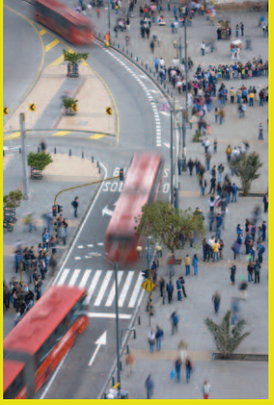

Tyrone Turner/National Geographic Society / Corbis

editorial

The Making of Movement

The Making of Movement is both an international research programme and a conference, headed by the City on the Move Institute/PSA Peugeot-Citroën with its China and Latin America chairs, and by Fabrique de la Cité, in partnership with Paris-East University and with the support of the Île-de- France Institute of Urban Planning and the Caisse des dépôts et Consignations Research Institute, with the participation of FNAU (National Federation of Planning Agencies). The initiative is funded by the Ile-de-France Region.

The fact that the City on the Move Institute should be interested in the making of movement will come as no surprise. That it should organise a two-day international conference in Paris on March 26 and 27 to explore the components of the making of movement in the world's different cities is a logical consequence. However, IVM did not confine itself to mere inventory. It sought to go beyond the usual analyses on the explosion in mobility, the traditional opposition between the car and public transport. Its aim was to identify "what it is that drives public action on urban mobility issues." A tough challenge. Because as Jean-Marc Offner, Chief Executive of the Bordeaux Métropole Aquitaine Planning Agency, explains, public action steers a course "between reason and unreason", is driven by rationales that are, to say the least, contradictory. As for Jean-Pierre Orfeuil, Scientific Director of La Fabrique du mouvement and of IVM's three academic chairs, he asserts that "if movement is made" (scientifically, culturally, socially, politically, economically...), sociotechnical analyses alone fail to reflect real life. Hence IVM's novel approach: the "startle reports", written by researchers about cities other than their own.

During the analyses of this section, objects emerged that are unfamiliar in our countries: the BRT (Bus rapid transit) which is beginning to appear here in France in the form of BHNS or "bicitaxis" at the ends of BRT or subway lines. Car policies in Chinese cities are revealed as astonishingly subtle. As for motorbikes, they are developing exponentially in emerging countries. In short, a varied landscape with the odd misfire, like a stuttering engine: the Bogotá subway stuck on the drawing board, congestion charging rejected in Manchester, users who refuse to pay for their tickets in Greece... Which does not prevent the students of the world, asked about their urban utopias, from providing an amazingly fluid and green vision of tomorrow's cities... To sum up, there's nothing dull about the making of movement! | **Antoine Loubière**

The quest for the principles of the making of movement

The Making of Movement was conceived by **Mireille Apel-Muller**, IVM Chief Executive, **Andres Borthagaray**, **Jean-Pierre Orfeuil** and **Pan Haixiao**, directors of IVM's academic chairs in Latin America, France and China, and headed by **Gaëlle Rony**, project manager at IVM. Jean-Pierre Orfeuil explains the project and its main lessons, following the International Conference on March 26 and 27, 2012 at la Bellevilloise à Paris.

"Cities exist... Because human beings have found it more efficient to manage their personal, social, economic and political relations by concentrating them in space" /1. They continue to grow, despite the Internet and despite the difficulties (more than a billion people today live in slums). The relational intensity the city brings depends on the number of inhabitants, but also on each person's ability to move around. This ability is something that is made, not inborn.

Movement is made...

In the eras when the great technological revolutions (the railway, the car) were greeted with enthusiasm, this ability expanded, movement exploded, to the point that certain analysts saw mobility as an irrepressible compulsion. This was to ignore the collective perceptions in favour of movement in those times, and the policies that facilitated this explosion by developing systems that allowed exchanges to develop at minimum cost. The making of movement was then a social production, based on simple criteria for the internal efficiency of the mobility system./2

These periods left indelible traces on the land and in people's inner lives, but the history of mobility is not a long and calm river. Rules to control movement have always existed./3 The histories of the bicycle, of the car, and even of public transport, are full of controversies, advances and retreats, often linked with representations of the nature of territory or of democracy: the making of movement is a social production linked with the desires and refusals – of the authorities, citizens and their organisations – to write a new page of history, to invent a new social order in the name of values or representations which they cherish, or wish to develop or even transgress.

Movement is made differently from one place and era to another...

Multiple signs suggest that the zeitgeist has turned against the enthusiastic embrace of mobilities of all kinds, and against a way of making movement where the only criterion is the efficiency of the system. For example, the symbolic status of the car, often the most efficient method of transport, has sunk sharply, and it faces regulatory measures. Conversely, tramways and self-service bicycle systems hold a positive image, and receive support unrelated to their true contribution to mobility. The replacement of Predict and Provide by Predict and Prevent approaches reflects a departure from internal transport criteria in favour of the integration /4 of the making of movement into more global principles and values./5

This criterial shift arises from the activities of groups who are ready to oppose, to advance their interests, to put forward their vision of the world and to change the grounds of the debate. In response to the multiplication of "stakeholders", project backers can adopt two kinds of attitude. They can play the game of the "process in which the state-governed public sphere was appropriated by the public of private people making use of their reason and was established as a sphere of criticism" by means of participatory approaches./6 This is the era of negotiated rationality. They can also, in societies of private people with easy communication, avoid it by beginning a direct dialogue with individuals taken in isolation. To exist "within huge masses of language matter",/7 project backers must capture attention./8 The intention expressed, the feelings it arouses, the appeal of the story told about it, even the opposition generated and the conflict anticipated, shift the conditions from an adhesion to negotiated rationality to a terrain of emotion.

1/ R. Camagni, *Principes et modèles de l'économie urbaine*, Economica, 1996.

2/ General interest criteria, a cost-benefit analysis of projects, developed by economic engineers, from Saint-Simon to the Ponts.

3/ Vagrancy, immigration internal and external...

4/ Term used by Karl Polanyi to describe "the great transformation" (Gallimard, 1995), that of a market that breaks free of society.

5/ E.g. the finiteness of the world and its resources.

6/ J. Habermas, *The Structural Transformation of the Public Sphere*, MIT, 1991.

7/ J.-F. Lyotard, *La Condition postmoderne*, Éditions de Minuit, 1979.

8/ B. Jones and F. Baumgartner, *The Politics of Attention. How government prioritizises problems*, The University of Chicago Press, 2005.

… depending on as yet undecoded belief systems

Because of this embeddedness in global systems, which can be observed on the ground, analyses founded purely on sociotechnical criteria, which are still dominant in the community of mobility analysts, its seminars and its publications,/9 no longer reflect the real world. For example, a congestion charging system has as many sociotechnical advantages and limitations in Paris as in London. Understanding why it has been implemented in the one and not the other (and rejected in Manchester…) requires us not only to understand the calculations of current actors, but also to think about cultures (the contrast between the perception of the state as a predator in the UK and as a protector in France) and to historical contingencies, such as the prevalence of CCTV cameras since the days of IRA terrorism in London.

In principle, the work of political scientists, who try to reconstitute the puzzle of a story, escapes these limitations. However, few of them take a specific interest in mobility policies, and they are sometimes too narrowly focused, and often more interested in the personalities involved than in the substance of policies and their link with founding principles.

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An objective for The Making of Movement: to understand systems and processess

These observations engender an objective: to contribute to an understanding of the making of movement that does not separate goals, project implementation, the agencies involved, whilst considering founding principles and the "zeitgeist". This objective is in tune with the neo-institutionalist current in the analysis of urban policies which, whilst acknowledging the impact of globalisation, shows that these policies remain embedded in institutions and human relations that are not content to adjust to the requirements of global capital./10 It is also in tune with one of the missions of the City on the Move Institute (IVM) since its creation: to consider mobilities in a different way by exploring the neglected areas, the blind spots, the cinderella issues.

IVM therefore decided to launch itself into the decoding of mobility policies by involving its contacts in Europe and its teams in Latin America and China, whilst broadening the field to include young researchers who have worked on controversies associated with mobility. It was an ambitious task, but we managed to persuade numerous partners – whom we thank – to join the adventure. However, it is far from complete, and the process is set to continue.

The principal methods employed

A research programme was launched initially on eleven cities./11 The work was extended to other cities and other contexts, through an appeal to the international community of young researchers. In parallel, we conducted an original piece of prospective research, by asking students to describe their urban utopias, the style of city and transport system they would like to see.

The public action analysis programme

The approach to each city is bottom-up and integrated: the "basic material" is the analysis of policies, in terms both of substance and the actors in place, and is illuminated by the socio-economic conditions and by a qualitative appraisal of the atmosphere. Overall consistency was achieved through flexible guidelines. Starting from the principle that mobility solutions arise from processes of meaning creation (global and sectoral criteria) and of implementation, these guidelines ask contributors to retrace the history of "winning" solutions, from their initial emergence to the final choice, in relation to the representations and actors involved. In addition, they call for an attention to problems that rarely come onto the agenda, however serious or urgent they may be. Finally, they assign an important role to surprise: teams were invited to post "startle reports" on a collaborative website in response to initiatives implemented in cities other than their own.

As this programme comes to a (temporary) end, we are certainly struck by the still very powerful presence of the State in city policies, but this presence does not imply uniformity in the forms of justification, and is not always a guarantee of success.

9/ Which remain useful and relevant, as a result of a formalisation that opens the way to refutation and judgement.

10/ Cf. The conference "La ville libérale : une thèse crédible" organised in Saint-Étienne and in Lyon in September 2012.

11/ Bogotá, Buenos Aires, Lima, Mexico, Paris, Beijing, Rio de Janeiro, Santiago de Chile, São Paulo, Shanghai, Taipei.

The young researchers' contributions

The research programme was extended to analyses of controversies on other questions and in other cities./12 The young researchers played the game here by studying conflict between institutions and problems of governance, the spontaneous intervention of citizens, perhaps involving a conflict of values, perhaps the emergence of a radical proposal, such as the idea of moving a capital because traffic has become unmanageable in the existing one... Most of these cases fit fairly naturally into at least one of the registers of explanation already identified, and thereby gain greater relevance.

An original perspective approach: student utopias

Describing dreams, or indeed nightmares, is a way of seizing an atmosphere and a problem. The extensive network of teams/13 asked their students to work on a description of urban utopias that they would like or or fear to see, with particular reference to mobility, in order to understand the criteria of the generation that will advise tomorrow's princes. The enthusiasm this project generated reflects demand for places where people can say their piece about the future. In each case, these urban planning students expressed their views not through drawings, nor from the decision maker's perspective, but on the basis of urban life, ways of living, values to be respected or fostered, the qualities they would like to see in urban spaces. Despite certain differences (a taste for groundbreaking technologies in Korea, worries about chaos and insecurity in Latin America), what is striking is the convergence of aspirations in countries with different living standards: ambivalence about megacities, belief in neighbourhood life, ubiquity of the environment, need for public readiness to promote cohesion and develop high quality public spaces, very positive image of the bicycle (including places where it is not used) and the subway (including cities with celebrated BRT systems)...

The first lessons from The Making of Movement

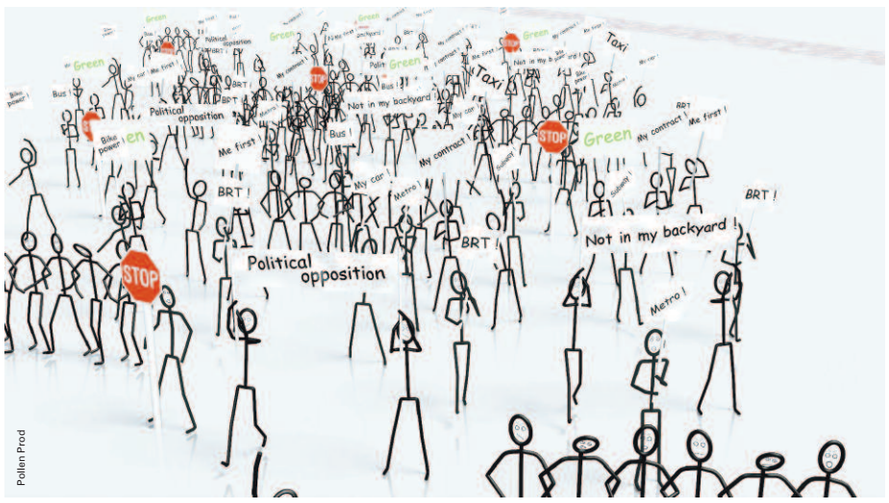
A crosscutting analysis of the cases identifies four main triggers for action: urgency; visibility and international impact;/14 the aspiration to modern standards; the dependence on historical actors and past trajectories. This provisional typology may be amended and enriched in the future.

Identifying "cinderella issues", issues of importance to analysts but ignored by politicians, is more arbitrary, because it depends on the judgement of the experts. Three apparently unrelated themes emerged: the quality of ordinary public spaces,/15 the mobility of poorer populations, the new questions raised by the strong growth in the use of bicycles and motorcycles. These questions are in fact linked, because it is usually the poor, for whom walking remains a major form of locomotion, who are the most dependent on the (lack of) quality of public spaces, but it is less often they who benefit from the (rare) high-quality public spaces. It is often they (with exceptions) who achieve individual mobility through the bicycle or motorcycle. This means that comfort and safety emerge as social questions.

The successes and failures of mobility policies in different places suggest the need to qualify the frequently expressed view of megacities as places detached from their national space and doing their own thing in the community of global cities. Because making "their" global or continental cities visible urbi et orbi, through big iconic projects, remains a priority for states and elites in their power struggles? Because, conversely, certain states have become weak before legitimate metropolitan structures could even come into being, leaving the idea of the metropolis by the wayside? Because metropolitan obsession, when it ignores the fact that the daily experience of most inhabitants is confined to infra-metropolitan territories, when it develops big projects in which the local tends to be sacrificed on the altar of the metropolitan, exposes its promoters to the risk of crashing failures? In an era of hypermodernity that narrows horizons, the "semiotic machine that seeks to produce the image, and therefore perhaps the urbanity of tomorrow", referred to by Michel Lussault, must accommodate not only the needs of inhabitants in the here and now, but also their capacity to produce a "protean landscape of multiple perceptions" brought about by the "proliferation of situated narratives that describe a possible world of practice".

The feature that follows presents these initial elements...

Jean-Pierre Orfeuil



12/ Ahmedabad, Athens, Brussels, Cali, Dakar, Djakarta, Lyon, Manchester, Paris, Santiago de Chile.

13/ The ten cities, plus Barcelona, Canton, Daegu and Eindhoven.

14/ Often associated with the quest for citizen quality of life..

15/ Which does not preclude the quest for quality in certain iconic landmark locations, as shown, amongst others, by the case studies in Lima, Mexico and Shanghai.

Public action, part rational, partly irrational

By **Jean-Marc Offner**, Chief Executive of the Bordeaux Métropole Aquitaine Planning Agency (a'urba).

In the planner's paradise, decision processes are simple: God (the mayor, the State...) identifies a problem. His assistants, the angels (experts, consultants...), reach a diagnosis. The saints ("creatives" of all kinds: technicians, designers...) propose solutions. God, possibly aided by the faithful, decides. And the business is settled.

Decisional life is less rosy in purgatory. You meet drunkards looking for their keys under streetlamps, because it's easier to look where the light falls. You come across idiots who look at the finger with which the sage points out the Moon. And you hear a lot of disputes between spokesmen for the "locality". Everyone, in their own way, thinks themselves the best placed to explain "real life": politicians– who listen to their bakers, their hairdressers and their entourage – "representative" of the population; local authority workers, with their decades of experience; consultants, sure in their universal knowledge, claiming objectivity; researchers, with the major comparative advantage of their unlimited availability for relentless scrutiny... I nearly forgot! Quite rightly, citizens have become experts in day-to-day life. Don't they know better than anyone the areas where they live and that they frequent? The competition is getting tough. Who should have the right to "enlighten" decision-makers? Does madness this way lie?

Reason rejected: empty rhetoric

The little world of transport and urban mobility provides numerous opportunities to test the rationales employed in the development of local public policy or the launch of a project. The initial conclusion is damning. Many politicians, journalists and other opinion formers have a problem with figures. For example, the rule of three is not the most widely mastered intellectual gymnastics. Yet confusing absolute and relative changes is sometimes a problem. The modal share of public transport has risen from 9% to 10% in 10 years: not great! The volume of public transport journeys has increased by 25%: fantastic! As for averages and medians... Innumeracy combines, sometimes more insidiously, with cognitive traps, radical and persistent errors of analysis that they won't let go: a tram with its own track is necessarily faster than a bus without a bus lane; it is speed that raises the capacity of a road infrastructure. Two opposed truths. Survey results that disprove these entrenched beliefs will remain unheard. Under these circumstances, argument can quickly become fruitless.

Reason restricted: programmed problems and solutions

The human mind, however smart, is incapable of considering all possibilities. Herbert Simon has explained why: we don't seek the best solution, we stop thinking when we believe we have found a good solution; that is something at least! However, the range of problems and solutions needs to be kept open. Unfortunately, a mass of "programs" come into play to limit the range of ideas. The media select the subjects that will motivate politicians; they hold the power to drive the agenda. For its part, the tyranny of image prompts decision-makers to favour the big and visible – the "hard" – over the "soft". It is more prestigious to cut the inaugural ribbon on a big project than an operating system or a funding arrangements. Public action needs visibility.

These varied programs restrict the range of questions that policy adopts as potential responses. This explains the standardisation of local public action. Technical programs are also in play, because methods of thinking structure modes of thought. A good example is household surveys, which provide data on travel patterns. This otherwise useful statistical system has centred the analysis on modal share, legitimising the notion of a transport market and focusing ambitions on modal transfer (from the private car to public transport). A praiseworthy but very partial goal, at a time of cuts in greenhouse gas emissions, essentially calculated by multiplying the number of vehicles by the kilometres travelled. Another issue is the recurrent understatement of pedestrian mobility, which is poorly reflected in travel surveys.

