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Multi-Mobility, Multispeed Cities: a challenge for architects, town planners and politicians

1.

The history of cities is deeply interwoven with the techniques for the transport and storage of goods, people and information

One way of defining cities is as the vehicles employed by human societies to achieve greater efficiency, whether motivated by the rationales of power and security, religion or economics.

When large populations are concentrated in cities, it means that some individuals in the society are no longer engaged in the task of producing provisions, which must therefore be transported and stored to supply their needs.

Providing for the food needs of urban populations results in the division of labour and the development of trade, and with these, the emergence of money, accounting and writing, which are the means whereby value and information are exchanged, transported and stored.

The growth of cities also necessitates new techniques for moving and storing people: the cities of ancient Rome, for example, provide fine examples of vertical construction, the *insulae*, paved streets, sewage and heating systems etc .

2.

The PIG (Persons, Informations, Goods) mobility system

While it seems clear that the growth of cities is linked with their capacity to move and store people, information, goods and energy, it should also be emphasised that these different techniques constitute a system.

The dynamism of Renaissance cities was based on a combination of factors: the expansion of interurban trade along protected roads; the development of harnesses for draught horses; the invention of printing for the circulation and storage of information.

Similarly, the growth of 19th-century cities both necessitated and was fuelled by the invention of the railway, electricity, the telephone, tinned food and reinforced concrete. Without these techniques for transporting and storing goods, people, information and energy, such an expansion would not have been possible.

Today, the techniques for carrying and storing people, goods and information are totally interdependent: there are few movements that do not simultaneously mobilise resources from all three of these domains.

For the sake of convenience, we will call this system of transport and storage the “PIG system”, standing for “Persons, Information, Goods”.

Cities evolve through the specific dynamics of this PIG system.

3.

City shape and the functional and social organisation of urban spaces interact with the techniques of transport and storage

The PIG system has a profound impact on city shape itself. So for example, it can be said that the combination of trams, cars and lifts, necessitated by the growth of 19th-century European and North American cities, gave rise both to verticalisation and the beginnings of suburbanisation.

These techniques also had functional and social repercussions: the availability of transport together with the expansion constraints of heavy industry led to space becoming specialised along functional and social lines. As a result, European cities became segmented into working-class districts around factories, into residential districts and into business districts. At the same time, the installation of lifts in Parisian buildings changed the traditional and symbolic values of apartment occupation: the poor, who had formerly lived on the higher, less accessible, levels, moved downwards, while lifts made it possible for the rich to move to the upper floors where there was more light.

We can see, then, that the transport and storage methods of the PIG system are a consequence of urban dynamics; however, they also “condition” those dynamics, in both senses of the word: they are both the content and the packaging.

4.

The dynamics of the PIG system accelerate big-city growth and “metropolisation”

Contrary to the beliefs of late 19th-century observers, and of many forecasters – thinkers like Paul Virilio or architects and urbanists like Frank Lloyd Wright – the development of private transport and telecommunications has not resulted in the demise of the cities and in dispersal. Quite the contrary. As has been explained, notably by economists such as Paul Krugmann, the process whereby the growth of cities and the concentration of certain activities promotes the development of transport and telecommunications, is actually reciprocally reinforcing. In fact, it is hard to see why these developments would run counter to the conditions of their creation, since technologies that are “social objects” are not independent of society; they are rooted in the logic of society and serve the agents that dominate it.

The NICT (new information and communication technologies) and technologies of private transport have thus promoted urban concentration and fed “metropolisation”.

Metropolisation can be defined as the concentration of human and material wealth in the biggest cities. Metropolisation is taking place in all the formerly industrialised and urbanised countries. It is, in a way, the next stage of urbanisation in countries that are already near-totally urbanised, notably in Western and Northern Europe.

5.

The information technologies do not inhibit the development of the physical mobilities of goods, people and information. On the contrary, they promote “real” movement of all kinds.

Even at the beginning of the 20th century, commentators believed that the telephone would replace a good number of direct personal contacts, and thus lead to a movement away from the centre of activities. In fact, the telephone created more face-to-face exchanges than it replaced. It made it possible for people to maintain personal and professional relations at a distance. It facilitated appointments, created a new scale of urban organisation.

The same is true of ICT today. It generates more possibilities for mobility than it replaces. However, it is a different kind of mobility. Today, both the business and scientific communities operate on an increasingly global scale, and much medium-distance mobility has been replaced by long-distance movement.

The spatial scales of economic and social life are expanding along with the speeds at which people, goods and information can travel.

6.

