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Expo '58 and “the car as king”

What future for Brussels's major urban road infrastructure?

L'Expo 58 et le « tout à l'automobile ». Quel avenir pour les grandes infrastructures routières urbaines à Bruxelles ?

Expo '58 en “Koning Auto”. Welke toekomst voor de grote wegeninfrastructuur in Brussel?

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Summary

Whereas it took more than forty years to complete the North-South railway junction, a scant three years was necessary to change the face of the city of Brussels completely and turn it into one of the European capitals with the highest levels of car ownership. Expo '58 had a crucial role in accelerating this movement. After explaining the circumstances that led to the "car as king" attitude in Brussels, the author wonders about the difficulties of having Brussels embrace an urban development model less dependent on the car. According to the Brussels-Capital Region's forecasts, the entire territory concerned by the extension of the future Regional Express Rail Network will be under the overwhelming domination of the car by 2015. The prospect of the crisis situation that this will spawn is an opportunity to be seized to turn the trend around. As we approach a new bend in the technological road, only a massive investment plan in Brussels's mass transport and the latter's integration in a management and information system on the appropriate functional scale (the REN area) could offset the road network development plans that marked the three decades that began with Expo '58. Such a policy cannot be waged without thinking about road traffic and parking conditions, the external costs of travelling by car, and the latter's contribution to financing public transport. Nor will it be possible without setting up civic participation schemes. The loss of attractiveness of urban areas that have been degraded by the colossal road infrastructure projects of the past can be combated, as shown by the examples of urban regeneration carried out in Boston and Madrid.

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Introduction¹

The gates of Expo '58 closed on 19 October 1958. However, the world fair's impact on Brussels did not end there. This article strives to show first of all the most pronounced decisive and lasting influence that Expo '58 had on the city, that is, its role in catalysing a development in which the "car was king". It then goes on to wonder about the future of the major urban thoroughfares and motorways that were created from the 1950s on at a time when another model of the city, one that is less dependent on the car, is spreading internationally and the development of sustainable mobility is becoming a priority.

Expo '58, the catalyst of "the car as king" in Brussels

The 1950s were a turning point in Belgium when it came to family ownership of cars after the trough of World War II. These years were considered those of the "take off" [Scholliers, 1992], with the highest rates of increase in car ownership ever posted (+175.3%²). The annual rate of increase in the number of vehicles, which was 10% on average for the entire country, was noticeably higher in Brussels and its environs [Ministère des travaux publics et de la reconstruction, 1956]. With 1 vehicle per 16 inhabitants in 1956, Belgium was, along with England and France, at the head of the European pack, although it remained far behind the United States, which already had 1 vehicle for 3 inhabitants, given that it had begun mass production earlier (with the Ford Model T in particular) and suffered less from the war. Whereas previously the car was reserved for an elite that used it first as a new sign of social prestige, in Europe's most industrialised countries the immediate post-war period and 1950s in particular were marked by the automobile's entering the era of mass consumption (which it was considered to spearhead) and the advent of the "automotive society"

¹ A long version of this article will be published soon (2008) under the title: "Expo '58 and daily mobility in Brussels: a decisive and lasting influence?" in Deline Chloé and Jaumain Serge (Eds.), *L'expo '58, un tournant dans l'histoire de Bruxelles*, Brussels, Le Cri.

² The rise in the number of cars in the country continued to be extremely high over the next decade (173.5%), then dropped to 53.4% in the 1970s and stabilised at around 20% over the following decades. As of 1 August 2006, 4,976,286 privately owned vehicles were registered in Belgium.

[Yonnet, 1984]³. However, not until the period between 1965 and 1980 were the social gaps in car ownership rates fully bridged.

Figure 1 : Change in number of passenger cars in Belgium from 1930 to the present

Source: Directorate-General of Statistics and Economic Information and Federal Department of Mobility and Transport

Given this rapid rate of increase in car ownership (to which one must add buses, coaches, and commercial vehicles, without forgetting motorcycles and mopeds), the road infrastructure had to be changed and improved. Such was the goal of the huge programme to modernise the Belgian and Brussels road networks that the Ministry of Public Works and Reconstruction's Roadways Administration, run by Henri Hondemarcq, hatched in 1949. This programme effectively aimed to turn Belgium and Brussels into "one of the most important road intersections in the West" [Ministère des travaux publics et de la reconstruction, 1957:8]. Moreover, the International Transport Committee of the UN's Economic Council for Europe recognised Belgium's function as a hub in the European road network during the meeting that it held in Geneva in 1950 to set the "E" network, i.e., the network of international motorways, in which Hondemarcq played a leading role [Demey, 1992].