As for graphic reasoning, it structures the design of transport schemes. The outline of a network suggests the finiteness of the route, reflected in a mesh (to serve all points in an area) or in a closed curve (success of bypasses... and multilevel interchanges).

There is also institutional programming. The genetic code of local institutions is reflected in the way development is conceived. An urban district or general council, for example, thinks in terms of territorial egalitarianism. Every village, every county is of equal value (a station in each town...).

This means that every territory must enjoy the same quality of service: no hierarchical network reflecting urban structure.
Ideological programming is probably the easiest to detect. Consultation meetings provide an ideal place to observe it. Everyone defends and describes their preferred method of travel. True, it is not easy to continue learning. Science itself progresses less by regular adjustments than disjointedly, through paradigm shifts. In the absence of intense educational activity, dogma wins out. And models are perpetuated. "It is ignorance that makes ideology necessary", stresses the economist François Bourguignon.

Reason fragmented: between tourism and polysemy

Every day, individuals experience multiple small organisational failures (a forgotten colleague, a missed appointment...) that an ill-intentioned researcher would be hasty in interpreting as high strategy. The tyranny of small decisions is the daily lot of technicians and politicians. This is true of the management of public space and parking, both governed by numerous and disparate systems. Too many chiefs, no one responsible. The division of labour pursues its damaging course.
Fragmented decision-making is exacerbated by the recognition of plural expertise. The reasonable application of the principle of consultation should not be allowed to hide the risk of relativism: "Everyone an expert, everyone a layman" – all opinions are of equal value. In the fleeting sincerity of the moment in our over-hurried societies, there is no small risk of cognitive illegitimacy.
So we have to live with this pluralism of appreciation. We must also accept that transparency is not the rule. In fact, each institution has its own language, its own codes. In a multi-actor system, therefore, translation becomes constant. However, translation implies a certain degree of error, of misunderstanding. This is not serious if we are ready to accept the catalytic nature of misunderstanding, what Lucien Sfez calls the "super-code". It is because each institution projects its own vision of things that action occurs. Action requires difference, transversality, mismatch. Public territorial policies are particularly fruitful ground for these translation issues, because each relates to a particular geographical scale, a scale that super-codes the meaning of projects.

Reason negotiated?

What is to be done in this world of reason and unreason? Countering ignorance of reason demands education, less to combat dogmas than to help them change. Because representations of the world have their uses in permitting action, whether we call them criteria, operational myths or active stereotypes.
To counter limited reason, we need to open up, hybridise the stages of debate. That is what is happening in Bordeaux with its *Grenelle des mobilités*: an overhaul of diagnoses, problems and proposals for mobility; sponsorship by the urban district, the general council, the regional council, the city of Bordeaux, the State; the planning agency as kingpin; six branches involving all the stakeholders in the mobility system, on both supply and demand sides (local government, central government, employees, employers, associations, technicians); six cross-cutting workshops; six months of work (1st half of 2012) to draw up a report aimed at the institutions, committing them to implement groundbreaking innovations and transversal partnership programmes.
As for fragmented reason, we need to learn to use it. Learn to reconcile the deterministic and the random, in the style of Chinese thought. Learn to use period of instability, dissonance, disharmony. Deliberation is a decision that is both long-weighed (libra: scales) but also set free (liber: free). And hell? you will say... Too many good intentions. Let's stick with purgatory, where cobbled together decisions are at home.

Jean-Marc Offner

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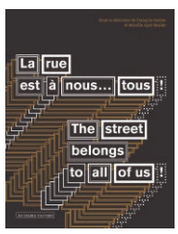

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An RER in Brussels? Spaces of rivalry and the governance of mobility

Belgium is characterised by a centrifugal federalism in which the parties to the federation constantly seek to maximise their autonomy./1 These community conflicts have an impact on the handling of public issues, especially when these go beyond regional and/or institutional boundaries. Mobility issues are a particularly good example. Analysis by **Ludivine Damay**, postdoctoral researcher at FUSL (Brussels), winner of The Making of Movement Young Researcher Prize.

This study forms part of a postdoctoral research contract begun on January 1, 2011, funded by the Brussels-Capital Region.
In methodological terms, it is based on a documentary analysis of archives and press articles covering the period 1989 to today, and on fourteen semi-open interviews with people involved in the RER project.

In Belgium, their prerogatives in the public transport field place the regions at the heart of the regulatory process. That having been said, the federal level also has prerogatives, in particular since it controls the SNCB (Belgian National Railway Company). For their part, the towns manage certain roads, parking policy and apply a municipal mobility plan (transport management planning document). These fragmented powers/2 make mobility complex to manage, especially as, along with the multiple levels of authority, there is also the question of scale, which only rarely matches the institutional boundaries of the different territories.

Yet this issue of mobility is crucial for the future of the Brussels-Capital Region (RBC) which is regularly portrayed as on the verge of being strangled by the pressure of cars... Since the creation of the RBC in 1989, this problem has been at the heart of political and societal debates. What can be done to bring an end to an "all car" policy which,/3 since the late 1950s, has profoundly marked the urban space by driving suburban growth and severely damages quality of life in the city?/4 What can be done to design a new mobility policy to work with a planning process that would put an end to urban sprawl? How do we go beyond the scale of the single territorial entity, and foster close collaboration between public and private actors operating at different scales?

Drawing on the debates around the introduction of an RER (Regional Express Railway) from, to and around Brussels, we will show that behind these issues of mobility lies a "space of rivalries and regulation of those rivalries"./5

Conflicts of use and rival visions

Who would benefit from the RER? Flemish and Walloon commuters working in Brussels? Natives of Brussels in their movements around the city? What would it be its impact on mobility, but also on households' residential strategies? These questions arouse stormy debates. Housing and jobs are moving out of the city, whether within or beyond regional boundaries,/6 and the RER is described as a potential threat to a region that is underfunded, in particular because people are taxed in their place of residence. Studies modelling the effect of the RER on household location confirm this risk of exodus./7 Certain Brussels politicians are therefore incensed by what they see as a transformation of the "[...] capital into a functional space, which sidelines the legitimate expectations of its inhabitants and the quality of their living environment."/8 In order to counter this exodus, the RER must also challenge automobile supremacy and planning systems.

Different visions of the city also emerge. Is Brussels a monocentric city, a city of offices concentrated around the main stations running through the North-South Junction and by the stations adjacent to the European district? Or is Brussels polycentric? These different images of the city can be found in the practical proposals prefiguring the future RER service. Whatever the reality, the RBC wants to maximise the number of stops in its region and to promote a more harmonious use of a railway network that exists for the city's internal mobility. In this way, it would reduce pressure on its subway network, likewise congested in its central areas, and develop other possibilities, for example the Western Station, through intermodal hubs. The city's image is therefore becoming more polycentric, particularly in recent political debates, since the centre is not necessarily the arrival or departure point for journeys within the city.

The RER could help the city to "breathe", to develop "sustainable" mobility insofar as "the train is the most

1/ M. Pâques, *Droit public élémentaire en quinze leçons*, Bruxelles, De Boeck et Larcier, 2005.

2/ M. Aussem, "D'une politique des transports à une politique de mobilité globale ?", in J. Beaufays, G. Matagne, *La Belgique en mutation. Systèmes politiques et politiques publiques (1968-2008)*, Bruxelles, Bruylant, 2009, pp. 285-311.

3/ M. Hubert, "L'Expo 58 et le 'tout à l'automobile'", *Brussels Studies*, n° 22, 2008.

4/ C. Dessouroux, "Le poids des héritages", *Transports urbains*, n° 114, 2008, pp. 4-7.

5/ S. Nahrath, F. Varone, "Les espaces fonctionnels comme changements d'échelles de l'action publique", in A. Faure, J.-P. Leresche, P. Muller, S. Nahrath, *Action publique et changements d' échelles : les nouvelles focales du politique*, L'Harmattan, 2007, pp. 235-257.

6/ F. Dobruszkes, "Un cadre peu propice à l'utilisation des transports collectifs", *Transports urbains*, n° 114, 2008, pp. 8-15.

environmentally friendly form of transport", making it "an essential contributor to sustainable development"./9 The RER should promote this modal switch from the car to alternative transport methods, a switch much heralded as a political goal in the RBC's IRIS and IRIS 2 mobility plans. The latter, adopted in 2010, sets a target of reducing car mileage by 20%. These two policies reflect the "imperatives of the Kyoto protocol".

Alongside the image of Brussels as an "eco-capital" (IRIS 2), by inducing a modal shift, the RER could also provide better access to the economic centres and to businesses. Indeed, not the least of the paradoxes is that the RER, by reducing car pressure, would enable... the remaining vehicles to move more freely, which is an important argument for certain actors, as expressed by the three regions's different unions./10 The future of Brussels as an "economic capital" is at stake...

Other policies will be needed in addition to building infrastructures and designing the RER's operating scheme. It would seem, in fact, that the RER will not resolve mobility problems unless drastic measures are taken alongside, designed firstly to make the train more attractive by penalising car use in different ways (parking policy, smaller traffic lanes or a toll system), and secondly to influence mobility demand by urban planning policies that promote density and development around areas with better public transport provision. These support measures have links with the exodus and urban sprawl, and the RBC will struggle to impose them on the different stakeholders.

However, it is not enough for the other regions to build car parks around the future RER stations. The RBC and its 19 districts also need to adopt coherent measures for roads, parking, public transport priority, etc. However, from the early days of the project, timidity has dominated: the "all car" culture that has underpinned the development of Brussels since the 1950s is tenacious.

The RER, towards a "functional space"?

We feel that the RER project is a fine example through which to analyse the heuristic fertility of the notion of "functional space", defined as a space of rivalries concerning a public problem and for the regulation of those rivalries./11 Three factors underpin this idea. In order to resolve certain issues, public action tends to take control of transterritorial and intersectoral factors and the redistribution of rights of use. In the case of the RER, the ups and downs of the project (which we will not cover here) culminated in an agreement on April 4, 2003 between the three Regions and the Federal Authority, which created space for negotiation between all parties, including the four transport operators involved, in order to finalise this RER network. Different organisations collaborated to produce a report, in June 2009, proposing an intermediate scenario for the introduction of the RER in 2015. Extensive infrastructure work is underway and important rolling stock choices have been made. It is now up to the different political structures to approve the scheme proposed by the 2009 study, approval that was

7/ F. Boon, S. Gayda, "Quelques impacts du futur RER sur la région bruxelloise et sa périphérie", communication présentée au 14e Congrès des économistes belges de langue française, 2000, http://www.stratec.be/files/articles/IMPACTSRER2-FB.pdf

8/ Charles Picqué, *Pour Bruxelles. Entre périls et espoirs*, Bruxelles, Éditions Racine, 1999, p. 123.

9/ L. Bovy, "RER : un projet de mobilité nécessaire", Presentation to the Economic and Social Committee, October 28, 2010.

10/ Joint declaration by SERV, CESRBC and CESRW, "Le réseau express régional", June 27, 2006.

11/ S. Nahrath, F. Varone, "Les espaces fonctionnels comme changements d'échelles de l'action publique", op. cit.

RBC = 19 communes
1re périphérie = 52 communes
(19 + 33 communes de l'anneau de 1re périphérie)
2e périphérie = 135 communes
(52 + 83 communes de l'anneau de 2e périphérie) = Zone RER

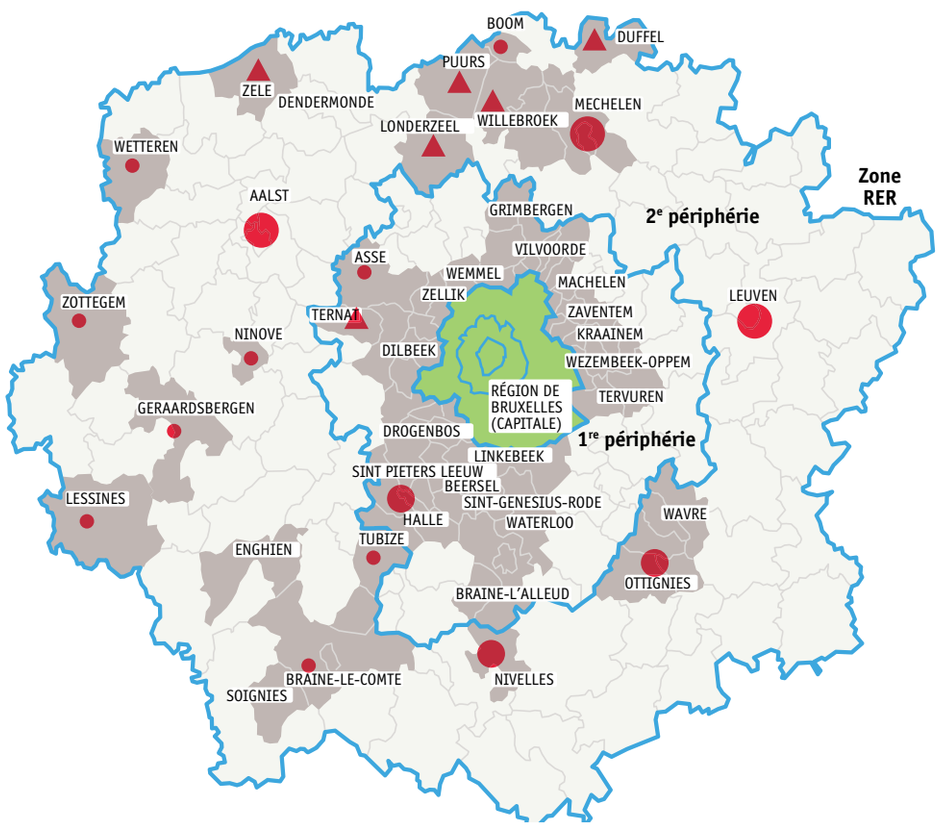
Zone urbaine de la Région de Bruxelles-Capitale

Autres zones urbaines

Nœud économique

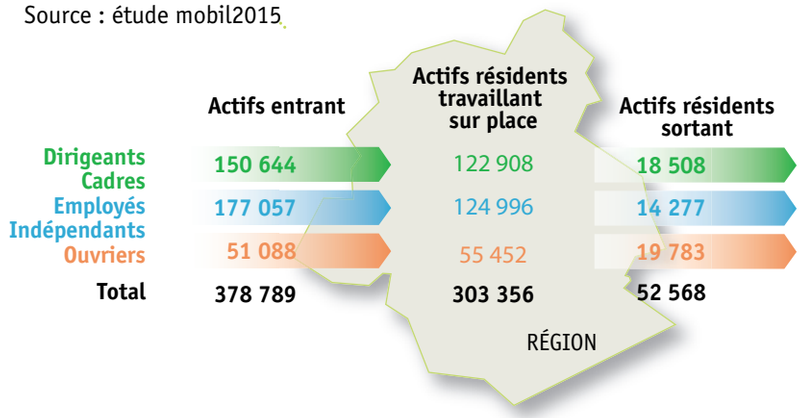
Ville

Petite ceinture
Voiries régionales qui ceinturent le centre de Bruxelles. Formant un pentagone, elles délimitent la zone du centre-ville.

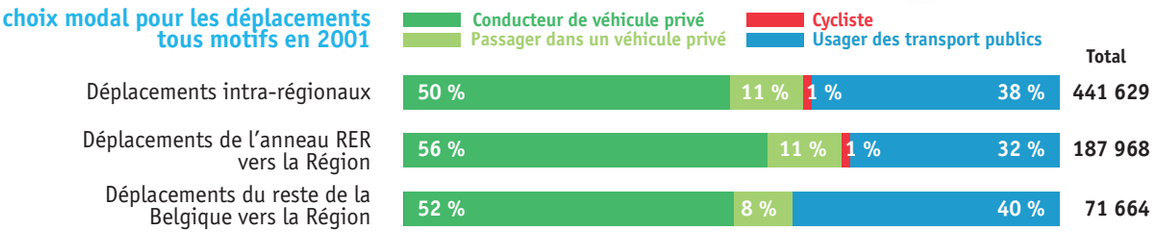


Provenance des autres régions

Source : étude mobil2015



choix modal pour les déplacements tous motifs en 2001



held up by the regional elections, the establishment of new ministerial offices, then by the larger community crisis experienced by Belgium and the absence of a federal government.

Put briefly, it could be said that the RER programme is failing for three reasons. Firstly, the underlying dynamics of the public issue of mobility and the RER resulted in the different public partners establishing an RER zone (see Figure 1), extending well beyond the RBC and taking in 135 municipalities, 33 in Wallonia and 83 in Flanders. This zone, established by the 2003 agreement, constitutes the reference for the development of the RER, and also a de facto acceptance of the metropolitan area around Brussels. Does this mean that this zone has become the relevant space where the different actors can discuss action to develop a coherent mobility policy? That the different choices are made on the basis of this territorial configuration for the purpose of advancing the goals of the agreement, which are to promote a modal shift from the car to the train through the construction of an efficient RER network? Despite the good intentions, this would not seem a simple task. The different actors continued to defend their territorial and institutional interests.

Secondly, the intersectoral principle is still not complete: the associated measures are clearly identified as the poor relation of the agreement. Concerted progress on an operating scheme and planning project designed to counter the effects of the urban exodus is not yet a reality. Even within Brussels, there seems to be difficulty in coordinating mobility policy with urban development.