The hubs and spokes model of rapid transport organisation extends to multiple scales. Meanwhile, car drivers percolate through the periurban zones

The *hubs and spokes* system is a type of network associated with the development of rapid transport systems. Speed means minimising stops, which produces the tunnel effect and makes it efficient for flows to spread outwards from focal platforms called hubs.

This type of reticular organisation obviously applies to air transport, with its huge airport platforms. It also extends, however, to freight transport by road and rail, with multimodal logistical platforms established near communication nodes, and to the urban and interurban transport of people, with the polarisation of all sorts of activities around multimodal stations and road junctions on the outskirts of cities.

The consequence is a transformation of the urban hierarchies and networks.

However, this model exists alongside another new form of travel, which we could describe metaphorically as percolation. As Zygmunt Bauman might have written of the liquefaction of modernity, the way car drivers filter through heterogeneous urban areas could be likened to a form of percolation, a capacity to navigate labyrinthine environments that have no guiding thread to direct the flows.

7.

The development of ICT also creates a sort of paradox: as they become commonplace, the audiovisual technologies enhance the value of everything that cannot be experienced electronically or digitally

The face-to-face, the ability to touch, taste, feel, are becoming increasingly precious. The accelerated rise in property values in the most physically accessible areas in a way bears witness to this change and to the growing relative value of physical, actual (as opposed to virtual) accessibility.

By no means the least of the consequences for the city is that the attractiveness of an urban space lies in the richness of the multisensory experiences that it offers. Thus, stores wishing to compete with e-commerce must offer the possibility of touching and trying their products.

The acoustic and even olfactory design of spaces is becoming increasingly important.

In parallel, individuals are more and more attracted to events that give them the opportunity of meeting other individuals, of being together, of community. Live experience is valued. Parties of all kinds, festivals, big sporting events, communal rituals (parades, carnivals, Halloween), are multiplying. These events punctuate urban life both spatially and temporally. They play a growing role in the design and management of space.

8.

Individuals also use ICT to enhance their autonomy, to control their own space-time

There is nothing new in the phenomenon of individualisation, of increased personal autonomy; the Renaissance invention of perspective – the move from a flat representation of the world to one based on the individual's viewpoint – is a spectacular example of this centuries-long evolution. Individuals pursue ever greater intimacy, privacy, capacity to control their environment. They want to be able to choose what they do, when they do it, with whom and where. For this they have to be able to move in space and in time.

To move in space, they use every method of transport, usually a combination to meet their specific needs, from planes to shopping trolleys to suitcases on wheels, to trains, trams, buses, cars, motorbikes, bicycles and rollerskates.

To move in time, they employ techniques that enable them to desynchronise and resynchronise, to store and dispose of information and objects easily and quickly: from videos to e-mail to mobile phones, voicemail and text messaging; but also the frozen goods and microwaves that make it easy to eat alone or in company at any time.

9.

With increasing autonomy, individuals are constantly having to “choose” and the range of choice is growing all the time.

Mobility is the primary instrument of these choices.

True, economic and cultural inequalities restrict the choices of certain sections of the population. However, even individuals belonging to socially disadvantaged groups are constantly faced with choices: what to eat, whom to meet, what to do. In his “Consumer Society”, Jean Baudrillard took the view that this “hyperchoice” is largely artificial, the difference between two washing powders being purely symbolic. Nonetheless, choice is an everyday compulsion that is characteristic of life in modern societies; what we do is less and less routine or dictated by tradition. We are constantly forced to make decisions, in minor matters as well as more important things, to choose a husband or wife, a television, a film, a meal, even a religion. For religion and traditions too are now modern, in that they are increasingly a matter of individual choice.

So the variety of the choices available to us is becoming socially more important. And mobility has become a key feature of this variety of choices: the more mobile we are, the more choices we have; the other side of the coin, though, is that we are also obliged to move in order to be able to choose.

10.

In an increasingly diversified society, the pursuit of individual autonomy and the variety of choices generate enormous complexity.

Modern society is increasingly diversified. It is made up of plural individuals, with multiple allegiances. In the past, people who belonged to the same social class or lived in the same place, had broadly similar lives. Today, every individual's life reflects their membership of a series of different environments, between which they navigate to the rhythm of their different personal and collective histories. Individual behaviour is still socially determined, but it is more diverse, with latitude for increasingly personal combinations.

Mobility is both a consequence and an instrument of this societal diversification. It is also an increasingly important element in the construction and expression of each individual's singular personalities.

11.

