



Mobility and urban transport challenges in the cities of today and tomorrow

By François Ascher

Movement is one of the core dynamics of our societies. Its centrality is social, economic, urbanistic. Without going over the top, it can even be said that movement is the core of life. Immobility is death, the inanimate. And even then, matter itself is motion!

While everything has always been motion... that motion has taken on a new dimension with modernity, which has introduced, amongst other things, new representations: first, of a world all in movement, i.e. in transformation, where renewal is no longer a simple process governed by tradition; and then, of a movement that can be progress... but provided only that human beings keep control of it and obey a certain number of rules...

Movement is thus at the heart of economics: capital always circulates as fast as possible and the market only exists through the movement of goods, people and information.

It is at the heart of social life, because it is integral to the notion of change, which is central to all modern sociopolitical thought.

It is also central to the principle of modern art, of its “points of view” and its rules of development.

It profoundly marks our representations of nature and the universe, which are no longer perceived as unmoving or immutable. In fact, the invention of “ecology” precisely expresses this awareness that nature is made up of temporary equilibria, that the power of human actions can influence its dynamics and that human societies therefore need to act in full consciousness of their responsibilities.

Movement is thus omnipresent in modern societies.

That is why it crystallizes debates and social conflicts of all kinds.

This was the context that saw the publication of the famous **Brundtland Report**, source of today's concept of “sustainable development”, which moved the debate beyond narrowly protectionist and reactionary attitudes by showing that a certain type of development was the sole means to preserve heritages of all kinds. It is true that this notion of *sustainable development* sometimes loses some of its meaning through being constantly repeated like a sort of magic formula.

However, it is still useful, since it emphasizes **both the difficulty and the necessity of simultaneously reconciling several goals: economic development, social progress and preservation of natural and cultural heritage**. These goals, which cannot be achieved separately without the risk of themselves being undermined, in a way constitute a sort of triple simultaneous equation.

The approach required is systemic and complex, since in a sense three distinct kinds of axiological criteria are involved:

performance in economics,
equity in the social context,
ethics in the environmental context.

It is not surprising that it is theoretically and practically hard to handle. Faced with these difficulties, there is a risk of resorting to reductive models. **At the two “extremes”**, we find those who think that economic development itself provides the means for social progress and environmental preservation; and at the other extreme, those who think that environmental preservation can itself engender a new economic and social model.

IVM’s goal is precisely to escape from these simplistic perspectives by bringing together researchers and operatives with diverse “sensibilities” and different disciplinary approaches, to address a single question: modern societies or societies in the throes of modernization are faced with a generalization of movement – how can and should they utilize and manage this movement, particularly in cities?

It is a huge field and we have tried to delineate it within a number of primary guidelines and objectives.

Here therefore, within the framework of this conference, I would like to discuss a few points that we are reflecting on and for which we have undertaken a certain number of actions.

Movement: a partially new societal issue

Today, moving has become indispensable for access to most goods, services and social relations. The ability to move around, especially in cities, in fact governs access to housing, work, education, culture, etc. As societies become increasingly complex and diverse, it is very rare for homes, jobs, schools, leisure facilities to be found in close proximity to each other. It is true that urban designers and local politicians, whose job it is to organize cities, need to coordinate spatial relations more effectively to optimize travel requirements, taking account of different constraints, especially environmental constraints. However, in a highly developed society, with labor divisions becoming increasingly marked, mobilities take on a new importance and meaning, and the right to movement becomes increasingly significant, in a sense a generic right underpinning many other rights.

Moreover, this right is not just about being able to move from A to B, but also a right to quality in the places and times of transportation, since transport takes up a growing proportion of daily life.

The notion of a right is obviously very problematical.

It should be noted that there are two types of right to movement: a *right-freedom*, which is the individual's right to travel; and a *right-obligation*, i.e. a right to have the practical and cultural means to travel.

This freedom of movement cannot always be taken for granted, as evidenced by numerous historical and contemporary examples. Many governments oppose such freedom and there are still restrictions in various countries on the movement of people, goods and information.