Thirdly, the railway can be seen as a resource that requires redistribution,/12 in particular for environmental (better air quality for all, sustainable use of resources) and ethical reasons (equal access to the right to travel in good conditions)./13 For sustainable development in particular, there needs to be a rethink on the allocation of rail resources. But here again, although these considerations are raised in the RER project's regulatory space, the parties have not yet identified a standard against which the different visions can be set.

Brussels is not the only city to be confronted with the problem of combining a "functional space" and an "institutional and political space"./14 Although the spaces for deliberation around a new mobility instrument suggest the possibility of a new, more effective and integrated form of governance, it must be acknowledged that they fall short of fulfilling the initial political intentions. Might this be a particularly egregious example? Without going further with this argument, we will nevertheless bring up three points. First, even metropolitan institutions, when they exist, sometimes have difficulty thinking beyond the institutions and territories that created them./15 Second, comparative approaches to the coordination between urban planning and transport, have shown that failure is far more common than success, regardless of the politico-institutional arrangements./16 Finally, despite the spread of international criteria of sustainable development, they are not easy to translate into principles of social organisation at local level, since they too run counter to traditional forms of public action./17

Ludivine Damay

12/ D. Aubin, S. Moyson, "La régulation du rail en Belgique. Analyse des régimes institutionnels depuis 1832", *Courrier hebdomadaire du Crisp*, 2011, n° 2114-2115.

13/ S. Nahrath, F. Varone, J.-D. Gerber, "Les espaces fonctionnels : nouveau référentiel de la gestion durable des ressources ?", *VertigO - la revue électronique en sciences de l' environnement*, vol. 9, n° 1, 2009.

14/ G. Senecal, L. Bherer, *La Métropolisation et ses territoires*, Québec, Presses de l'Université du Québec, pp. 278-287.

15/ J.-A. Boudreau, J.-P. Collin, "Épilogue. L'espace métropolitain comme espace délibératif ?", in G. Senecal, L. Bherer, *La Métropolisation et ses territoires*, ibid.

16/ F. Paulhiac Scherrer, "À la recherche d'un référentiel territorialisé : retour critique sur les fondements d'une analyse cognitive des politiques urbaines", in H. Maksim, S. Vincent, C. Gallez, V. Kaufmann, *L' Action publique face à la mobilité*, L'Harmattan, 2010, pp. 181-200.

17/ A. Da Cunha, P. Knoepfel, J.-P. Leresche, S. Nahrath, *Enjeux du développement urbain durable*, Lausanne, Presses polytechniques et universitaires romandes, 2005 ; P. Hamman (dir.), *Penser le développement urbain durable : regards croisés*, L'Harmattan, 2008.

Public transport modernisation and hybridisation in Latin American cities

The modernisation of urban transport systems in Latin America has had contrasting effects, in both social and territorial terms. Highly efficient methods of transport like the BRT have emerged, meeting part of the demand at the wealthier end of the scale. However, more traditional, even informal, systems continue to provide a transport service for less well-off social groups and in the outskirts of cities. Not to mention fragmented methods of governance. Summary, by **Oscar Figueroa**, transport specialist at the Institute Of Urban and Territorial Studies, Catholic University of Chile.

Since the beginning of this century, Latin American urban transport systems have undergone major transformations aimed at significantly improving the quality of available services.

This process, which has has essentially taken two forms – firstly, upgrades to existing systems, and secondly the introduction of new, more modern and sophisticated services – has been largely successful. For several reasons. First, the rise in family incomes in cities and demand for land and homeownership, accompanied by more private vehicle use, have led to urban expansion. Second, this increased urbanisation has triggered metropolisation processes and the creation of new bodies to govern them. Finally, new transport authorities, both metropolitan and local, tasked with managing traffic and ever-increasing congestion, have come into existence. This has led to the development and introduction of new technologies, some of them largely indigenous, which have managed to change the image of urban transport systems.

However, the most characteristic feature of these achievements is their lack of global scope. Even if they represent a significant advance, they have in no way changed the totality of transport service within cities. The only attempt at total transformation was in Santiago de Chile, but the results were unsatisfactory in terms of the organisation and efficiency of public transport.

These changes began with the introduction of BRT (Bus Rapid Transit) systems, the model being the Transmilenio in Bogotá, which opened in 2000.

Inspired by this experience, many cities in the region tried to imitate it, with varying degrees of success and fidelity. At present, BRT systems can be found in many Colombian cities – Lima, Quito and Guayaquil, Mexico City, León, Guatemala City, Buenos Aires – whereas similar projects remain on the drawing board in other cities.

Other innovative measures have also been initiated, such as the Transantiago project in Santiago de Chile, the modernisation of suburban trains in Brazilian cities, Buenos Aires and Santiago, the construction of subway systems in Panama, Saint-Domingue and San José de Puerto Rico, and their extension to Mexico, Santiago or São Paulo, a small tramline in Buenos Aires, taxi regularisation in Lima and the Federal district of Mexico, and even shuttle systems in Medellín.

Moreover, Santiago, Buenos Aires, Rio de Janeiro and Mexico City have built modern toll expressways, some of them private concessions, others publicly owned.

Finally, with regard to more precarious and often illegal systems, tricycles – whether motorised or human-powered – have proliferated and become very popular in certain parts of Bogotá, Lima and Guayaquil, whilst public motorcycle transport has developed extensively in the cities of Colombia, Brazil and Central America.

Modern, but exclusionary and partial

One of the features of all these innovative systems is their partial nature. In general, the initiatives are limited in scope, with little connection to traditional systems, and only meet a fraction of the demand, leading to social and territorial differences.

The most innovative systems serve high-demand areas, generally in the centre and immediately around it, as with the BRTs in Bogotá, Mexico or Lima. Others operate in peripheral or low-demand areas, and are almost experimental in nature, as in Buenos Aires.

Obviously, the expressways are concentrated in areas of intensive car use, with wealthy populations and, when they pass through less prosperous areas, are not necessarily linked with them.

As a general rule, although they extol the advantages of

Oscar Figueroa

modern, innovative systems, the cities cannot claim to have achieved a radical transformation in their transport systems. The innovations sit alongside more traditional, less high-profile services, which continue to meet the majority of public transport demand.

In addition, the new systems are often exclusionary. Firstly, they only meet a fraction of the demand, and secondly they are not accessible to everyone, since much of the population does not earn enough to use them and/or is located in areas with poor provision. The more marginal transport services are also marked socially, because they meet the needs of more precarious, low-income social groups, located in the most inaccessible outskirts of the cities.

This is because the new forms of transport are not integrated with the traditional system. Generally, unless replaced by new services, traditional systems are left out of the equation, and neither integrated nor updated to reflect the changes. The most common practice is to ignore them and to focus solely on the innovations.

This practice is standard in Latin America. Improvements to public transport systems there usually involve adding new services, often unconnected with existing provision. There are two possible explanations for this: either because of a certain inability to improve the status quo, or because it is thought that the efficiency of the new systems could be undermined by interaction with the traditional services.

To a certain degree, this attitude reveals that the purpose of the new projects is more to boost status in the competition between cities than really to improve transport systems. A good number of the new Latin American urban transport projects play an important role as "showcases" for modernisation and as vectors for the attractive self-image that the cities wish to project. With cities seeking to attract investors and other economic agents, some initiatives are more focused on visibility than effectiveness: in Buenos Aires, the modern tramway has been extended by two kilometres, but does not link any of the important points of the city; as for the BRT system, it is located in a peripheral area where demand is relatively low.

Segmented institutional structures

This situation is also caused by the organisations responsible for them. The process of metropolisation in Latin American cities has led to a strengthening of local government, or a development of new governance structures for certain sectors such as transport, making for an organisation that is more complex and less transparent than before.

The different governmental bodies are often in competition on projects, which reinforces the "solitary" character of these new projects in relation to existing services, and generates considerable confusion at the metropolitan scale. Moreover, there are few local authorities with authority over the whole urban area.

Planning and decision-making processes are also institutionally fragmented. Transantiago was built without the participation of the 38 mayors who form part of the Santiago metropolitan area. Command of the transport innovations in Lima (BRT and subway) was divided between different bodies: control of the modernisation and rationalisation of the taxi system was

confined to the Federal district (DF) of Mexico alone; responsibility for transport in Buenos Aires is divided between the national and municipal authorities over the whole federal capital area, whilst the outlying municipalities, numbering at least 18, play no part.

Numerous entities have been created to manage the new systems. Sometimes they have a degree of independence from the existing structures, but more often they form an additional layer. This makes institutional organisation highly complex, without necessarily producing greater efficiency in the management and organisation of the sector.

As a result, there is competition between the new projects and the old, resulting in highly fragmented transport systems and less integration. In Santiago, new subway lines were created without prior planning, obliging the bus operators to negotiate with the subway operators in order to change their routes to take account of the changed situation.

In the context of urban public policy, governments generally gain more status from investing in iconic, high-profile projects than by maintaining less prestigious existing systems. The idea of modern, integrated, effective, user-friendly systems, embraced by and affordable to the whole population, seems to have been completely abandoned. Giving up on governing the ungovernable (the traditional system) reveals the inability to manage systems that have stood the test of time and, for good or ill, survive and reproduce.

Widening social divisions

The new situation, underpinned by globalisation and the liberalisation of transport system management, has generated innovations that are obvious and positive in many ways. Nevertheless, the failure of governments is flagrant when these new efforts are assessed.

Part of the population remains tied to the old methods of transport, and probably identifies with their capacities, given the virulent critiques that Transantiago has attracted. Other systems are victims of their popularity and, like the Transmilenio, come under critical stress when demand exceeds expectation. In other cases, higher-income populations have to resort to systems that are informal and illegal, but of better quality, as in Buenos Aires.

Modernisation highlights social divisions that are already apparent in residential location and income, and are now emerging in access to transport. However, traditional systems can survive, whilst new, informal systems develop, as can be seen at the end of the Transmilenio line or the BRT routes in Guyaquil, where there is a good supply of bicycle and tricycle taxis. | **Oscar Figueroa**

Gentileza El Mercurio - Chile

Why Bogotá has no subway

With its 7 million inhabitants, Bogotá is one of the few cities of this size in the world to have no subway system, despite very favourable features: two thirds of journeys by mass transit systems (MT), car ownership below 15%, very high density, marked monocentricity, strong demand on the radial arteries. Nevertheless, Bogotá is a global icon for mass transit, with its Transmilenio bus corridor system, which has greater peak capacity than most subway lines and is a model for many cities that have developed BRT (Bus Rapid Transit) systems. The history of public action explains why. By **Juan Pablo Bocarejo**, Professor, **Ingrid Portilla**, researcher, and **Maria Angélica Pérez**, research assistant, Los Andes University, Bogotá.

There have been countless studies and pseudo-studies on Bogotá's need for a subway. Time and again, the French, Japanese, Chinese, Spanish governments, and big global railway industries, have offered their services to the Government and the municipality. Dozens of possible lines have been designed. The World Bank has financed a number of "serious" studies on the subject. Politicians since the 1980s have always expressed keen interest: proposing a subway system has always been a good political tactic.

Rodrigo Arangua / AFP

Sur les quais du Transmilenio.

Questionable and questioned projects from an urban and financial perspective

In 1981, a Franco-Spanish team proposed a three-line subway network, which was set to open its main branch in 1986. This project, backed by the then mayor, ran up against financial obstacles, since the country had to decide between a subway in Medellín, its second largest city, and in Bogotá. Since the then president came from Medellín, and had promised his city a subway in his election campaign, he kept his promise...

In 1986, a president from Bogotá decided to build a subway system on the existing railway lines. He issued a call for tenders from several national corporations. An Italian company won, and even signed a contract. Problem: the old railway lines had not kept pace with changes in the city, were in low-density areas, often running through depressed neighbourhoods. The lack of forward planning and urban vision, along with funding problems, prompted the new mayor, the first elected by universal suffrage, and the president, to abandon the project. At the same time, the Medellín subway system was facing delays and cost overruns, which the whole country would have to pay for. Not too popular...

The president elected in 1998, a great fan of the subway system, approached the mayor with a project including 70% state funding. However, the mayor was backing a transport master plan developed by the Japanese Cooperation Agency. The two studies differed on what kind of subway to build. The country's financial crisis in the late 1990s killed the project.

These failures offer lessons for urban transport in developing countries:

- There was a lack of linkage between the subway projects and the existing transport system. The subway was sold as a magic bullet, but it required large government loans and studies showed that the demand it would meet would not exceed 10% of total public transport use;
- The division of prerogatives and responsibilities between central and municipal government led to continual disputes and delays;
- The funding of the subway system was always dependent on the health of the public finances, often under pressure;
- International specialists encountered a lack of vision of urban development. It was only in the late 1990s that

Bogotá adopted a proper land use plan, and some projects depended on forecast growth in low development areas;
● The international lobbies largely saw the subway system as good business, and tried to bypass institutions and planning processes, with no understanding of the complexities inherent in these projects. The Colombian institutions wasted time in poorly conceived procedures.

Transmilenio, an innovative project, but a victim of its success?

At a stage when he had two subway system designs on the table, Enrique Peñalosa, mayor of Bogotá in 1998, chose to put his political prestige behind a groundbreaking innovation: the Transmilenio. True, Brazilian cities had had bus lanes for a long time, and Curitiba's surface train line concept was very popular. However, proposing it as the principal transport method in a city as big as Bogotá and successfully developing a system with the capacity of the Transmilenio would be a first.

The infrastructure cost of the Transmilenio's first phase was 10 million dollars a kilometre, less than a 10th the cost of the subway, at almost 120 million dollars a kilometre. With an investment of around 1.5 million dollars, Bogotá soon had a 100 km network of mass transit corridors. The reduction in travel time, particularly to the city centre, was substantial. Positive impacts on city density,/1 real estate values, air quality and road safety /2 were demonstrated.

However, Transmilenio is a victim of its success. Passenger perceptions of the service is declining, notably because of overcrowding. This is the result of a strategic decision: that operating costs should be covered by fares. As a result, operators seek to maximise passenger numbers. With almost 45,000 passengers an hour in each direction, at peak times the busiest route suffers from reliability and comfort problems. Outside peak hours, a significant number of buses are unused, which means that the average daily occupancy rate is more than 6 people per square metre.

Revival of the subway?

Although the BRT's capacity could be further increased /3 and other lines less costly than the subway could reduce congestion on overcrowded routes, its inadequate performance has brought the subway solution back onto the agenda, with a lead time now of ten years. A first "new" 24 km subway line, based on the last study financed by the World Bank in 2010, has political backing from City Hall. It would serve 7% of mass transit journeys and cost twice as much as the Transmilenio's 100 km, whose modal share is close to 30%. In 2012, with a new mayor, the old planning problems are back: there is no long-term master plan, or precise funding programme. Studies continue, and replacing BRT lines with tramlines is a new priority. In the meantime, car and motorcycle use is rising fast...

Bogotá, Paris, same conflict?

We are struck by at least two resemblances with Paris: the confrontations between the government and the City of Paris about the metro at the end of the 19th century, and the sudden emergence of the "Grand Huit" in 2009... Is a saviour project always needed? |

Juan Pablo Bocarejo, Ingrid Portilla et Maria Angélica Pérez

1/ J. P. Bocarejo, I. Portilla, M. A. Pérez, "Impact of Transmilenio on density, land use and land value in Bogotá", *Research in Transport Economics*, 2012 a, pending.

2/ J. P. Bocarejo, J. M. Velásquez, L. E. Tafur, C. A. Díaz, "Impact of BRT systems on road safety: lessons from Bogotá", *Transportation Research Record*, 2012 b, pending.

3/ D. Hidalgo, G. Lleras, E. Hernández, "Capacidad en sistemas de transporte masivo en buses, desarrollo de fórmulas y aplicación al caso de Transmilenio de Bogotá", XVI Congreso latinoamericano de transporte público y urbano-CLATPU, Mexico DF, Mexico, October 6-8, 2011.

SUBWAY PROJECTS IN BOGOTÁ

	Study year	Planned operations	Priority line (km)	Capacity per hour and direction	Costs ($ millions 2007)
Ineco-Sofretu Subway	1981	1986	23	44,000	1,719
Former Intermetro SpA railway lines	1987	1995	46	22,000	2,348
JICA subway	1997	2011	32	42,000	3,057
Bechtel-Systra-Ingetec subway	1998	2006	29.3	56,000	3,293

Modernisation?

On March 27, at the IVM International conference, **Alain Meyere**, Director of the Mobility and Transport Department at IAU-Île-de-France, led the round table on "Modernisation?". Below, he summarises what he learned from the debates.


D. R.

What did you find surprising in this round table?
Whether the issue is to move away from an underdevelopment that is still a recent memory, or to overcome the effects of an economic/social crisis, practitioners and researchers in Europe, Latin America and Asia share a belief that transport and mobility management have a role to play. What struck me first is the degree to which the educated elite of different countries share the same concerns.
I saw the same thing some fifteen years ago at a conference in Cordoba in Argentina, entitled "Transport and public health". At the time, car use was rising very fast in emerging countries, outstripping the quality of their roads and their driving skills. So I expected to hear references to road accidents, which are three times higher than in France, but the focus was on vehicle emissions. Similarly, the IVM conference highlights the presence of nature in the city as a necessary component of the urban dreams of students, whether from Catalonia, Korea or Columbia.
Should we welcome this uniformity of ideas, which could save time in identifying problems and finding solutions? Or should we be concerned that it masks differences that have to be taken into account in any successful urban project, whether or not there is a transport element?
I would tend to optimism: the increasing emphasis everywhere on managing mobility rather than building large-scale infrastructures, what the World Bank calls "white elephants", will prevent it falling into the trap.