A networked social structure: mobilities structure society

The possibility for individuals to choose – much more than in the past – who they are and what they do, in an increasingly diverse society, even though social determinants continue to operate, is gradually altering social ties. While these were formerly very strong and lasting, because a neighbour was often also a workmate, a relative and a friend, in today's increasingly varied society, where individuals choose what they do and with whom, and therefore change jobs frequently, social bonds too are often weaker, but incorporated into increasingly complex networks.

We see particular people less, but we meet more and more people.

Society is thus structured and functions more like a network, or rather like a series of networks, a network of networks which increases the possibilities of mobility for people, goods and information.

12.

A hypertext society

In this society, people increasingly switch between networks, between social universes, employing a combination of real and virtual methods of communication.

With the car or the tram, we can move between districts for work or entertainment. Likewise, a single computer screen conveys us in a few seconds from the world of work to the world of the family. With the mobile phone, we can switch instantly from face-to-face chat with friends to remote conversation. Modern methods of transport and communication allow us to transfer from one social context to another, from a working environment to a sports club, from a local relationship with neighbours to an emotional bond with people who live elsewhere but share the same interests.

In this way, individuals move physically and virtually in distinct social universes, which take a different configuration for each person. Metaphorically, we could liken them to a sort of hypertext, like the words that link a group of computer texts. Hypertext is the process whereby we can “click” on a word in a text in order to access the same word in a series of other texts. In a hypertext, the word belongs simultaneously to several texts; in each one, it contributes to the production of different meanings by interacting with other words in the text, but with syntaxes that may vary from one text to another. The digitisation of images has created the further possibility of constructing hypermedia, which link texts, sound documents and images (the prefix hyper here is used in the mathematical sense of hyperspace, i.e. n -dimensional space).

Similarly, individuals exist in distinct social fields like words in the different documents of a hypertext. In one, they interact with colleagues according to a professional “syntax”, in another with relatives according to a family “syntax”, in a third with friends in a sporting “syntax”, etc. They are “word-individuals” who constitute the main links between these “texts-social fields”. They move from one field to another, either physically, or through telecommunications. When an employee phones home from the workplace, this is in a way a change of “text”.

The various social fields are different in nature. An individual’s participation in each will vary in duration and motivation. The interactions

may be economic, cultural, emotional, reciprocal, hierarchical, conventional, face-to-face, written, spoken, telecommunicational, etc. The fields also vary in scale (from the “local” to the “global”) and in openness. The networks that structure these fields can take the form of stars, webs, hierarchies. And individuals practise *code switching*, in other words they juggle with different social and cultural codes to move from one to another.

12 bis

Unequal access to the hypertext

This hypertext metaphor can also be used as a new way of identifying and analysing social inequalities. The fact is that not everyone has the same possibility to construct social spaces in n dimensions, or to move easily between social fields. For some, the network layers are completely collapsed: their economic, family, local, religious fields largely overlap. So for example, those excluded from the job market do not generally belong to multiple fields: they usually live in big housing estates, depend on an “informal” local economy and mainly encounter only people from their own locality.

The ability to move through a series of fields opens potentialities that are not equally accessible to all. As a result, physical and virtual mobility is becoming an increasingly important element in the generation of individual and social inequalities.

13.

Cities and the use of transport and ICT: polarisation and dispersal

Fast methods of transport leads cities to evolve in two directions: on the one hand, a number of functions can be concentrated at a restricted number of points, thus increasing the effects of scale and density and maximising certain interactions; on the other hand, some other functions, which do not require density, or which in fact are better served otherwise, can increasingly be distanced from the polarisation points.

On one side, business areas are condensed, stores concentrated into megacentres, cinemas grouped into multiplexes, etc. A whole series of functions is focused into centres: administrative centres, business centres, leisure centres, academic centres, sports centres, etc.

On the other side, a section of the population takes advantage of transport and communication resources to move to larger accommodation, if possible with gardens, and thus migrates to the outskirts, accentuating the process of periurbanisation, suburbanisation, or even exurbanisation.

This two-way process is not new and has been going on in North American cities since the end of the 19th century. However, with improvements in transport and telecommunications, the scale and intensity have increased.

The technologies for the transport and storage of people and energy are mobilised for ever larger concentrations: for example, with complex arrangements of lifts and escalators, new building techniques, new air-conditioning systems, it is possible to construct shopping centres of several hundreds of square metres under a single roof.

In addition, private transport and the use of wireless communications, even for the Internet, is adding to urban dispersal, with city dwellers constantly looking further afield for more space and lower prices.

14.

Metropolisation and metapolisation

This two-way process of polarisation and dispersal affects urban spaces at every scale.

On the one hand, it results in human and material wealth being concentrated in and around ever larger cities – what we call metropolisation.