In democratic countries, the right-freedom is largely a given.

This freedom has thus become the condition for individuals to be able to exercise personal choice in all sorts of spheres. In our society, with its huge variety of needs and demands, its multiple activities and its extended territories of the everyday, transportation is the key instrument enabling individuals to decide what to do, went to do it, where to do it and with whom to do it.

However, many categories of people nevertheless have no real possibility of movement,

- because they suffer under different handicaps – social, cultural, economic, psychological, physical;
- because they don't possess any individual means of transport;
- because there is no public transport service where they are or where they want to go.

They therefore have the right to expect society to provide them with the means of genuinely accessing mobility. This leads us to the second, complementary meaning of the notion of the right to movement: a *right-obligation*, i.e. a right that implies society's responsibility to ensure that everyone has the real, practical and cultural means to move around and to access the whole city.

Obviously, this opens up a complex but necessary debate on the level of mobility that a society can guarantee to all.

Economic and environmental constraints contribute to setting limits on the mobility that contemporary societies can offer their members, individually and collectively.

However, these limits should be set to take account of the demands of equity and social justice, and provide an opportunity to specify the terms of this right-obligation to mobility, in contexts that vary in time and space.

This could provide the basis for establishing the specifications of what might be called an “**universal mobility service**”, a kind of minimum level of mobility to be guaranteed to any individual; or a “**public mobility and access**

service”, a slightly more ambitious view of what governments should seek to offer all city dwellers to enable them to get around cities, everywhere and if possible at any time.

This universal or public mobility and access service may be implemented in different ways, depending on the specific conditions pertaining to each society.

As regards the practical aspects, it is clear that city authorities possess a very wide range of transport resources, from heavyweight public infrastructures (roads, overground and underground railways, even harbor facilities) to lighter transportation equipment (buses, taxis) down to items for individual use (bicycles). Governments can also support particular groups, e.g. through pricing policies that subsidize certain methods or types of transport. And finally, they can develop a range of social and educational measures, possibly through nongovernmental associations and organizations.

The legal and economic status of these public service operators is also very varied: from state enterprises to PPP (public-private partnership) and PFI (private finance initiative) services, from municipal companies to city departments, from cooperatives and concessions to big international transport firms.

So it is important to establish a clear distinction between the needs of public authorities, which set the specifications for this right to mobility and accessibility, and the way these needs are met.

Firstly, it is a fact that economic and social development is everywhere accompanied by a **growing demand for individuation**, i.e. people's desire for greater autonomy, for choice in the way they use things and places, for control of the spaces and times of their day-to-day lives. Many functions that were previously carried out collectively, through public amenities, have become private mobile systems: the clock tower has become a wristwatch; telephones were originally attached to a specific place, and have become individual, mobile devices “attached” to a person. **Transport has not escaped this dynamic of individualization.** It still requires public infrastructures, but people increasingly aspire to autonomy. The specifications of public mobility services need to take account of this demand and to be able to provide everyone with this individual autonomy in the city.

What is needed is a way of combining the demand for an increasing diversity of individual mobilities, with collective requirements. This clearly requires flexible, personalized services articulating different methods of transportation.

Walking, the bicycle, the private car and public transport are solutions that are each efficient in the right conditions, so we need to develop ways of making them complementary. **Multimodality and intermodality are thus key notions for the development of today's urban and interurban transport**, for the right to movement also implies generalized access to the whole city.

Movement and development: a partly new economic issue

Modern cities arise out of the division of labor and generate further division; as a result, cities can only exist through movement.

Today's urban concentration can be described as a consequence of the quest for greater efficiency in most spheres of social life, production and consumption. However, urbanization involves the transport and storage of Goods, Information and People. **These transport and storage activities are interdependent and form a system.** This we call the GIP system.

Today, the dynamics of urban life bring into play a whole range of new transport and storage techniques. We are therefore seeing the emergence of a new GIP system in which private cars, fast rail transport, air transportation and telecommunications play a major role, alongside a series of new techniques for storing goods and information, from the frozen goods/microwave pairing, to the DVD, e-mail, mobile phones, PCs and the Web.