Did you come across any questions relating to urban function that apply to Île-de-France?
Very much so. First, about the management of big capital cities and the role of the state. It was not shown that the state of should be in exclusive, or a least absolute, control. In Bogotá, it was only after the government withdrew that the question of mobility was stated in all its dimensions, and that the authorities finally dropped the naive and archaic vision of the subway as an essential instrument and sine qua non of access to modernity. The case of Brussels /1 clearly shows to what extent the standard structures of governance, designed for territorial management, are hard put to manage flows, which take no account of administrative boundaries. This is what, in France, led us to devise cooperative bodies designed to manage the interfaces between governance structures at different scales (interdistrict federations, metropolitan clusters).
The other point that finds an echo in Île-de-France relates to territorial equity and the role of transport in social inclusion. These issues came up in the review of the masterplan, and then in the controversy on the overhead metro. In this domain, Latin America has undeniable expertise, which could be particularly useful to us in certain areas.
A final point, highlighted in his contribution by Oscar Figueroa: /2 the risk, which arises when modernisation is restricted to a few lines serving a handful of areas, of excluding the majority from its benefits and sidelining the existing network. When I heard this, I wondered if it was really necessary for the Grand Paris metro stations to have "their own image", a separate identity, and whether the plan was now to extend this operation to all stations in Île-de-France?

What should be our priorities for future exploration?
One of the lessons of the round table is the importance of a transitional period. The same technical solution that has been a success in Bogotá is a failure in Santiago de Chile: in one case, the transitional period was tightly managed, in the other not.
We Europeans are moving into a time of upheaval when we will have to overhaul our mobility practices from top to bottom. In order to cut car use, we will need to change the way we consume and produce, and some, because of their economic vulnerability, will have to do so sooner than others. We urgently need to help them take those steps and prepare for a managed transition.
Interview by A. L.

1/ Presentation by Ludivine Damay, cf. article p. 30 to 32.

2/ Cf. article, p. 33 to 35.

China: already regulating cars

For car manufacturers, China is the world's leading and most dynamic market, and one of the markets with the greatest taste for luxury. However, the Government has ensured, via joint-venture obligations, that most demand is met from domestic production, at a time when it is otherwise opening its borders (it joined the WTO in 2001). For urban planners, Chinese cities have been defaced by a frenzy of urban expressways. For analysts of mobility and transport policies, the car still plays a modest role, but one already regulated by pragmatic, innovative and subtle policies... Summary by **Jean-Pierre Orfeuil** based on the work of **Pan Haixiao**, Professor at Tongji University, and **Liu Jian**, Professor at Tsinghua University.

In China, the private car still plays a modest role, equivalent to France at the time of Tati's films: ownership stands at 50 cars per 1000 people (nonetheless a sixfold increase in 15 years!), against almost 600 in Europe. Although the numbers are concentrated in the big, wealthy cities (60 cars per 100 households in Beijing, almost as many as in Île-de-France), the car accounts for only 20% of trips in Shanghai, and scarcely more in the capital. Not that this precludes pollution or congestion. Beijing probably established a record in 2010 with a motorway traffic jam that lasted... 10 days.

Traditional or innovative strategies

China's transport policies differ widely from one city to another. To see this, you only have to compare Beijing with Shanghai. The former, seat of central government, welcomed the car with open arms, whereas the latter, with greater exposure to the world, tried very early on to control it. Result: in 2008 there were three times fewer cars in Shanghai than in Beijing, cities of similar size (20 million inhabitants) and wealth.

There is also no objection to policy U-turns. For example, in the early 2000s, at the beginnings of the car explosion, many cities restricted bicycle use on major roads, because they got in the way of the cars. They even cancelled cycle lane projects, before central government, in 2006, took a clear position in favour of the bicycle. A few years later, Hangzhou had the world's largest fleet of self-service bicycles (50,000), and most big cities now have such systems or plan to introduce them. And, since the measures taken to ensure a smooth running road network during the Olympic Games, and since the great traffic jam of 2010, Beijing has changed strategy is and is now moving towards greater control of automobile traffic.

These management policies draw both on traditional and innovative strategies. The extensive development of subway and RER (regional express rail) networks is conventional in approach. Shanghai was very active in this area in the 2000s, and Beijing is catching up./1 Because of the significant investment needed, and in the hope of better management, the authorities increasingly make use of public-private partnerships. However, in Shanghai in particular, they are starting to understand that they cannot stake everything on these large-capacity systems, especially for suburban provision, because of the diminishing return in the number of passengers for every additional kilometre of track built. Hence an increasing focus on the development of bus lanes, transit oriented developments (TOD) inspired by Hong Kong and Japan – i.e. big urban operations near stations, like the Nine Clouds Project in Shanghai – and on mobility services (park-and-ride, 2, 3 and 4-wheeled taxi services, largely informal but tolerated, which extend the range of cover for these stations, self-service bicycles).

This increasingly integrated approach to physical networks goes hand-in-hand with pricing mechanisms: a single prepaid card can be used for public transport, taxis and parking. In Shanghai, there is now preferential pricing for journeys involving the use of multiple transport methods. And Beijing, quickly followed by other cities, has introduced a strategy to reduce public transport fares, which will probably have more impact on the mobility of the poor than on car use. Alongside these ambitious schemes, bicycle friendly policies (cycle lanes, self-service bicycles, bicycle parks near stations, etc.) might seem trivial. However, this is not the case, because of the size of the bicycle's modal share, the presence of 100 million electric bicycles and the rehabilitation of the cyclist's status. These policies have

1/ 42 km of subways in 2000, 336 in 2010, 571 planned for 2020, plus hundreds of kilometres of suburban tracks.

proved their effectiveness: since 2005, the bicycle's share has remained at around 30% in Shanghai, whereas it dipped from 30% to 18% in Beijing.

Disincentives

However, the greatest innovation is to be found in policies that focus directly on car ownership or use. Shanghai was the first to act, at a time when cars were still few and far between. Its inspiration came from Singapore, where the government limits the number of cars that can be registered in any one year, by means of an auction system to select those ready to pay the most for the right to buy. Shanghai retained this auction principle, but adapted it: what people buy is the (lifelong) right to drive, which they need before they can bid. As Shanghai is not an island and it is always possible to claim residency outside the measure's range of application, the system is combined with a toll charge for the use of urban expressways by nonresidents. According to experts, the impact of this initially very effective measure may be eroded over time, as a growing proportion of the population acquires the right to drive. All the same, the average auction price stood at $9380 at the beginning of 2012, enough to make people think, and all the authorities have to do is reduce the number of licences for the price to go up further – which penalises the younger generations.

Perhaps because the pressure was on (the Olympic Games), or else because, as in France in the choice of tramways, two rival cities cannot adopt the same policy, Beijing opted for a different system. With the perspective of the Games, it began with modest experiments in traffic alternation for smaller events, then developed the "full-scale" policy (right to drive on alternate days based on the last number on the registration plate). Care was taken (this is the capital, after all) that the restrictions should apply at least equally to government vehicles as to private vehicles. Reduce congestion (45% less traffic, travel speeds within the city up to 43 km/h), a 60% drop in pollution, demonstration of the capacity of buses, subway systems and taxis to meet the additional demand during the Games, as well as opinion polls (69% pro, 19% anti), encouraged the authorities to maintain this strategy, with adjustments, after the event. At local level, the disincentives included an expansion in pay parking and a sharp increase in parking prices (5 to 7 times higher, depending).

Despite these arrangements, the year 2010 saw record car sales and the "Very Big Traffic Jam". The authorities then shifted ground by circulating a draft traffic reduction plan on the Internet, with the aim of assessing public reaction and generating rumours, particularly about the application of an auction system like Shanghai's. Shortly afterwards, they adopted a measure which is, to our knowledge, unprecedented anywhere else: a lottery for the right to acquire a car. The authorities set an upper limit of 240,000 for the number of cars registered in 2011, a third of the 2010 level. Potential car buyers entered a lottery, so it would be luck (and not money, as in Shanghai) that would decide. The success rate in the lottery was about one in 50. This measure would seem to have had significant side-effects: a rise in bicycle sales, increased demand for rental vehicles, which are also subject to quotas. A recent proposal is to allow taxis to be shared by several users.

There is a lesson in this: China, where the level of car use is equivalent to that of France in the 1950s, and which has developed an extensive motorway system, is implementing equally extensive traffic reduction policies in its biggest cities, policies that are beginning to be imitated elsewhere in the country. It will not experience the same patterns of urban car use as we did. | **Jean-Pierre Orfeuil**

To find out more:

- Liguang et al., "Evaluation on the effect of car use restriction measures in Beijing", Transportation Reseach Forum, Custrec, 2010.
- Liu Jian and Zhuo Xiaoxuan, "Analysis on Beijing's policy of restricting motor vehicle usage", Tsinghua University, for La Fabrique du mouvement, 2011, www.movemaking.com
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- *Le Quotidien du Peuple*, on line, *via* http://french.peopledaily.com.cn/

Emerging megacities: optimising movement

By **Patrick Carles**, CEO of Sareco, Ponts et Chaussées civil engineer.

My thesis is based on a simple prediction: demand for mobility in emerging cities will continue to rise with economic growth and the rural exodus. In the absence of preventive measures, and with the increase in the number of cars, a highly coveted object, these cities are condemned – as were their western counterparts – firstly to more or less chronic congestion, and secondly to hugely expensive investment in road infrastructures and car parks.

Three axioms

In the light of this prediction, three axioms emerge.
First, once constraints reach a certain level, in particular parking costs, most motorists stop using their cars.
Second, in urban areas and with equal flows, urban expressways and car parks built for automobile use are much less efficient than public transport infrastructures, in terms both of investment costs and environmental quality. The savings can be estimated as a billion dollars per million inhabitants. And last, in a city where car use is still low, the majority of the population aspires to car ownership, a source of freedom to "come and go" and of social status. However, this nonmotorised majority is clearly unaware of the problems associated with car use, and therefore unaffected by the increase in parking charges.

A solution

The solution is clear: as of now, before this explosion in car ownership occurs, parking charges should be set at a level that will provide a targeted disincentive for certain uses of the car. In parallel, cities should develop public transport, along with other efficient alternative modes, depending on conditions, e.g., car sharing, bicycles and motorbikes.
This solution has the major advantage of being politically acceptable. It does not affect the desire for car ownership: there is no plan to alter the cost of car purchase; appropriate car use is not affected, i.e. in low-density areas, during off-peak times and in the evenings, at night and on rest days; the change is not abrupt, in fact it can be implemented very gradually, both in terms of expanding the geographical scope of the sectors concerned and increasing parking charges.
Finally, the advantages of such a policy are very easy to communicate: investment savings can be allocated to other, more essential amenities (universities, hospitals...); only car owners, i.e. the well-off, will be affected; the majority will see rapid improvements in the public transport quality; the development of public transport systems and the spread of roadside parking charges in central areas will generate significant employment, which is always popular: the calculation is some 3000 parking wardens per 100,000 pay spaces, and 5000 jobs per million inhabitants on the public transport system.
It also offers an opportunity for highly effective public communication on environmental improvements and better quality of life.
In view of the predictable explosion in car ownership, therefore, optimising the economics and ecology of mobility in an emerging city urgently requires the deliberate implementation of a targeted parking policy in central areas, accompanied by the development of public transport. This will prevent massive wasted investment and significant environmental damage and discomfort. The next step is to begin pricing experiments in order to confirm and refine this innovative approach.

Patrick Carles

Pierre Bessard / REA

Peru: pedestrians to blame?

Vehicle use in Peru is still low: 55 vehicles – 35 cars – per 1000 inhabitants. In proportion to the population, there are nevertheless three times as many fatal traffic accidents as in France, 78% affecting being pedestrians./1 In the outskirts of Lima, where the population is dense, young and poor, and traffic intense, the absence of measures to protect pedestrians is flagrant. However, according to the Peruvian authorities, pedestrians alone are responsible for this situation, the only ones to blame, and must be punished for their imprudence: in 2010, a system of pedestrian fines was introduced, which has in any case proved ineffective. What is behind this paradox?* Synthesis by **Gaëlle Rony**, based on research by **Juan Carlos Dextre**, Chair of the Mobility Committee, and **Mariana Alegre**, teacher, both at the Pontifical Catholic University of Peru.

"The Carretera Central has always been like this, but now there are more people, more shops, more movement. The only safe and quiet time to cross is before six in the morning. After that, all day and all night, it's very dangerous." Mrs Mariella, 53, a resident of Los Portales, describes the daily ordeal of people living in this poor suburb of Lima, which has developed along the Carretera Central (CC) road. This expressway, originally designed as a high-speed central road artery for heavy transport between the capital's industrial zone and the country's other regions, has actually involved into a badly managed urban road. In the last 30 years, accelerated though irregular urban development, the introduction of supermarkets, the presence of a growing number of street traders, have contributed to the development of a mixed, but primarily commercial, district on this site, which brings in pedestrians from other districts.

The CC has thus become a congested thoroughfare in the midst of intense urban activity, with large pedestrian flows, a fact that has not been registered by the authorities, who continue to treat it as an expressway on which pedestrians are marginal users. The outcome

"Petaones irresponsables en calles limeñas"

Irresponsible pedestrians in the streets of Lima
(La Repùblica, 24/10/2010)

"Peatones son culpables del 40 % de acidentes de trànsito fatales"

Pedestrians are responsible for 40% of fatal accidents
(El Comercio, 13/06/2010)

"Malos peatones : el 75% de los casi 4 mil limeños multados en una semana cometió faltas muy graves"

Damned pedestrians: of the 4000 pedestrians booked in one week, 75% have committed a serious offence
(El Comercio, 23/11/2010)

* This summary is based on two case studies: Juan Carlos Dextre Quijandria and his team analysed pedestrian conditions in three areas running along the Carretera Central Road. Mariana Alegre Escorza studied the passing of the law authorising fines for irresponsible pedestrians, its application and the debates around it. www.movemaking.com/welcome/

1/ "Global status report on road safety", WHO, 2009.

“Sanción a imprudentes : ya son 6.800 los peatones multados por la policía de Lima Centro ”

Penalties for improvements: 6800 pedestrians have already been booked by the police
(El Comercio, 01/12/2010)

is that the number of fatal accidents here is amongst the highest in the city.
Although the authorities have long recognised this road safety problem in Lima, and around the country, they nevertheless tackle it as an issue of traffic congestion and driver safety, not from the perspective of pedestrian rights. Transport takes priority over mobility. Against this background, in 2010 the central government passed a decree authorising penalties for pedestrians committing “offences”: for example, ignoring traffic lights, walking on the road, crossing outside designated crossings, walking in public space when inebriated or under the influence of drugs, etc. This measure turns pedestrians into offenders rather than potential victims or vulnerable users deserving of protection./2 Yet in 93% of cases, accidents are caused by motorists, and are essentially due to excess speed and dangerous driving.
During 2011, 22,160 fines were imposed and only 700 paid, as reported by the Peruvian National Road Safety Council. The first critiques of this law in fact focused on the difficulties of identifying offending pedestrians (who do not necessarily carry any ID) and forcing them to pay, although the poorest of them had their fines commuted to road safety education classes. However, the main critique is the ineffectiveness of the procedure, since there has been no fall in accident rates since it was introduced. This failure has led to a re-evaluation: the media now reports previously minority opinions on the absurdity of a measure taken against users who do not enjoy the minimum conditions for safe movement. How can you impose obligations on citizens whose right to mobility is not protected?
However, the public authorities, whether national, regional or local, continue to deny responsibility, despite the fact that the design and management of the city and of public transport systems have still not been rethought to reflect the diversity of pedestrian needs and movement patterns. And the most vulnerable pedestrians – the poorest, the oldest, the disabled,... – still face the daily threat of accidents, but also of exclusion, since they restrict their activities (leisure, access to services, shopping, etc.) to an ever smaller compass. | **Gaëlle Rony**

2/
A point of view that contradicts Asirt’s assessment (an association that advises tourists and expatriates): failure by drivers to obey the Highway Code, aggressive behaviour, inadequate traffic lights, poorly maintained sidewalks, etc., www.asirt.org

Forced walking

By **Éric Le Breton**, lecturer in sociology, Rennes 2 University, IVM.

Planners pay great attention to city dwellers who who go to work or shopping on foot, those pedestrians from the gentrified centres who are also motorists and public transport users. For them, walking is a choice, and a secondary mode of travel.
However, there is also a “forced” form of walking, practised by a population of the “vulnerable” who exist on the margins of the working world. Its representatives are lone women with children, migrants, young people under 26 and unqualified jobseekers. In all, one French person in ten is obliged to travel on foot, for lack of an alternative.
Of course, these people have access to other forms of transport, but with difficulty. The bicycle is excluded for cultural reasons, since men see it as shameful relative to the car, and women reject it because of the bodily postures it demands. The car is unaffordable and restricted exclusively to big occasions. Public transport is also expensive and, in addition, a sign of poverty: the vulnerable only use it as a last resort. So walking is their main means of getting around, and for many their only means.

The ordeal of urban trekking

Walking can find them within circumscribed zones, no more than a few kilometres from their homes. In our sprawling cities, these people live in tiny enclaves where they have access to the essential minimum. And even if

they describe their movements in terms of freedom – "I go where I want, how I want..." – it gradually emerges that they never take the car, or the train, or the plane, that they rarely leave their accustomed hunting grounds. The confinement of these walkers to small areas is not overtly visible.