On the other hand, it generates new forms of city growth, what we might call external growth: the biggest cities absorb towns and villages from further and further away into their perimeter of day-to-day function, thereby constituting distended, discontinuous, heterogeneous urban territories, containing city and countryside, borough and metropolis; these new territories are held together by transport and telecommunications.

We have used the term “metapolis” to describe these new urban entities. By doing so, we wish to emphasise that, contrary to the claims of certain authors, such as Françoise Choay in France, what we are seeing is not the disappearance of cities, but the formation of cities of a new kind, cities that are something other than the old continuous entities, cities that are taking over their surrounding countrysides, metacities, metapolises.

15.

New urban places

Certain authors have adopted the notion of “non-places”, a word that the anthropologist Marc Augé has borrowed from Jacques Duvignaud, Michel de Certeau and, in a way, from Melvin Webber.

For Marc Augé, we are experiencing a proliferation of non-places and the disappearance of places. By place, he means a space that is identitary, relational and historical. For him, our “supermodern” world is “surrendered to solitary individuality, to the fleeting, the temporary and ephemeral”, and the spaces constituted for the purpose of transport, transit, commerce, leisure, are precisely the spatial matrices where direct interaction between people has ceased.

There is thus a close link between this very pessimistic vision of supermodernity with its notion of the non-place, and the development of transport and telecommunications, with the spaces that they engender, with the social relations that they are perceived to destroy. These theories are particularly attractive to those who are nostalgic for certain old forms of urbanity, or who promulgate a whole mythology of the European city and its sociabilities.

Unlike Marc Augé, we consider that there is no dissolution of places into non-places, but rather the constitution of new urban places, and that, in fact, the spaces of mobility, of transit, of passage, are particularly favourable to the emergence of these new places.

For one thing, airports, motorway service areas, stations, shopping centres, leisure parks, are, in Marc Augé’s definition, identitary, relational and historical spaces. Secondly, all sorts of urban places are today emerging or re-emerging

- in traditional public spaces, squares, boulevards;
- within private spaces, as evidenced by recent developments of shopping centres and malls with cafés, newspapers and public entertainment;
- in new ephemeral spaces, particularly raves and festivals, which temporarily make use of all sorts of places.

So it would seem that mobilities, real and virtual, are not causing the demise of the city or of places, but are in fact generating new forms of city and place.

15 bis

From place to hyperplace

For a partly new society, partly new urban places.

A society where individuals move in all directions, at all hours of the day and night,

a hypertext society where individuals move rapidly from one social milieu to another,

a society where sequences of activities overlap and interweave,

a society where social ties are chosen, constructed, formed, but also dissolved more freely;

this hypermodern society generates new places – hyperplaces.

These hyperplaces are first of all spaces with n dimensions, i.e. places where individuals can, if they want, practise different activities quasi simultaneously in multiple social fields, and with the people they have chosen to be with, whether they are actually or virtually present.

The hyperplace is a potential space, with multiple physical and social dimensions, which offers individuals possibilities for practical and relational choices.

I would say that the space we are in now is not really a hyperplace: you are pretty much obliged to listen to me. Sleeping here, while I am talking, is socially difficult, because it would invite disapproval; getting up to go elsewhere is impossible for most of you, since you are trapped in your seats; using your mobile phones would be inappropriate; and even chatting quietly to your neighbour would allow only very limited communication.

On the other hand, the cafe terrace outside has all the characteristics of the hyperplace: it is a single space that permits mobilities of all kinds, discussions and social relations and activities. In fact, to take up some of the concepts of William Mitchell, you could even add a few giant flat screens and a little bit of virtually enriched reality.

You will perhaps say that it is not exactly a very new place: quite true, but it is a very urban place; in a way, it is a modern form of the agora, enriched over time by new elements to make way for new practices.

Now all we need to do is to incorporate the new methods of transport, communication and exchange; to adjust to the new rhythms of life; to make possible overlapping activities, crossbreedings between public and private, hybridisations between interior and exterior ...

16.

The à la carte 24/7 city, on foot, on horseback and by car: the challenge of multimodality and intermodality.

Citizens of the hypertext society increasingly live lives of constant and multidirectional movement. Day and night they travel around this distended and multipolar metapolis, using different methods of transport, either successively in a single journey or alternately, depending on their destination, the time, the weather, who they are with ...

In a heterogeneous city, the different types of transport, public and private, have different advantages and disadvantages depending on place and circumstance.

The quality and efficiency of a city, therefore, depend on its ability to offer a multiplicity of solutions, to provide the widest possible variety of choices in deciding where to go and how to get there.