It is clear that modern economic development – particularly its emerging globalize forms – is linked with the capacities of this new system for carrying and storing goods, information and people.

The growth in travel speeds and storage capacities (of which miniaturization and digitalization are specific forms) plays a key role in this economic process. They are a major factor in development. They are central to the rationale of economic agents and a large proportion of scientific research.

It can therefore be said – to transpose the previous terminology to the social sphere – that the movement of people, information and goods is at the heart of current economic life, and that here too, shifts of scale in both speeds and storage capacities have a qualitative impact on the way we look at the economic and transport issues of modern societies.

The growth in outsourcing and subcontracting also reinforces the economic importance of transportation and transforms city space into productive space. The stuff that in the past moved around within big corporations, now moves around cities.

As a result, **deliveries and intra-urban logistics** are taking on a new importance and asking difficult questions of urban planners and local authorities.

A partially new social issue

This dynamic in the evolution of the GIP transport and storage system also interacts with the forms of occupation of space in general, and particularly city forms. **A profound change in city form is underway.**

At the end of the 19th and beginning of the 20th century, the concurrent development of trams, then automobiles, lifts, reinforced concrete and steel-frame construction (notably with the invention of the skyscraper) and the telephone, contributed to the territorial remodeling of cities and generated an increasingly marked functional and social differentiation of urban space.

Today, the dynamics of the GIP system are driving a threefold change that is partly new.

- First, we are seeing what is often called **metropolisation**. This is the continuation of urbanization which, in already highly urbanized countries, takes the form of a concentration of human and material wealth in and around the biggest cities.

- Second, we are witnessing a **transformation in the accessibility system and in the relations between the centre and the periphery**. In the past, city centers were the most accessible areas and therefore the places where symbolic, social and economic values crystallized. Today, the evolution of the GIP system is changing the geography of accessibility: certain outlying areas are becoming more accessible for different people or activities than the old geometrical city centers. It is now possible to live in the outskirts but have easy access to many urban functions. At the same time, however, as telecommunication becomes commonplace in all its forms, the value of face-to-face, unmediated communication increases. Physical meetings, live experience, shared emotions (festivals, sporting events) are increasingly valued, both in leisure time and at work. This is evidenced by rising property prices in office areas with good public transport, or by the development or revitalization of places with the potential to attract people and host events.

- Third, the increasing speeds of the transportation of goods, information and people is changing economic, social and cultural attitudes to urban forms. **In the past, the density and continuity of the urban fabric were essential to the production of the city, to maximize interactions, for collective defense, etc. Today, at least in Europe and North America, this is no longer true for a proportion of citizens and activities.**

– **In particular, speed in certain cases is replacing density, generating profoundly different urban spaces and new forms of behavior:** the fastest city route is increasingly not the shortest. The new GIP system thus interacts with metropolisation and helps produce increasingly complex urban systems characterized by both polarizations (multiple centers of all kinds) and dispersal, continuities and discontinuities, high density and low density. **In consequence, new types of cities are emerging in Europe and North America, heterogeneous, sprawling, discontinuous,** a type that we have termed a **metapolis**, which intertwines quasi-village, suburban and metropolitan spaces.

These changes have proved highly disorientating. For a long time we thought that density, continuity, public amenities were essential attributes of cities and of urban lifestyles. **Today, we find that density – in so far as it no longer seems absolutely necessary in all circumstances as a means of generating a high potential for human intercourse – is often seen as stifling; that proximity, when it is no longer indispensable, is experienced as promiscuity; that collective amenities, when there exist individual solutions better suited to individual desires, are seen as a palliative or as an ideological choice.**

We thus find ourselves facing a new urban issue, largely the outcome of the mismatch between, on the one hand, the city we inherited and its associated cultures and lifestyles, and on the other hand, the emerging city with new social practices which we don't yet know how to organize

and regulate. For it must indeed be recognized that we don't yet know how to construct urbanity with this discontinuous, heterogeneous, multipolar, highly differentiated and individualized city, constantly abuzz with movement at all hours of the day and night.