People in precarious jobs sometimes have to travel long distance. For example, the woman who washes up in a restaurant at Croix-Rousse, in Lyon, finishes her shift around half past midnight and rushes to catch the last metro, which has often left; and runs for the last bus, only to miss that too. All she can do is walk home, to Villeurbanne – an hour and a half on foot, repeated several times a week, month after month, year after year. There is nothing pleasant about this trek across the city, and even less when it entails, for some, walking five or ten kilometres daily along major roads, in industrial or commercial zones. Winter and summer, these long foot journeys are sapping. They are exhausting for these people who, in the city, have the same needs as a trekker – the right shoes, the right coat, the right bag – all kinds of kit that they can't afford to buy. Often presented as an activity that promotes well-being and health, in these conditions walking destroys the body.

Ewa Lundgren / Nordic Photos / age fotostock

Will the democratisation of mobility give these forced and frenzied walkers a chance of accessing other forms and scales of travel? No. Our mobile society operates via a number of systems, in particular transport (train, subway, motorway), information (signage of all kinds), and finally security, which regulates access to mobility networks (tolls, airport security gates, ticket machines, driving licences). These systems are paradoxical, offering certain populations the option of mobility and, at the same time, isolating and confining other sections. For example, the A6 motorway is practical for holidaymakers in the South of France, but constitutes an impregnable urban barrier for people from the poor estates of the Essonne. The driving licence is a fantastic source of freedom in a society organised around the car, but those without it are deprived of access to that society. The foot travel of the vulnerable runs counter to the growth of hypermobility. | **Éric Le Breton**

The explosion in motorcycle use around the world: heaven or hell?

The huge expansion in the use of motorcycles in all the world's big cities is, in the field of transport, one of the most striking features of the last two decades. With the "guided tours" provided by The Making of Movement, we can measure the scale of the phenomenon, understand the process, and draw lessons for European countries. By **Jean-Pierre Orfeuil**.

Every year in the world, twice as many motorcycles are sold as private cars (100 million versus 50 million). Their use is on the rise almost everywhere. In certain cases, it goes unnoticed, in others it generates irritation, ignorance or polemic. Why? Because the motorcycle "family" is highly disparate, running from electric bicycles to mopeds to powerful motorbikes. Because the risk of accident their users face varies greatly, but is often higher than that borne by car drivers.

In the East

One scenario is exemplified by Taiwan,/1 where the motorcycle has always dominated the car. With average annual growth of 9 to 10% over forty years, it is now a rich country, with per capita income higher than the European Union. Yet it only has 250 cars per 1000 inhabitants, as compared with some 600 in Europe. Until the 1960s, mobility was divided between walking, cycling and the bus; the car was almost unaffordable. In this period, the government encouraged the establishment of a national motorcycle industry with the aim of developing the domestic and export market./2 In parallel, it implemented road safety measures (compulsory helmet wear and licence from the 1960s, prohibition on motorcycle use on certain roads and all motorways, etc.), then environmental standards on pollution, noise and fuel consumption (1970s and 1980s) which helped to "civilise" the motorbike. The cost of buying and using a motorcycle is much lower than for a car, particularly in big cities. The differences lie in the "market prices" of vehicles (ratio of 1:10). They also relate to the annual taxes on ownership (ratio of 1:40) and the legal obligations (in particular the obligation to pay for domestic private parking in Taipei, at a cost of g1000 a year). In addition, the cost for an hour's car parking in central Taipei is the equivalent of half the average hourly wage, whereas motorcycle parking charges are less widespread and cheaper (10 to 15% of the average hourly wage). These disincentives to car ownership and use help to maintain an extensive taxi service in the big cities (75,000 taxis for less than 7 million inhabitants in Taipei, as compared with the figures for Île-de-France!) and tend to restrict car use to particular purposes (70% of motorcyclists also own a family car for longer, i.e. interurban, journeys).

The motorcycle is thus the primary method of transport in the city of Taipei, accounting for 32% of mechanised journeys, as against 28% for the car, 30% for public transport, 8% for taxis and 2% for pedal cycles. It is a much safer form of travel than in France: in Taiwan, there are around 12 deaths per billion motorcycle kilometres, compared with around 105 in France for moped and motorbike riders...

Continental China has become the world's biggest car market. Yet in Chinese cities, twice as many electric bicycles as cars are sold each year, and this bicycle fleet (more than 100 million) is estimated to be four times larger than the private car stock./3 Moreover, the extension of subway and light railway systems to the urban outskirts leaves huge areas without direct public transport provision. As a result, big park-and-ride centres, in some places equipped for self-service bicycles, in others for electric bicycles or motorcycles, extend station range and bring additional customers to the railway. Finally, a gradual shift is taking place from the electric bicycle to the electric scooter, which is faster, when the need arises and conditions suit.

In the West

Let us cross the Pacific to South America. Despite a fortyfold increase in motorcycle sales (as against fourfold for cars) and a tenfold increase in the total number of motorcycles in the last 20 years, the situation of the motorcycle in Brazil,/4 and in particular in São Paulo, differs greatly from what we find in Taiwan. Transport methods here are invested with strong symbolism. In this very unequal country, public transport is a symbol of solidarity, of universal access to

1/ Cf. Chao Fu Yeh, "Taipei, from a metropolis for motorcycles to a greater role for public transport", for The Making of Movement.

2/ Today with global brands like Sym and Kymco, whereas the local car industry is limited to assembly and the manufacture of spare parts.

3/ According to the most recent mobility survey (2009), the subway accounts for 6% of trips and the car 15%, whereas motorcycles (largely electric bicycles) represent 20% and the bicycle 14%, the remainder being divided between buses (13%), taxis (7%) and walking (26%).

4/ Cf. "Uso das motocycletas", São Paulo, study carried out by Eduardo Alcãntra de Vasconcellos for The Making of Movement.

Chris Stowers / PANOS-REA

mobility, but it is a fragile symbol, which needs to be defended.

Moreover, transport has been the source of significant innovations, which have contributed to national pride. For example, Curitiba was the birthplace of the BRT (Bus Rapid Transit) concept; and throughout Brazil the poor are issued with a "cheque" giving them access to public transport, which otherwise receives little subsidy. As for the car, it represents a significant industrial priority, with 3 million vehicles produced domestically. Its spread is still limited (100 cars per 1000 inhabitants), though much more widely in the city.

It is within this very "congested" ideological context that motorcycles have to find their place. On the one hand, these vehicles are largely manufactured in Brazil (particularly in Manaus) and remain affordable for ordinary people. The Federal State cannot but be aware of this. On the other hand, however, the fact that a good proportion of motorcycle users are youngsters who use them in jobs as couriers, delivery riders or moto-taxis, and moreover against a background of minimum regulation, only adds to the difficulties, because of their failure to obey traffic rules. In addition, the motos-taxis, which tend to charge prices set below public transport fares, deprive the latter of some of their clientele and are perceived as practising unfair competition. The congestion is also apparent, more concretely, on the ground.

The response of the authorities to an appalling safety record (900 deaths per million motorcycles in São Paulo and across Brazil, as compared with 75 in Taiwan and around 300 in France for motorbikes and mopeds), has been limited: raising the skill requirements for couriers or moto-taxi drivers, exclusion of motorcycles from one of the city's main thoroughfares, creation of a number of motorcycle lanes. The record of public action is thus modest, which leaves the future open and uncertain.

In Europe, and particularly in France (where motorcycle fatalities, relative to total numbers, is two to three times higher than in Germany or Italy), the situation of motorcyclists is closer to the conflictual state found in Brazil than to the increased urban quality found in Taiwan and continental China. Avoiding a potential hell requires accepting that city dwellers have good reasons to switch to these modes of transport – which can also confer public advantages (reduced congestion,/5 reduce energy use, urban quality for electric versions) – and that they do not have to be unsafe: systems are not born safe, as the train and plane clearly show, they become it...

Jean-Pierre Orfeuil

5/ A Belgian study ("Commuting by motorcycle: impact analysis, 2011", TU Leuven and Leuven University, 2011) shows that if 10% of car users shifted to the motorcycle, traffic jams in Belgium would be reduced by 40%.

Santiago de Chile: street resistance

In the last two decades, transport systems in Latin America have been totally transformed. Through their modernisation plans, Latin American states have tried to reorganise their "insecure" and failing services. Chile, in keeping with the rest of the continent, has developed new systems, the most ambitious of them, Transantiago, operating in its biggest city and capital. This has raised numerous problems. Presentation by **Cristhian Figueroa Martínez**, architect and urban planner, Catholic Pontifical University of Chile, winner of the Young Researcher Prize.

For the Chilean government, the main objective of the modernisation plan was to restore to central government responsibility for public transport, which had been left in the hands of the private sector for 30 years./1 This was an explicit reaction to privatisation, which had culminated in a chaotic system devoid of any security, incompatible with the "Chilean economic miracle"./2 Launched in 2002 (under the government of President Lagos), the Transantiago system was to improve the capital's image by equipping it with new buses, technologies and infrastructure. It was to be completed in 2005. However, a number of problems arose that modified the original ideas and delayed its completion until the next government (2007, President Bachelet). And, instead of achieving the expected revolutionary change, Transantiago triggered a political and social crisis. Since the system has been running, the city's inhabitants have faced arbitrary and unpredictable service frequency, the inadequacy of the network, slow journeys and long waits at bus stops./3 They feel that Transantiago has damaged their quality of life to such an extent, that the name itself has become unpopular: everything associated with it is bad./4

Conflicts between the State and citizens

Research and surveys have revealed a number of mistakes committed by the people who designed and implemented Transantiago./5 In particular, they highlight the absence of infrastructures specifically dedicated to public transport as the "original sin": buses remain stuck in traffic jams in the city centre, and journeys are slow and uncomfortable. Yet the authorities had opted for "exclusive corridors": streets with side lanes for private vehicle traffic and central corridors reserved for the buses, separated by intermediate strips for the bus stops. They planned to introduce this model on every street. In so doing, they neglected factors associated with urban morphology, local activities, day-to-day uses and, more more importantly, the difficulty of transforming a large section of the city in just five years. The Lagos government had designed Transantiago to operate with 284 km of dedicated corridors,/6 but only 13 km have been built, with 33 still under construction./7 The shortage of investment in these corridors ($350 million) contrasts with the size of the budget allocated to other infrastructures developed over the same period: more than $1.7 billion was invested in motorways and $2.2 billion in subway systems between 2000 and 2007./8 This reflects, in particular, major disagreements within government. For example, the corridors on the José Joaquin Perez and Gran Avenida roads raised objections even before the authorities produced preliminary studies. According to the Minister of Transport (Jaime Estevez), these two corridors would have wiped out urban life along these roads, because there was insufficient space available to build them and expropriations would have been required./9.

That is why the government built only a few corridors, in industrial or peripheral areas with enough space, which also avoided community or political conflicts. In 2007, however, against a background of emergency measures to avert the Transantiago crisis, the Bachelet government tried to build a bus corridor on one of the city's main arteries, Matta Avenue; the discussions within government then entered the public sphere.

In order to promote the Matta bus corridor, the authorities used arguments relating to the whole urban transport system: for example, increasing the speed of the buses, which was 11 km/h, below the ideal speed of 23 km/h./10 However, these arguments proved inadequate, and citizens remained sceptical.

A group of furniture dealers led the opposition to the project, highlighting the impact on the running of their businesses. A dedicated corridor would have changed the entire layout of the street. Pedestrians would have moved to the bus stop sides, rather than using the sidewalks. As

1/ O. Figueroa, "Transporte urbano y globalización. Políticas y efectos en América Latina", *Eure*, 31 (94), 2005, pp. 41-53, www.scielo.cl/pdf/eure/v31n94/art03.pdf.

2/ A. Maillet, "La gestación del Transantiago en el discurso público: hacia un análisis desde la perspectiva cognitivista", *Nuevo Mundo Mundos Nuevos*, Coloquios, 2008, http://nuevomundo.revues.org/1093

3/ R. Witter, "Public urban transport, travel behavior and social exclusion. The case of Santiago de Chile", 12th WCTR, Lisbon, Portugal, 2007.

4/ F. Escobar, "Transantiago es la marca más desgastada de Chile y Bomberos se alza como la más valiosa", *El Mercurio*, 11 oct. 2007.

5/ I. Briones, *Transantiago: un problema de información*, Santiago, Chili, CEP, 2007 ; A. Covarrubias, *¿Cuáles son los principales errores del sistema?*, Santiago, Chili, Libertad y Desarrollo, 2007 ; Comisión Especial Investigadora, "Informe de la comisión especial encargada de analizar los errores en el proceso de diseño e implementación del plan Transantiago", Valparaíso, Chili, Congrès national, 2007, http://ciperchile.cl/wp-content/uploads/Report e_Transantiago.pdf

6/ Comisión Especial Investigadora, ibid.

a result, shopkeepers would have lost potential customers, who would no longer see their shop windows or products; in addition, they would no longer have had spaces to park their vehicles and for deliveries. However, they were not protesting against the corridor itself, but against an imposed layout change that would have disrupted their habits.

Five months later, this conflict ended when the government cancelled the project, leaving the streets as they were, a U-turn that established a precedent for citizen action: subsequent conflicts lasted for similar periods, aroused virulent opposition from inhabitants, which were followed by the abandonment of the project by the government, with no significant change to the streets.

Cristobal Saavedra / Archivolatino - REA

Manifestation contre le Transantiago (avril 2007).

Between 2007 and 2011, the authorities thus announced the creation of new corridors at least three times;/11 each time, they applied the strategy used for Matta Avenue, i.e. a an argument based on improvements to the running of the whole transport system (bus speeds, user numbers, etc.). Yet the government continues to propose more of the same, whereas the needs of users evolve constantly, requiring both new actors and new types of projects.

At present, Santiago has 93 km of dedicated corridors,/12 all situated in peripheral or industrial areas. However, it is common to see some of these corridors suddenly disappear, and the street changing from eight lanes to four or two, generating bottlenecks that considerably delay the buses. This inconsistency shows that, even when the authorities succeed in building a dedicated corridor, this brings no improvement: journeys remain just a slow. And the reasons for this failure are still the same: conflicts between the State – which is trying to improve an ineffective system – and citizens – who do not want to see a sudden change in their way of life. And it is always the citizens to come out on top.

It is curious that, after all these failures, the government is incapable of doing anything new, whether on traffic organisation or on transport facilities. In fact, whereas other countries link transport modes or promote public transport by effective regulation, the Chilean authorities continue to try to keep transport modes separate, thereby encouraging inactive, lifeless streets. The government is putting all its efforts into the subway system, promoting it as the only effective solution /13 and excluding less costly modes of transport (e.g. trams) from the public debate.

However, in terms of participation, the authorities have shown signs of innovative thinking. In September 2010, they implemented a "pilot" process to test public opinion on a dedicated corridor (Dorsal Avenue)./14 Citizens were asked to vote for one of the three proposed projects, but once again they were predetermined schemes, which more or less mimicked what the authorities had previously tried to do.

Because of its lack of effective infrastructures, Transantiago, which also suffers from problems of management, continues to provide long and uncomfortable journeys, prompting people to buy cars as a way of resolving their mobility problems. This results in a vicious circle: these cars cause congestion in the streets, thereby making travel slower for everyone.

The obvious solution would be to take account of neighbourhood concerns and needs when traffic schemes are under development. Otherwise, local people will always find ways to develop a simple but rational argument against the project, and unite in opposition, leaving the city frozen and, in some cases, preventing its natural development. |

Cristhian Figueroa Martínez

Original translation **Annie Zimmermann**

7/ Transporte público de Santiago, "Corredores de Transporte público", 20 oct. 2010, http://transportedesantiago.cl/INFRAESTRUCTURA/PARADAS/index.htm

8/ Instituto Libertad y Desarrollo, "El problema de fondo del Transantiago", *Temas públicos*, 852, 2007, http://164.77.202.58/lyd/controls/neochannels/neo_ch3819/deploy/tp-852el%20problema%20de%20fondo%20del%20transantiago-28-12-2007.pdf

9/ Comisión Especial Investigadora, op. cit.

10/ M. Aguirre, "Vía exclusiva de Avenida Matta se aplaza hasta 2008", *El Mercurio*, 5 avril 2007, p 18.

11/ R. Cerda, "23 nuevas propuestas: medidas que buscan agilizar el Transantiago", *El Mercurio*, 11 mars 2007 ; P. Molina, "A 2014 habrá 225 kilómetros de corredores para buses", *El Mercurio*, 9 janvier 2009 ; gouvernement chilien, "Ministro Errázuriz anuncia construcción de 67 km de corredores Transantiago con inversión de $281 mil millones 2011-2015", 2011, http://www.gob.cl/informa/2011/02/10/ministro-errazuriz-anuncia-construccion-de-67-km-de-corredores-transantiago-con-inversion-de-281-mil.htm

12/ Transporte público de Santiago, op. cit.

13/ J. Nahuelhual, "El Metro se consolida como eje estructural del transporte público y busca duplicar red en 20 años", *La Tercera*, "Negocios", 8 déc. 2011, pp. 8-9.

14/ M. Valencia, "Recoleta votará hoy por el diseño de nuevo corredor del Transantiago", *La Tercera*, 25 sept. 2010, p. 76.

Bogotá: the BRT versus public space?

Bogotá is a city of 7 million people, more than 2 million in the metropolitan area, with no subway system. Inaugurated 12 years ago, the Bus Rapid Transit (Transmilenio) system sought to offer the same advantages as a subway, but at less cost since, amongst other things, it uses the existing road infrastructures, subject to certain alterations. Mission accomplished? Analysis by **Isabel Arteaga**, architect, Professor at the University of Los Andes de Bogotá.