In this context, intermodality and multimodality are the key conditions for the efficiency of each type of transport. Car parks, as the focus of major modal change, are becoming increasingly important, but they are often treated less as a place than as a mere space for storing automobiles.

Likewise, many transport places continue to be perceived in narrow technical terms, with minimal urban value. Some of the potential of these spaces is demonstrated in the “Architecture on the Move” exhibition staged by the City on the Move Institute in the French pavilion at this Biennial.

17.

Learning to make the city with speed and low densities

For city authorities, town planners and architects, then, the aim is to produce new types of place, to create a new urbanity, in other words to make places that suit the ambiances, practices and social relations that take place within them.

That is not too difficult in existing city, where densities are high and where identities can be constructed out of new contextual elements. Overall, I would say, we know how to do it. That doesn't mean we always do it well, but we are not short of examples to inspire urban design in these circumstances.

In contrast, we have much less idea of how to make the city in zones of low density, in fragmented spaces, where people move around quickly and singly.

Many architects and town planners respond to these problems by proposing the elimination of discontinuous and low-density zones in European cities. In this, they have a wide spectrum of support: people nostalgic for the cities of the past and in search of a lost urban paradise; the public transport bosses who don't know how to service these suburban areas and would like the populations to live in easily transportable groups; ecologists worried about energy consumption due to urban sprawl; city mayors who in fact finance most of the central amenities used by the populations of outlying communities.

Most of these concerns deserve to be taken seriously.

It is true that we should try to preserve, or rather to develop, the specific qualities of the ancient cities found notably in Europe.

It is true that we need to find innovative solutions to provide transport for the many inhabitants of low-density outlying areas who do not have access to cars (children, people with disabilities, the less well-off, etc.) or to public transport.

It is true that we need to save nonrenewable natural resources, restrict carbon dioxide emissions, and that spontaneous urban sprawl constitutes a threat in this respect.

Finally, it is true that in most democratic countries local political institutions are ill-adapted to the new metropolitan scale.

Nonetheless, a return to the past reflects a reactionary principle that is undesirable in itself, and is unrealistic in terms of the policies that it might entail.

It is an illusion to believe that we could return to a village or district-centred lifestyle, where everything we do takes place locally. Certainly, we should try to reintroduce a few local shops, but judging from numerous surveys, it is a safe bet that this would increase other journeys. The division of labour will not be reversed and employment will occupy ever larger urban spaces. There is no going back on the demand for more cultural diversity, and culture and leisure will continue to generate a urban development on a large scale.

So we need to invent new urban models, which combine high densities and greater polarisations for certain activities and social groups, with increasing levels of dispersal.

We need to make the city not only with collective accommodation and town houses, but also with discontinuous spaces, individual houses with large private gardens, theme parks, airports, car parks, etc.

We need to make the city with citizens who sometimes travel on foot, but also at 30 mph; with citizens who snack in varieties of trendy fast food outlets, who eat and drink on the move (on foot, in cars, in trains), but are also increasingly attracted to quality food and are prepared to travel and spend for a good meal with friends, at home or in restaurants.

All this is a major challenge for today's town planners: they need to be able to design the urbanity of discontinuous cities, of low-density urban spaces, of speedy citizens, while still maintaining the values of the existing, continuous, pedestrian city.

18.

Mobility, however, is not only a challenge for architects and town planners...

It is so deeply rooted in our urban societies that it is also a major social and political issue.

First, mobility is indispensable from an economic and social point of view. Today, movement is a key condition of access to the job market, to accommodation, to education, to culture and leisure, to the family... The right to work, to accommodation, to training, now incorporates an implicit right to mobility.

In a way, this right to mobility conditions the other rights; it has become a sort of “generic right”, of increasing importance to society.

Secondly, as mobility increasingly becomes a factor in the day-to-day lives of individuals, the times and loci of mobility assume growing importance: transport needs to be more convenient, more economical and more pleasant. Moreover, transport is no longer simply a means of getting from A to B: it is a part of life in its own right, which deserves to be valued as such. Movement should also be a pleasure.

Finally, it should also be underlined that mobility has a cost, economic, social and environmental. The generalisation of movement we are experiencing implies that individuals and groups should be able to control their mobilities, that these mobilities should contribute to the establishment of social identities, that the movements of some should not adversely affect the lives of others, that the transport of goods and people should not damage natural and cultural heritage, and that the energies they employ should not mortgage the future of our planet.

These are the challenges of sustainable mobility.

It is certainly not easy to find solutions to this system of economic, social, societal and environmental equations.

However, it is for this reason that mobility has now become a major issue for our democracies.