Managing movement: a partially new “societal” issue

Urban sprawl, which can be defined as the discontinuous, low-density growth of cities, is now a particularly urgent issue with the expansion of private and public means of transport. In itself, it is not a new phenomenon, and it concerns a wide range of people for very different reasons.

Cities on the move: are there any models?

The propositions above can be summed up in the statement: we need to optimize travel economically, make access to transport more equitable and produce urban planning and mobility systems that are as environmentally friendly as possible.

However, when we look for a compromise between these different objectives and constraints, we find situations that differ greatly from one national – or even regional – context to another.

So for example, the issue of movement probably affects developing countries in a markedly different way. There, the urbanization process is rapid. However, in contrast with the experience of the already developed countries, this urbanization is taking place at a time when the modernity they are seeking to achieve is already highly individualized and hypermobile. **Growth in the cities of the developing world is taking place in the era of the Internet, of the mobile phone, of the motorcycle and of the car.** This was not the case in most of “old Europe”. England and Germany, for example, were already almost 90 per cent urbanized at the beginning of the 20th century, when the car, the motorbike and the telephone were in their infancy. France urbanized later and the car developed within a context of low population density, producing cities that were significantly less dense and less compact than in England and Germany.

History, geography and culture also played important roles in differentiating urban reforms and transport methods. In the Netherlands, for example, land shortage has always been an issue and the need to combat flooding has long legitimized strong central planning. Today, in Asia, in Africa, in South America, we are seeing tremendous urban growth combined with the rapid development of private methods of transport, especially the car. Nonetheless, **there are very great differences from one country to another, or even one city to another:** the contribution of public transport, small private firms, company transport arrangements, bicycles and motorbikes, individual and group taxis, mass public systems, varies considerably. Nonetheless, in all these countries, the economic, social and environmental situation is urgent. And as we know, today's solutions – especially crisis solutions – are tomorrow's problems. In any case, improvement in the transport of people, goods and information is undoubtedly one of the major keys to development.

In this context, we need to avoid trying to graft a limited number of models onto situations that have no precedent. Rather, the challenge is to foster creativity and innovation and there is no doubt that the cities of these countries will invent new types of development, and will manage mobilities in original and different ways.

Likewise, there is no single model of the European city, although a shared or similar history has given them certain common characteristics; nor is there a single type of North American city, although once again history, economics and culture have given them a certain number of shared traits: cities as close together as Los Angeles and San Francisco are very different, both at the centre and the periphery, and likewise bear no real resemblance to Minneapolis or Miami.

Given the magnitude of the challenge, what modest contribution can IVM make?

We operate to three priorities:

- Helping to find solutions that can contribute to the introduction of the “right to mobility”.

* Mobility for integration

- research
- international colloquiums and scientific conferences
- support for experiments: on-demand transport, education in urban mobility, driving instruction, car cooperatives in rural areas

* Disabled people’s mobility: blind and partially sighted people

- colloquiums on the use of the new technologies (GPS, PDA, electronic canes, etc.)

- software enabling blind people to read transport information websites

- the Homère haptic simulator
- tactile relief plan of the Paris region and all its public transportation networks

- tactile relief models in metro stations;

* Mobility for children and teenagers

- national survey on child mobility and parental transport
- experiment in on-demand transport
- research programmed with European cities on young people’s mobility.

- Helping to improve mobility by influencing the quality of transport systems and places

- Student competitions (projects, reports, student architecture competitions, etc.)

- Architecture on the Move exhibition
- colloquium on the “the city of flows”
- “city at night” operations
- “The street belongs to all of us!” project

- taxi project

- **Scientific and cultural activities**

- the IVM Chair in France

- colloquiums (e.g. Cerisy)

- publications (numerous books and diverse scientific publications)

- the Shanghai Chair