The launch of the BRT undoubtedly improved mass transit. But it has also had a negative impact on public space. Debates took place – more in academic circles than in government – on the consequences of the construction of the system's fast bus corridors (*troncales*) and on the fact that opportunities for urban linkages, for the creation of multimodal spaces, for the revitalisation of the most rundown areas, and for the qualitative regeneration of the BRT's urban environment, had been neglected. Up to now, the municipal administration has not approached these troncales as integrated mobility projects that would include improvements to their surroundings and public spaces. Also apparent is the lack of consultation between the administrative structures responsible for different parts of the work.
The BRT system was designed as a network of routes running through the city, whose main characteristic is to avoid traffic interruptions (traffic lights, intersections, etc.) as far as possible. The *troncales* are integrated into a series of existing roads, transforming certain processes, notably relating to movement, industry, socio-economic exchange, mental maps. In this network, the stations and pedestrian bridges act as points of connection with the new BRT system, which is superimposed on long-standing systems that have become embedded over time. The troncales also had a negative impact on urbanisation in these spaces of intense mobility.

Tyrone Turner / National geographic society / Corbis

Marginality versus vitality

Two case studies (avenida Caracas and avenida NQS) analysing accessibility, transversality, continuity, urban dynamics, acceptance and safety, revealed the disappearance of a kind of "urbanity" on various sections of the troncales, notably because of their dislocation from the transverse roads used by cars and the lack of interaction between those roads, the public space and the roadway. The BRT, a large mobility corridor, introduces splits into the urban fabric, because this "barrier" can only be crossed at specific points: stations and/or pedestrian bridges. This generates congestion, affecting both vehicles and pedestrians, and results in spaces where urban activity has disappeared and where a process of decline is underway.
Result: mobility virtually reduced to major arteries and main roads, which interact little with the pre-existing axes of local mobility. Very few pedestrians use the troncales, a fact that exacerbates the process of segregation and marginalisation.
In urban design terms, the BRT was to contribute, to some degree, to improving the surrounding public space, prompting transformations in urban structure, reconfiguring the uses and norms of the city, connections with other urban systems, etc.
In fact, in the cases analysed, urban conditions seem very uneven, divided between spaces of marginality and vitality, the latter arising from the proximity of the transversal axes that offer varied mobility and from the quality of buildings along the roads. When major transformations

have affected the pre-existing urban fabric (including the destruction of entire sections of housing), the resulting new public space has gained in quality, essentially through the widening of the sidewalks. Nevertheless, during these processes, the potential for urbanisation on either side of the corridors has been ignored. The inadequacy of street furniture, the lack of activities and the failure to include parks and leisure areas into the neighbouring residential sectors, has transformed the latter into nowhere spaces and focal points of insecurity.

This study has therefore revealed the coexistence of two opposed systems of mobility, one promulgating the speed and efficiency of public transport as the essence of the city, the other retaining a system of mobility that is less efficient but more dynamic in urban terms. This situation directly impacts the vitality and use of public space. What would seem to be needed, therefore, is to establish points of contact between the two systems, without denying the benefits of organised mass transit, but nevertheless emphasising the relevance of a broader and more contextualised approach, where public space (and not only sidewalks) would play a critical role.

The economic and financial aspects constitute a serious obstacle to the development of plans to integrate the BRT into the urban environment. Likewise, the excessive compartmentalisation of municipal structures leads to a highly restrictive institutional framework, which makes it difficult for entities not directly involved in improvements to the mobility system to participate. As a result, the development of initiatives that are not linked with a global vision of urban public space is destined to failure.

Mobility plays a dominant role in current debate on the city. However, public space and the quality of the urban environment on the BRT's *troncales* remain secondary themes, even though they are beginning to play a role in the attitudes and demands of certain social actors and, to a certain degree, in the political agenda of the city of Bogotá. Indeed, since not all of the planned phases for the development of the BRT have been implemented, the financial factor still plays a powerful role in this agenda. Nevertheless, a project like the Transmilenio represents a tremendous opportunity to intervene on public space and to trigger processes of urban regeneration. | **Isabel Arteaga**

Monica Reyes / Concours photo "Bogotá ville en mouvement" / Universidad de Los Andes, Bogotá 2009

Shanghai: the difficulties of the last kilometre on foot...

Viewstock / Stock connection / age fotostock

In principle, the "coordination between urbanism and transport", and in particular the creation of density around stations, represents a good way of moving towards "the city on rails" and ensuring that investments in heavy infrastructure will meet multiple needs, without requiring park-and-ride services for stations, which are problematic for users or costly to the community. The ideal is the "last kilometre on foot". France is moving in this direction, from the "Diva" in Lille to the ambitions of Grand Paris, as is the rest of the world with the concept of "transit oriented development", well-suited to fast-growing or regenerating cities. The study by Pan Haixio and Xu Mingcai /1 on the environment of four suburban train stations at a distance of 15 to 40 km from Shanghai, reveals some of the difficulties encountered in the application of this principle, officially adopted in China: in one place, an industrial zone very close to the station has not been regenerated, and has "frozen" the area around the station; in another, the station, a long way from the historic centre, is located at the heart of a district that is having difficulty in competing with the attractiveness of the neighbouring, more dynamic centre: in a third location, the expected populations (of people working in Shanghai "driven out" by property prices) are not arriving, and the occupants are well-off working people from the new city, with their own cars... More or less everywhere, the "gamble on proximity" has sidelined the careful implementation of effective systems of connection to the stations, necessary as they are.

Ultimately, out of the four cases analysed, there are two failures, one success in a nearby station where the "transit oriented development" approach has not been implemented but where walking has filled the gap, and one success in a remote station where the local authorities and the rail operator have worked together to create a joint rail-planning funding system inspired by practices in Hong Kong... | **J.-P. O.**

1/
"The dream of 'TOD' in Shanghai periphery area", http://movemaking.com/welcome/

Bogotá: bicitaxis, an informal complement to the BRT

In the last decade, bicycle use has developed in Bogotá following the construction, as part of the mobility plan, of a network of cycle tracks. However, a different use of the bicycle has recently emerged in the city. Changes in public transport approaches, notably embodied in the introduction of the Transmilenio BRT system, have led to a gradual reduction in transport provision to various districts, in particular in the outskirts. In response, complementary, informal and/or illegal transport systems have developed to remedy these shortcomings, including the bicycle taxi, which is used to travel in areas not covered by the BRT.

The bicitaxi, as it is called is a cheap, a short-distance method of transport. Its users generally wait at intermediate stops or at the end of BRT lines. Although it has a maximum range of two kilometres, it attracts strong social demand. Operating with no regulatory framework or fleet of approved vehicles, it is not currently authorised by the municipal government, for reasons of safety and financial and operational sustainability.

It also provides "informal" jobs: bicitaxis are often run by young people, who thereby earn money for themselves and their families, carrying out between 30 and 50 trips a day for less than one dollar a trip. Associations have formed within each urban sector to regulate this service, thereby establishing the basic operating rules. All this takes place on the network of existing roads between districts, without necessarily using the cycle lane network.

Isabel Arteaga

Boris Heger / Report Digital - RÉA

The Lyon conurbation: towards varying speed mobility

The social dimension of public transport policies is now in competition with environmental and economic factors, which emerge in particular in financial choices. The economic attractiveness of regions, and their role as a model for sustainable development, are also resulting in new standards and no-go areas in the implementation of mobility policies. Explanations by **Cécile Féré**, doctor of urbanism and planning at the Lyon Institute of Urban Design.

In France, since the 1990s and 2000s, the emergence of environmental issues onto the public agenda has been accompanied by a slow recognition of inequalities in mobility, by transport operators, the big guns in mobility policies, but also by new players outside the field of transport./1 In the Lyon conurbation, the AOT (transport organising authority) has helped to improve access to social pricing and transport provision to sensitive areas. Mobility aids and intercompany travel plans also help to improve access to employment clusters.

Financial choices unconducive to solidarity measures

In the Lyon conurbation, the withdrawal of State funding from TCSP (the French equivalent of Bus Rapid Transit) at the beginning of the 2000s delayed measures intended to promote access to transport for people of modest means or to improve services in municipal policy target areas. The tramline linking the Minguettes district in Vénissieux, made notorious by the urban riots in the hot summer of 1981,/2 to the Part-Dieu business Centre, was divided into two phases, initially linking this troubled area to Lyon's 8th arrondissement. The application of social pricing under the SRU bill of 2000, with the vote to open up social fares to recipients of CMU C (universal additional health insurance), was also postponed, and only implemented in 2005, when the fare scale was overhauled./3 Moreover, the CMU C criterion has complicated the existing fare scale. The choice of this criterion reflects a managerial and financial compromise, which relates to the need for the AOT to be able to control resources easily and restrict costs. The financial challenge is indeed substantial: the number of potential beneficiaries varies between 100,000 and 250,000 (i.e. 20 % of the population of the Lyon conurbation), depending on the scenarios tested. Even though they reach most of their client population, social fares always miss part of their target clientele because of their complexity and unfamiliarity. Moreover, the social priority has not yet been accepted. There is no public communication on social tariffs aimed at all users: the T4 tramline serves the Minguettes without saying so, with no mention on the station map./4

These contortions might seem harmless if the delays were not being used to choose in favour of other users or territorial projects that contribute to the attractiveness of the public transport network, and more broadly of the Lyon conurbation. The social dimension therefore seems to have been distanced the concerns and strategic priorities of the AOTs, which are now more focused on recapturing city centres through iconic urban projects in which public transport projects represent a positive externality and a signal to private investors./5

Mobility services and environmental imperatives

New mobility services are also contributing to solidarity measures in transport policy. In this case, environmental concerns are becoming increasingly indisputable, and tending to displace social issues, partly because of an emphasis on value for money, partly because of potential sources of funding, not to say the influence of militant scrutiny. In the Lyon conurbation, intercompany travel plans do little to target groups with more complex or difficult mobility needs, in particular women and workers in precarious jobs. The primary objective of action plans is to generate a modal shift. As a result, they target car drivers, or indeed groups that might be receptive to new, innovative practices (bicycles, electric bicycles, home deliveries, etc.). The intercompany travel plans are far from avatars of employer-transport, which was used more by women than men, and more by industrial and clerical

1/ C. Féré, "Concilier accès à la mobilité pour tous et mobilité durable. La prise en compte des inégalités d'accès à la mobilité dans les politiques urbaines de l'agglomération lyonnaise", doctoral thesis in urbanism and planning, Lyon 2 University, 2011.

2/ C. Bachmann, N. Le Guennec, *Violences urbaines*, Hachette Littératures, 2002.

3/ More than 10 years after the passing of the 2000 SRU bill, the right to social fares is still poorly applied by France's transport organising authorities. "La tarification sociale dans les réseaux de transports collectifs urbains de province. Un éclairage sur une réalité difficile à saisir", Certu, Mobilité et transports, 2011, fiche n° 22.

4/ C. Féré, "Concilier accès à la mobilité pour tous et mobilité durable", op. cit.

5/ R. Verhage, R. Linossier, "La co-production public-privé des projets urbains", in P. Boino (dir.), *Lyon, la production de la ville*, Parenthèses, 2009, pp. 144-171.

employees than by executives./6 The requirement to assess these systems, imposed by Ademe and the Lyon Urban District, no doubt contributes to the "environmental forcing" of the approach,/7 through the need to demonstrate the savings in milage and CO_2.
More sustainable solutions than the car, such as electric scooters, electric bicycles or pedals cycles, are increasingly being proposed as mobility aids, contributing to the introduction of new behavioural standards and ignoring the mobility needs of vulnerable./8 The sustainability argument enters the debate during the financial planning of these measures, and can generate conflict. In the Lyon conurbation, the intercompany travel plan covering human services (which often require cars and involve low-skilled workers) has withdrawn driving licence funding, whereas the Lyon Urban District is offering financial subsidies to the Greater Lyonthe population to encourage the acquisition of electric bicycles. These mobility measures are also a vector of new mobility standards ("get on your bike"), as well as new travel standards (for distances of less than 3 km, people should cycle or walk). In the intercompany travel plans, the emerging standards are based on travel distance: for local journeys, the emphasis should be on walking; for short journeys, bicycles or electric bicycles; and for longer journeys, the priority goes to public transport or car sharing.
The issue of access to car use is not flagged by the public transport agencies, is less and less formulated as such by the employment integration agencies, and in the intercompany travel plans, funding for measures that favour the private car is refused. Yet car use is still the social norm, not to say the most effective way of reducing inequalities in mobility,/9 even if the trend is for the aspiration to car ownership to be replaced by other objects of desire.

Social compromise on urban mobility policies

This paper describes the history of a controversy that is never stated, between the priorities of access to universal mobility and those of sustainable mobility. With the increasing dominance of environmental concerns, transport policies have played the game of "*transmitting the legacy*"/10 of the universal right to transport, whilst restricting the social factor to access to public transport. In parallel, agencies outside the transport sphere are taking on the issues of urban mobility, by providing mobility support for jobseekers or else new mobility services aimed at companies and their employees, contributing to the recognition of mobility as a "new social issue" and helping to turn "motility"/11 into a category of action in urban policies.
However, the social compromise that has been reached

Laurent Cerino / RÉA

between the priorities of access to mobility and of sustainable mobility is driving the emergence of a targeted right to transport and a conditional right to mobility, a new "assistantial"/12 component of sustainable mobility policies. With the emergence onto the political agenda of environmental and sustainable mobility issues, transport policies have chosen to break with the principle of universality in the development of urban services,/13 with the potential risk of the emergence of varying speeds in mobility services and urban splintering./14
This is of course reflected in delays in the implementation of social measures, but also in the emergence of new standards and new prohibitions. In Lyon, the city's mobility strategy is dominated by two priorities – the economic attractiveness of the area and model status in sustainable development –and social issues have fallen by the wayside./15 The way the notion of "motility" is interpreted in public action will also generate new norms. The trend is for the car as icon to become a new taboo in urban mobility policies, whereas new fetish objects are emerging, like the tram in the 1990s, or more recently the electric bicycle, the new must-have of sustainable mobility.

Cécile Féré

6/ B. Gerardin, *Le Transport-employeur*, Economica, 1981.

7/ C. Emelianoff, "Les agendas 21 locaux : quels apports sous quelles latitudes ?", Développement durable et territoires, dossier 4 : La ville et l'enjeu du développement durable, 2005, http://developpementdurable.revues.org/532

8/ E. Le Breton, "Bouger pour s'en sortir". *Mobilité quotidienne et intégration sociale*, op. cit.

9/ D. Caubel, "Politique de transports et accès à la ville pour tous ? Une méthode d'évaluation appliquée à l'agglomération lyonnaise", Laboratoire d'économie des transports, Lyon 2 University, 2006.

10/ F. Scherrer, "Tentative de dévoilement d'une ville invisible, techniques, territoires et temporalités de l'action urbaine", HDR, Lyon 2 University, 1999.

11/ V. Kaufmann, *Rethinking Mobility*, Burlington, Ashgate, 2002.

12/ R. Castel, *Les Métamorphoses de la question sociale. Une chronique du salariat*, Fayard, 1995.

13/ N. Brenner, *New State Spaces*, Oxford, Oxford University Press, 2004.

14/ S. Graham, S. Marvin, *Splintering Urbanism*, Aldershot, Ashgate.

15/ P. Boino (dir.), *Lyon, la production de la ville*, op. cit. ; R. Dormois, "Les coalitions dans l'analyse des politiques urbaines post-keynésiennes", *Métropoles*, 4/2008, http://metropoles.revues.org/3122

Reconciling the Seine and the car

Despite its shimmering and sometimes troubled waters, is the Seine still a faithful mirror of the capital it flows through? The occupations and preoccupations of the city, at multiple scales, have often been reflected and decoded in it. However, during the 20th century, two metamorphoses occurred: firstly, the colonisation of the river and its banks by the automobile network, and secondly and more recently, its "recapture" from that same automobile, now seen as too invasive in its proliferation. Commentary on planning by **Mathieu Flonneau**, lecturer in modern history at the University of Paris 1 Panthéon-Sorbonne and the Institute of Political Studies.

The apparently somewhat paradoxical thesis that we propose and support through assiduous research is that for a long time the car in fact helped to bring the Seine closer to Paris,/1 before the emergence of a radical new change, condemning it to an ostracism not without ambivalence.

The automobilisation of the river, 1930-1970

The 1970s, in this domain as in others connected with Parisian urban planning, marked a shift in the utilitarian approach to the river space and its surroundings. To approach the problem at its culmination may prove enlightening for our thesis. Today, Paris has become a city in which we now build walkways for leisure rather than bridges for traffic./2 Symmetrically, the discovery of the environment and the invention of heritage have now made the question of industrialisation virtually irrelevant to the future of the city.

Let us attempt a genealogy of this process based on the car as its obvious focal point. May 2000 saw the infilling of the traffic underpass at Quai Malaquais, built at the end of the interwar period to relieve congestion at the exit from Pont du Carrousel. This episode is in fact highly revelatory of the long-standing shift, particularly emphatic at the beginning of the 21st century, in the City of Paris's car policy. However, it is striking to note that, however natural it might seem, the solution of using the embankments for the movement of traffic was not the result of a dogmatic master plan, but rather of a series of adjustments decided gradually and pragmatically.

In chronological order, the first significant construction occurred on the left bank of the Seine, moreover without arousing any protest. It was part of a set of relatively discreet operations to develop all the embankments, begun before the war. Thus, the year 1942 had seen the completion of the widening of the road on Quai Saint-Michel through the technique of reinforced concrete cantilevers; in 1946, the Quai Malaquais underpass came into operation, though the structure was ready in 1939, and in 1947 the widening of Quai des Grands-Augustins. Further to the west, on a route whose concept emerged gradually, a one-way 2.5 km stretch of dual carriageway running East-West on the embankment opened fully to traffic in 1960, on Quai d'Orsay and Quai Branly. Prior to the development of the right bank, these projects were forgotten as soon as ideas emerged for the construction of a continuous expressway running past the Louvre, Place du Châtelet, the Hôtel de Ville, which, above all, would be visible from the historic heart of Paris, Île de la Cité. The idea of an expressway on the right bank emerged only slowly, although isolated sections of embankment had already been built. At bottom, it was an old idea, but the timetable for its realisation was entirely political: in this, the expressway benefited from the extremely rapid coincidence of several decisions supported by the then Prime Minister, Georges Pompidou, an unusual event in Parisian Urban planning. It was instigated by Paul Delouvrier and the Prefect of the Seine, Raymond Haas-Picard, following the inter-ministerial Council of February 20, 1964. The schism that arose occurred not in the political, but in the aesthetic sphere, where there were powerful concerns about the motorway features of the "embankment road". Finally, it was only on June 16, 1964 that the construction was given the green light. On December 22, 1967, at the opening of this 16 km artery that could carry cars across the capital from west to east in little more than 15 minutes, Georges Pompidou proudly spoke of the "Christmas gift to the people of Paris"./3 In the end, the technical and even aesthetic feat was greeted in the press and there were few opponents to suggest that some 30 years later, this "gift" might prove poisoned, to the point that there is now talk of excluding cars... Representative of an era, this

1/ Cf. our contributions in Voies publiques. *Histoires & pratiques de l'espace public à Paris* (exhibition catalogue, Pavillon de l'Arsenal-Picard, 2007), Paris, métropole sur Seine (Paris Projet, n° 40, Textuel, 2010) and the publication of our history doctorate in the following two books: Paris et l'automobile. Un siècle de passions (Hachette, 2005) et L'Automobile à la conquête de Paris. Chroniques illustrées (Presses de l'École nationale des ponts et chaussées, 2003).

2/ The alteration in the allocation of road space on Pont Charles-de-Gaulle in the 1990s is revelatory of this urban transition, which some are occasionally too hasty in describing as a "revolution".

Gerald Bloncourt / Rue des Archives

infrastructure nevertheless had no symmetrical counterpart on the left bank of the Seine, which George Pompidou had referred to as its "natural complement" because, in 1974, after the President's death, the government finally refused the necessary funding. Whilst the problems of the development of the Paris region had not changed, those of the future of public space had, for their part, undergone a transformation after 1968 and 1973, brought on by the cultural and economic crises. At the time, associations and certain politicians had noted the impasse that has engulfed the, largely mythical, "Parisian" way of life. A response was needed, and this was the first salvo in the resistance to the car. Eventually, there came the demands for a more mixed public space, which found its archetype in the "successful" summer Paris-Plages operation.

The abandonment of the central section of the left bank expressway

Attitudes began to change markedly in the early 1970s, when the central section of the left bank expressway was completed. For some, increasingly numerous as their movement developed, it was unacceptable for cars to reach the walls of Notre-Dame de Paris./4

There is probably no other struggle that has provoked such emotional investment /5 and created such an impact, as evidenced by the diverse and international origins of the signatories of the many petitions that punctuated the period of protest. The iconic force of the site gave the combat an exceptional symbolic impact, clearly perceived in the highest political circles since, one after the other, three Presidents of the Republic – two of them influential during the 1974 electoral campaign – took a stance on the issue.

The value of the threatened site, with its central location, representing the heart of the city and the soul of the citadel, brought opponents together in a network that employed every tactic of militant struggle. Brought to a spectacular halt, the car entered a new phase of stigmatisation. However, its use did not diminish on the wider scale of the Paris region, any more than did a certain form of schizophrenia in French society's attitude to it. As for the Seine, it saw the emergence of new possibilities, the fruits derived from this ultimately complex dialectic. By what means and what scale should today's authorities who have inherited this legacy – not entirely a long quiet river– seek to reconcile mobilities/car use with city life? If it is true that the future visage and urban quality of the city revolves in the public space around the new modal share, it should not be forgotten that it is because of the massive democratisation wrought by the car that the city is able to ask itself different questions and aspire to new horizons. The modern touristico-recreational takeover, which is also a symbolic step towards the risk of an incomplete museum city, also needs to be seen in the light of this legacy. | **Matthieu Flonneau**

3/
On this subject, André Herzog, then Director of Roads, recalls the "Ah !" of the admiring officials, a spontaneous reaction to the inauguration coach's emergence into the open air at Pont-Neuf after the journey through the Louvre tunnel.

4/
Cf. the press campaign by André Fermigier in *Le Nouvel Observateur* (article reproduced in La Bataille de Paris (Jean-Luc Einaudi, Seuil, 1991).

5/
It is thus astonishing to find in the administration archives an envelope containing the leaves of a weeping willow and poplar trees (still in an excellent state of preservation in this makeshift herbarium!) sent by the defenders of the site.

Manchester, toll roads and democracy

Between 2005 and 2008, Greater Manchester designed the world's largest urban toll system. Highly unpopular, it was to partially finance a massive (£3 billion) public transport investment plan, the "Metrolink Big Bang". In the end, a local referendum irreversibly buried the project. The debates it aroused and the analysis of its failure nevertheless show how citizen motorists refuse to be reduced to the status of mere economic agents. Explanations* by **Laurent Fouillé**, sociologist, CNRS, IRSTV (Urban Sciences and Techniques Research Institute).

* This article is a brief summary of a case study conducted as part of a sociology thesis (supervised by Professor Boullier, Rennes 2 University) presented by the author and entitled "L'attachement automobile mis à l'épreuve. Étude de dispositifs de détachement et de recomposition des mobilités". In it, congestion charging is seen as an economic barrier that seeks to separate drivers from their cars by increasing the price of urban motoring.

Manchester, in 1835 England's most industrialised city, has, since Engels, been largely identified with its coal-darkened red brick facades. Its rapid and unplanned urbanisation made it one of the first polycentric cities. During its period of industrial development, an impressive network of canals, railways and tramlines was built to link the parts of this urban archipelago, made up of cotton weaving mills, warehouses, coal mines and working-class residential neighbourhoods...

Metrolink, an expensive obsession with the tram

With the process of deindustrialisation in the 20th century, this urban structure was largely remodelled around cars and roads. The subsequent morphology is typical of a massive trend towards suburbanisation: between 1930 and 1970, the heart (Salford and Manchester) lost half of its population, whereas the metropolitan population remained virtually static (around 2.7 million). A vast network of motorways was then built, in particular the M60 orbital motorway and the elevated urban expressway, the Mancunian Way, the apotheosis of the process. This car centred development, combined with a laissez-faire tradition of urban planning (during the Manchester School), produced an increasingly congested road network.

After a long period of decline, in recent decades the city has undergone genuine regeneration, exemplified by gleaming structures such as the Beetham Tower or the Urbis centre. In 1992, the first tramline was opened. Named Metrolink, this amenity seemed undersized for a multi-million population, and local politicians shared with the ambition of extending the existing network.

Since 1986, two significant parliamentary acts have profoundly weakened local authorities in the management and planning of public transport: deregulation (Transport Act, 1985) and the abolition of metropolitan counties (Local Government Act, 1985). Unlike other countries in Europe, the UK's tax system is highly centralised. A large proportion of local government finance comes via the central treasury in Westminster. Under these circumstances, if they want to build a costly tramline, British local authorities, which have very limited investment capacities, have to petition central government to grant them the money needed to build their infrastructure projects. This is where our story begins.

Project: the Big Bang and the Berlin wall

In March 2000, Deputy Prime Minister John Prescott announced a government subsidy of £289 million for the expansion of the Metrolink. In July 2003, the Secretary of State for Transport cancelled this subsidy because of cost inflation. In December 2004, he announced that the subsidy had finally been agreed, but that it would not be enough to fund the full project. He therefore proposed two solutions: to reduce the size of the project (a "Little Bang", two lines rather than three) or to try to obtain new funding: the transport innovation fund. To simplify, the government promised a lot of money to the local authorities, whilst proposing regulation measures, entailing the introduction of an urban toll system rather than trying to encourage a voluntary change in behaviour./1 London was opening (or rather closing) its central congestion charging zone, and the Department for Transport (DfT) was pushing for experiments and pilot plans presaging a future national pay-as-you-drive system based on GPS tracking. This movement was consistent with its era.

Initially, local politicians (mainly Labour) tried to negotiate with central government (also Labour, the Blair then Brown governments) to obtain guarantees, such as the realisation of investments before congestion charging came into

1/ A. P. Taylor Michael, "Voluntary travel behavior change programs in Australia: The carrot rather than the stick in travel demand management ", *International Journal of Sustainable Transportation*, 1 (3), 2007, pp. 173-192.

Atlantide Phototravel / Corbis

Le Metrolink de Manchester : station St Peter's Square.

operation. Local politicians were somewhat sceptical about this scheme.

Until 2005, opposition had been latent, with debate confined strictly to local politicians and central government. The controversy really began with the emergence of public support for local officials and of direct opposition to their plan: two concentric toll zones operating during peak travel times in exchange for subsidies of £2.5 million and dedicated loans for massive investment in public transport./2

The opposition formed around three main players: Graham Stringer, Peel Holdings and Manchester Against Road Tolls (MART)./3 This disparate coalition formed a hybrid perfectly designed to bring down a project: a political spokesman from within the majority, a powerful private sector firm and ordinary citizens with no whiff of a conflict of interest.

While politicians talked of a unique opportunity to obtain funding for the tram, their opponents raised the spectre of an electronic Berlin Wall that would transform the city centre into a ghost town. Later, with the approach of the referendum, the different forces in place would form into two coalitions: the Yes Campaign and Stop The Charge. The referendum thus reduced the controversy to a single question: "Yes or No?"

At the start of the controversy, the word "package" was used only by partisans of the project. Their opponents employed terms such as "harassment", "racket", "blackmail", "strings attached"./4. At the end of the negotiations between local politicians and the minister, the agreement consisted of a package linking congestion charging with investment. The public transport Big Bang sought by the local authorities + central government's congestion charge = the Mancunian package. This package would be the biggest project ever built: £3 million for public transport and the world's largest "toll" zone.

Dissolving the parliament of the road in a republic of drivers?

Why is a congestion charge so hard to introduce? With a democratic vote, it seems impossible to obtain the people's consent on such an issue./5

"The freedom of the open road", understood as the political choice to guarantee free use of the road for all drivers, is a promise that cannot be broken without undermining other crucial democratic principles, such as liberty or equality. It seems irreversible. Nevertheless, partisans of the congestion charge claimed: "Only one person in ten will pay",/6, yet 80% voted no in the referendum. Because drivers are not only individuals, separated and isolated in a steel cage, they form a vast majority (a community of concern) every time they need to protect their fundamental rights. The referendum verdict seems to prove this significant solidarity between citizens, whether car owners or big car users, throughout the community. | **Laurent Fouillé**

2/ This plan is clearly described in the second document in information kit (AGMA, GMPTA, 2008) www.manchester.gov.u/egov_downloads/Contents_1_.pdf It is interesting to note that the description of the congestion charging system is the last chapter in the document (pp. 65-79).

3/ The first, a Labour member of Parliament, elected in the Blackley constituency and a member of the Parliamentary Transport Committee, was also the previous leader of Manchester City Council. The second is one of biggest corporations in Manchester (owner of the canal, Trafford shopping centre, Media City, Salford docks), and even in the whole North-Eastern region (Liverpool docks and airport). The third was a small association of activists set up for the purpose. Its founders were members of the ABD (Association of British Drivers) and of the NAAT (National Association Against Tolls).

4/ Cf. "£289m for Metrolink 'Big Bang'", *Manchester Evening News*, March 22, 2000.

5/ The work by the historian Cotten Seiler, *Republic of Drivers : A Cultural History of Automobility in America* (University of Chicago Press, 2008), is a major contribution to the understanding of this phenomenon. The author brilliantly describes the movement whereby, in the 20th century, subjectivity is reconstructed/reprogrammed towards a growing self-determination of individuals, who nevertheless remains governable. It shows the process of the making of a consumer, of a voter and of a free driver.

6/ "C-charge: Only 10% will pay", Manchester *Evening News*, August 11, 2008.

City and mobility in crisis: the Athens case

In Athens, since 2010, citizens have mobilised against austerity measures and have launched the "I don't pay" (Den plirono, in Greek) movement, whose members refuse to pay for their tickets on public transport or at motorway tolls. In parallel, public transport and motorway operators have seen their revenues fall further, and are facing severe financial difficulties. For its part, the government is applying additional sanctions, while at the same time reducing public transport subsidies. Result: quality of service is further deteriorating further and citizens are responding with ever greater virulence. Investigation by **Zoi Christoforou**, doctor of transport at École des Ponts ParisTech.

In January 2011, motorway operators recorded a slump in revenues, as interurban travel had diminished because of the crisis, with users choosing to use alternative non-toll routes rather than motorways. They therefore announced a significant increase (from 4 to 40%) in toll charges for all vehicle types. Such increases were already included in the project financing plan drawn up by the Greek government with the international funding agencies. Drivers now paid around 25 Euros to cover the 500 km of motorway linking Athens to Thessalonica, a situation particularly tough on farmers and residents of peripheral areas, who have to pay these tolls every day./1

"I don't pay"

A short time afterwards, a protest movement formed, essentially in rural areas, with the participation of local authorities and politicians. The idea was to go through motorway tolls without paying the charge, since the operators had no authority to stop offenders. The local police forces proved insufficient to enforce payment and, in certain cases, deliberately ineffective. The "I don't pay" movement then quickly gained momentum, acquiring supporters throughout the country. During the main holiday periods, teams organised blockades of the toll gates and "raised the barriers" to allow all drivers to pass free of charge. Local political parties and other forces were actively involved in the movement when it converged with their interests. They justified their involvement on the grounds of social equity. However, the parties avoided taking an official stance, though the left was largely in favour of the practice and the right against it. Little by little, the "I don't pay" movement extended its activities to combat other austerity measures, including those relating to public transport fares and new real estate taxes. The media, both digital and print, adopted a fairly controversial position. Famous journalists both overtly criticised the movement and, at the same time, continued to comment on it on a daily basis, which was fairly exceptional, since protest against other austerity measures went little reported. This raised the movement's profile and brought it new members. It should also be noted that significant media figures are stakeholders in motorway operating licences. A short time after the movement reached its height, major motorway operators requested new negotiations on the agreement, claiming loss of revenues due to the government's inability to enforce full payment of tolls. Their demand was legitimate, and they obtained significant revenues, which would have otherwise continued to plunge without it. It could therefore be said that, at midway, the "I don't pay" movement benefited the main motorway licence operators.

The community of experts immediately denounced "I don't pay" through communications by the Hellenic Institute of Transportation Engineers (HITE)../2 It is worth mentioning that the chairman of the HITE is also CEO of Attikes Diadromes SA, the service agency for Attika Tollway (Attiki Odos) in Athens. Attiki Odos is a private orbital motorway, virtually the Athens ring road.

As regards public transport, following the most recent crisis-related reform, bus lines were suspended and others merged. Daily operating hours were reduced, as well as service frequency, and many drivers transferred or made redundant. Nevertheless, fares increased by 20 to 40% for all users, and the State subsidy on public transport tickets dipped from 70% to 40% /3. In December 2011, the "I don't pay" movement was described by the media as virtually non-existent with regard to public transport. At the same time, the government decided to sanction offenders, who – as well as paying a fine equivalent to

1/ www.skai.gr/news/greece/article/159698/auxisi-diodion-ston-autokinitodromo-an-peloponnisou/, http://www.tanea.gr/ellada/article/?aid=4616667

2/ www.ses.gr

3/ www.enet.gr/?i=news.el.article&id=219422 et www.tanea.gr/ellada/article/?aid=4618452

60 times the face price of the ticket – were required to appear in court and were liable to 3 months in prison./4 Social pressure forced it to reduce the penalty (3 to 30 days in gaol)./5

Reforming consumption patterns

Athens is Greece's economic and political centre, alone accounting for almost 50% of the country's GDP, with annual revenue of around 27,000 per capita (at 2007 values). Until the 1970s, Athens was a largely monocentric city, where offices, retail and wholesale activities, small industries and housing developed within a small radius around the centre. A number of significant socio-economic and spatial changes took place, as a result of both local and global dynamics: in particular the redirection of investment – from industry to commerce and residential property – and the development of financial and service activities. The 2004 Olympic Games exacerbated real estate price inflation and triggered extensive gentrification. As a result of these processes, the metropolitan region of Athens was transformed, evolving from a monocentric to a pluricentric city, characterised by the exodus of businesses to the outskirts. Nonetheless, the central business district retained a dominant role.

Economic activity in the city centre is considerable – shops, finance, leisure, accommodation and small industry – and generates substantial demand for transport (around 5 million journeys per standard working day). In an area of some 39 km^2, the population is only 700,000, with most people choosing to live in the suburbs. This city centre is served by a network of 3 subway lines, 2 tramlines, a suburban railway line, 360 bus lines and 20 trolley bus lines.

With the crisis, the city centre area has been severely affected in many ways, in particular a dramatic slump in the value of land and a fall in both transport supply and demand. The research we conducted revealed complex relations and conflicts of interest between the actors concerned (local and national political parties, transport authorities, media, public transport users, etc.). We developed and established a pilot assessment based on a survey of 300 pedestrians, questioned about their transport preferences at different points on the Athenian road network. The sample was random, but stratified according to the time of day. People were questioned on their demographic characteristics,/6 their personal travel patterns, changes in their practices following the 2011 crisis, their opinion on and involvement in the "I don't pay" movement.

More than three quarters of Athenians seem to have a favourable or neutral opinion of the "I don't pay" movement. However, no correlation could be established on the basis of demographic profile. We can nevertheless deduce, empirically, that the users of regular public transport lines do not approve of the "I don't pay" movement's actions.

In fact, it would seem that the economic crisis is restructuring consumption and travel patterns, both directly (transport as a service) and indirectly (for example: doing less shopping). Public transport use increases somewhat when citizens are faced with financial problems, not because these services are more attractive. The refusal to pay for tickets seems to be an expression of political disagreement with the government rather than related to income level. However, regular public transport users are in a position to understand the vicious circle generated by such practices and to refuse to adopt them, without necessarily disapproving of them.

In general terms, our research findings confirm the hypothesis that the characteristics of transport demand reflect the crisis in the urban environment. Government and political decisions seem to take absolutely no account of bottom-up trends and behaviours. Urban and personal values are in open conflict with national and international governance. And one question remains unanswered: should or should not citizens pay for a transport service that is already reduced and the low standards? Should they or should they not bear the cost of the crisis?

Zoi Christoforou

Original translation by **Annie Zimmermann**

4/ www.enet.gr/?i=news.el.article&id=250302

5/ www.tanea.gr/ellada/article/?aid=4618452

6/ Age, sex, marital status.

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WHAT CITIES DO THE WORLD'S STUDENTS DREAM OF?

Utopian well-being?

Seven hundred students of architecture, transport engineering or urbanism from fourteen cities around the world,/1 questioned by The Making of Movement, described their dreams for the city of tomorrow and its mobilities, part realism, part utopia. In the strict sense of the term, utopia is first the invention of a locus of discourse (topoï), before that of a non-place and a "place of happiness" (u-topos). What characteristics would the latter have? Analysis by **Gaëlle Rony**, doctor in social sciences at the Catholic University of Louvain, project manager at IVM.

The disparate pictures painted by the students are not those of perfect cities, founded on a uniform theory and exclusively political mobilisation, as expected in the traditional model of a finished utopia. Nevertheless, they fit within a utopian register.
They say what the students aspire to, and at the same time reveal what they don't want: a city of pollution, caused especially by the ubiquity of the car; a city threatened by global warming where, as a result of inaction and indifference, ecological and human disasters seen inevitable. The dark side of their dreams thus paints a picture of an unjust, segregated city, which excludes whole categories of the population from mobility and, more broadly, from the right to pleasure – for hedonism emerges as a very strong value.
Apart from their reactive dimension, these atemporal visions are characterised by a great openness to possibilities, an impulse that is of value as an end in itself.

Programme-utopia and fiction-utopia

The visions are divided between probable and improbable virtual realities. In the one, perceptions are based on a real city and rely on the possibility of transformation and enhancement. They are operational, describing how to effect the shift to another city, realistically and mimetically. By contrast with this programme-utopia, other approaches envisage a city unconstrained by the real, a city without a "manual": negative is simply reversed into positive. In this case, the recourse to poetry is often necessary, as an oblique way of speaking of something that seems too "absurd" relative to conventional thinking: desires for joy, freedom, play, gratuity and spontaneity are thus expressed in poetic and offbeat ways.
Recurrent figures within these images embody the political dimension, in its widest sense. A first typology is "happy people": people who experience pleasure, in particular in a return to the past. They walk, read, look at the sky, converse... In short, they indulge in what Michel de Certeau calls "tactics"./2 Tactics are the art of turning day-to-day events into occasions, and in so doing altering the established order. These micro-actions embody a type of human action specific to contemporary utopias, modest, malleable, concrete and local, utopias invented in the here and now. In counterpoint to these "happy people", the inhabitants of today's cities are passive victims of certain forms of mobility and exclusion: the disadvantaged or the vulnerable, the disabled, miserable users of public transport...
So human beings are very present in these urban dreams. And they prompt those who read/see the image to act in the name of primordial values: the protection of the human dimension of citizens and of humanity in general. The aim is to remind us that a change of attitude is needed.
Which brings us to the last type of figure, the ones to whom these student images are addressed, i.e. us, the readers or recipients of their visions. Indeed, our presence is implicit in their productions – like those postcards addressed "to anyone". And they ask us questions: "So what is your attitude to the car?" Finally, irony and humour, typical components of a rhetoric designed to instil agreement, are used to impel genuine mobilisation. The students are perhaps not so much inviting us to act to achieve a particular kind of city as simply to dream of it. The priority, for them, is not to make their dreams a reality, but to encourage us to stop, to take time to think, to make choices that are real and right.

Gaëlle Rony

1/
Barcelona, Bogotá, Buenos Aires, Canton, Daegu, Eindhoven, Lima, Mexico, Paris, Beijing, Rio de Janeiro, Santiago de Chile, São Paulo, Shanghai.

2/
Michel de Certeau, *L'Invention du quotidien, 1. arts de faire*, Gallimard, 1990 (1st edition, 1980).

Hyun A. Kang (The Yeungnam University School of Architecture, Daegu, Corée du Sud)

R. Hanzelman (Faculdade de Arquitetura e urbanismo da Universidade Federal do Rio de Janeiro, Rio de Janeiro)

Re-enchanting the city through nature and sociability

In France, students on two masters programmes (Urbanism, Transport) at the Paris Institute of Urban Planning were asked to share their personal visions of the city in 20 years' time (more than 150 contributions). With nuances, these perceptions converge. **Jean-Pierre Orfeuil** presents the contexts (the world in which we will live) and the aspirations for urban design and mobility systems, before examining the likelihood of their being realised in the real city.

Views were unanimous on four questions: oil will be scarce and expensive, a fact that dominates the topic of climate change; mobile Internet services will be used intensively and extend to the whole population, for all uses; the car will undergo a sharp decline, for various reasons (petrol shortage, indifference, stress...); finally, the labour market will be more flexible.

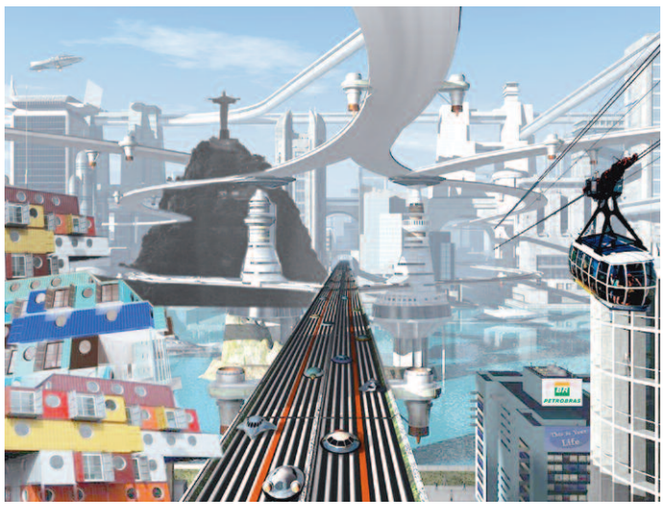
Hopes for the city

The unanimous urban picture is of a city of "neighbourhoods", or even villages characterised by a great functional mix and a substantial social mix. Whether seen "positively" in dreams or "negatively" in nightmares, questions of cohesion and sociability, with public space as a place of expression, are strong structural components of these utopias. They hold equal rank with the environment, unanimously perceived in terms of a return to a city of nature, in very diverse forms, and particularly of vegetation, the sine qua non of a peaceful city and life. For a minority, it is even a future of urban agriculture, with family gardens or allotments feeding local markets.

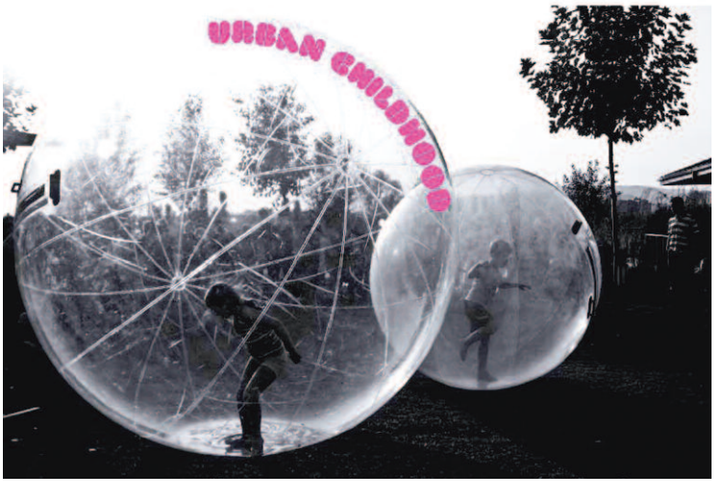
The link between the neighbourhood and the rest of the city is achieved via a hub which acts both as connector – not only with the centre – and focal point, a multi-functional fulcrum, with the risk that the hyper-attractiveness of the neighbourhood will drive up property prices and exclude certain social categories...

Mobility: a wide variety of territories and speeds

Mobility is moderated by an increase in virtual networking. When there is a need to move, the local and the remote are handled very differently. The street network is primarily a public space dedicated to the local. Acceptable traffic is that of the pedestrian or the "pedestrian enhanced" by transport services (moving sidewalks), or light, clean vehicles, privately owned or self-service (rollerblades, hover-shoes, Segway, electric bicycles



Marta Torres (Faculdade de Arquitetura e urbanismo da Universidade Federal do Rio de Janeiro, Rio de Janeiro)



Gaviba Corbetta, Yolanda Medina, Silvia Navarro et Berta Sánchez (Escola Tècnica Superior d'Arquitectura del Vallès de Universitat politècnica de Catalunya, Barcelone)

and scooters, perhaps a few self-service cars). Inter-neighbourhood mobility is shifted to a third dimension, underground (metro, automated pollution-free cars) or in the air (cable cars and the occasional flying car). The subterranean and automation are mostly favoured by those who see long trips as necessarily fast; the aerial is proposed by those for whom every trip is a journey, with sensory, playful and emotional components.

By contrast, all agree that public systems must be accessible to all, in physical (people with reduced mobility) and economic terms (fares proportional to income...), and seamless, with transactions conducted on smartphones, despite the odd reservation (a minority) regarding excessive traceability.

A few unanimous keywords can describe the perceptions. Empathy with others and with nature, revealed through the emphasis on access to mobility for all, through the spread of "clean" energies, through the presence of vegetation. Sociability, based on the interest generated by proximity and public meeting spaces. A need for permanent, uninterrupted connection. Sharing of vehicles, but also of experiences. Lightness, particularly in transport methods. Far from being rejected, technology is seen as serving these values.

These visions nevertheless ignore significant questions: there is no awareness of the advantage of the big metropolitan markets, work and value creation are absent. And they resonate with other, previously imagined worlds./1

So, always the same utopias set against a stubborn reality that will take no notice of them? Not entirely. What is new are the constraints, the disillusions, but also the opportunities offered by the virtual, the norms of immediacy and fluidity that it generates. Its credibility is founded on big names (Cisco, Google, IBM, Siemens...) which vaunt the smart city and collaborative, transversal systems, in tune with the aspirations expressed here. True, neither financial feasibility (the ideas assume a massive transfer from private consumption to public services and control of land use), nor sociological feasibility (it has been known for a while that spatial proximity and social proximity don't always mix well...) are covered. Nevertheless, do not these utopias perhaps have the merit of offering a frugal, but acceptable, comprehensible and motivating direction, whose "technological bricks" are already available?

Jean-Pierre Orfeuil

1/
We find here the themes developed in the Amis de la Terre campaign for the 1977 municipal elections in Paris; cf. The article by Jean Haëntjens, "La ville écologique, itinéraire (très sinueux) d'une utopie", *Urbanisme*, n° 384, May-June 2012.

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Towards a "joyful and beautiful" city

Rosanna Forray Claps, architect, professor at the Pontifical Catholic University of Chile.

Urban dreams

What does the ideal city look like for young people? First, it is ecological, associating greenery, cleanliness and security. There is also a consensus on accessibility. However, the form it takes fails to achieve originality. The imagination behind it is nourished by Web culture, with its domes and floating islands. In the realms of the possible, it is pictured in terms of nature, agriculture, non-fossil energy, life without stress.

It is also cosmopolitan, connected to the rest of the world, whilst retaining a human scale. It can be embodied as much in well ordered hyperdensity as in isotropic networks made up of low- or high-density nuclei, immersed in nature and linked by efficient and recreational transport. In any case, it must be sociable, welcoming, foster close relations in a dynamic, playful and beautiful space.

Opposing socio-spatial segregation, the dream city is equitable and integrated. This fairer city is expressed less in urban form than in the mobility choices it offers. It is movement that alters social relations. Public transport and the space of this movement act as mediators of social conflict and inequalities.

The traditional car is in decline. In dreams, we escape congestion by extending freedom of movement to all available space, using machines that fly, float and skim. In reality, we improve public transport efficiency. Rail systems remain the most popular, followed by BRT for long distances, and cycling and walking for short journeys. Great importance is assigned to the atmosphere of a public space which, according to the youngsters from China, should be "joyful and beautiful". For them, the urban landscape reflects the wish for an aesthetic experience of travelling. In this joyful and beautiful city, transport takes place away from the surface, whether underground – in more realistic visions – or in the air in a 3-D city, one that includes both aerial propulsion and teleportation. The street is free of the car and public transport, restored to pedestrians and cyclists, dedicated to the sensory pleasure of a verdant public space, to sport and recreation, whilst offering occasional access to travel methods of all kinds. | **Rosanna Forray Claps**

Lee Jumin (The Yeungnam University School of Architecture, Daegu, Corée du Sud)

Hwang Ji Hoon (The Yeungnam University School of Architecture, Daegu, Corée du Sud)

Inhabiting present and future

Carles Llop, architect, professor and head of the Department of Urban Design at Universitat Politècnica de Catalunya, Barcelona.

The students describe the great richness of "the spheres of movement", in other words the multiple actions that have their origin both in city mobilities and in the new territories of future urban constellations. Since dreams differ depending on one sociocultural context to another, this "panorama" of visions exposes the new ways of using the urban, through "portraits" and scenarios of the future, which reflect transcultural possibilities, the gradual hybridisation of social groups and its impact on the new stereotypes that emerge from it.

They are, for example, about "fluids" and "flows", particles in movement: cars, goods, objects, data, information, bits, all these factors need to be considered in the perpetual movement of both beings and their networks. In these accounts, homo mouvens takes multiple, even extraterrestrial(!), forms. And his capacity to move also underpins the quality of his living space. Transport modes should offer services, systems and places that contribute to the richness of life: facilities for people with disability is; systems of hospitality and information on the city; citizenship services; automation as a resource for effective mobility; osmosis between transport modes and urban space: hybridised air transport; shared use of public and private vehicles; multi-infrastructures dedicated to individual movement (bicycles, electric bicycles...); intermodal public transport, etc.

These new dimensions of mobility require new types of intermediate space: urban halls, transit stations, intermodal hubs, city gates... the geography and nature of mobilities generate a new concept of the city, a new form of territoriality. We are being drawn ineluctably towards this world-city, with no possible alternative. Like these students, we should think of it as a shared, fluid space, made up of multiple simultaneities which intertwine, reducing fragmentations and segregation. | **Carles Llop**

Stimulating comparative international approaches

Marcel Smets, architect, urban planner and professor at Louvain University, is the new chairman of IVM's Scientific and Steering Committee, following François Ascher and Jean-Pierre Orfeuil. He closed the international Making of Movement conference with a "startle report". Here, he looks back over what he learned from the event and presents a number of prospects for future work by IVM.

How do you see the international conference of March 26 and 27?

What first struck me is the number of vistas the theme of mobility opens up. For a start, the expression "the making of movement" made it clear that it was no ordinary conference. And the idea of bringing together contributors from different horizons proved very fruitful. There were four successive types of contribution: young researchers who had worked hard on case studies, the presentation of the results of the survey on "the city of tomorrow", the "3 minutes to convince" videos, and interviews with significant figures, such as the former mayor of Bogotá. This interface worked well, because of the diversity of the contributions, the richness of the submissions, the confrontation of concrete cases with theoretical approaches; all these different aspects generated ideas, avenues for development. A lot that I heard was new to me.

For example?

For me, the BRT in Bogotá and in Medellín was a historic tale: the creation of rapid bus systems in order to refashion connections within the cities. And then I learn that the impact of this intervention was not at all what was hoped! In other words, on the basis of a positive report of an experiment, there is a risk of repeating it elsewhere without knowing what really happened.

What did you think of the student dreams?

I was amazed by the ideal city they proposed. They came across a bit like spoiled children. Their city is a summery place, made for pedestrians and cyclists, public space a place of encounter and not of conflict... Their dream city has nothing to do with the normal city, where people live. Cars are not even represented! It is a city of nature, with a sort of equity between all citizens, devoid of real conflicts. Images of an urban décor, where we are all strangers, entranced visitors.

Étudiant de l'Yeungnam University School of Architecture, Daegu, Corée du Sud

What conclusions do you draw for IVM's future work?

We are going to put the emphasis on transitional locations, where mobility melts into the urban space. Such places that everybody uses need to be urbanised. They carry the hope for a future urbanity. The aim is to avoid repeating a traditional model. In this sense, mobility implies interconnecting existing systems, not simply juxtaposing them or constantly inventing new ones. In Rio, the current issue is the introduction of cable cars that will enable the inhabitants of the favelas to access the subway stations and commute to their workplaces in the city centre.

To pursue the development of Île de Nantes, where I currently work, we need to seize the fabulous opportunity that the site offers to create a new focal point. With the introduction of the teaching hospital, there is the possibility of linking the different tramlines together by means another one, but also through cycle tracks, a cycling route running from the south to the city centre. In short, to turn the island into a network of mobility that will enhance the character of the real estate projects! I developed this type of approach in Anvers and in Louvain, around the stations. IVM is at the heart of these issues, and can therefore stimulate comparative approaches at international level.

Interview by A. L.