In this context, one in which a large number of routes were supposed to pass through Brussels, the capital's clogged arteries and insufficient road infrastructure

³ The first Volkswagen Beetle was created in 1938, the Renault 4 Chevaux (4 horsepower) in 1946, and the Citroën 2 Chevaux in 1949, to mention just a few emblematic examples.

appeared to be key problems. The decision was thus taken to launch a huge public works programme with the twofold objective of reinforcing the radial arteries' capacities and redistributing traffic better across these arteries by means of better concentric roadways (the inner beltway, outer beltway, and peripheral ring road).

For Hondemarcq, "...this network naturally was not based on the exhibition's special needs. It met constant needs, and what was important was to do some of the work within a brief deadline to be able to meet the unusual traffic needs that would be felt during the run of the Exhibition" [Hondemarcq, no date, quoted by Demey, 1992:20]. However, the officials in charge nevertheless recognised that "without being the sole justification for the work done in the Brussels area, the Exhibition helped to make this work more urgent and, consequently, to set a particularly strict timetable for its completion" [Ministère des travaux publics et de la reconstruction, 1957:77]. With hindsight, we can go even further and write that Expo '58 was a decisive catalyst of the "car as king" policy that was waged in Brussels. Indeed, it first stimulated the design of an overall plan and rapid achievement of a consensus on this plan despite a variety of opposing positions. Next, it made it possible to set up in record time some vital milestones of this plan and in so doing to go beyond the point of no return, thereby requiring the subsequent continuation of the works and even their extension. So, whilst it took more than forty years of shilly-shallying to build the North-South train junction⁴, a scant three years was necessary to metamorphose the boulevards of the inner beltway (several tunnels were built and the surface carriageways were redone), build or redo a part of the outer boulevards, build the first part of the ring road (between the Oostend and Antwerp motorways), redo the profiles of many radial arteries (starting with Leopold II Boulevard and its viaduct), and build access roads to the Expo site⁵. After Expo '58, the pace of work moreover slowed down: After a pause that lasted until 1962⁶, the investments resumed with the complete overhaul of Avenue Louise/Louisalaan along the lines of what was done to the inner beltway. Next, the Roadways Administration's plan of 1964, which followed the "spoke-and-wheel model", bolstered that of Hondemarcq and foresaw the building of the ring road and new entering motorways and express lanes that the B1 Intermunicipal Company created in 1971 was to carry out (and did so incompletely, following growing opposition from residents and the region's mu-

⁴ Actually, the "Junction Saga" lasted much longer: Talk about the junction began in 1837, the Town Hall took a favourable stand on it in 1865, work began in 1911 (whilst Parliament continued its debates on the subject!), and the junction was officially inaugurated in 1952 [Brunfaut, 1959; Deligne, 1998].

⁵ All in all, 128 kilometres of carriageway was either built or modernised, 119 crossroads laid out, and 36 bridges, 6 tunnels, and 1 viaduct built [Demey, 1992:29].

⁶ During this period only Madou Tunnel, the building of which had been postponed after a compromise with the City of Brussels, was dug and the first part of Boulevard de la Woluwe/Woluwelaan plotted.

nicipalities)⁷. The 2534 m long Leopold II Tunnel, which was put into service on 31 August 1986 to replace the viaduct of the same name, wrapped up three decades of major road works (designed primarily with the car in mind) in Brussels.

Would the works have been of such magnitude if Expo '58 had not given them such a major and rapid boost? It is possible to doubt it. Of course, the "Thirty Glorious Years" of prosperity (1945-1975) or the "Fordist A Phase of the fourth Kondratieff (1948-1974)" [Vandermotten and Marissal, 2004:172] were characterised in all industrialised countries by the rapid development of the car industry and "transition from a supply-driven economy to a demand-driven economy founded on massive reliance on private and public lending" that was propitious just about everywhere to carrying out, based on the same model, gigantic infrastructure projects and having a car in every household. There is no reason to think that Belgium, which was in the vanguard of modernist thinking and in the middle of an economic boom, should have escaped this trend [Montulet, 1996]. The hypothesis put forward here is that in creating a deadline, Expo '58 gave a formidable boost to the massive acceptance of the car in Brussels at the decisive moment of its "take-off", thereby reflecting the desire for cars in spatial organisation almost instantaneously. Without this deadline, the difficulties of political decision-making that characterise Belgium (and were clearly visible during the construction of the North-South train junction but also in carrying out other major projects such as the building of the State's administrative complex in Brussels (Delmotte and Hubert, 2008)), would most certainly have led to a more spread-out schedule of road infrastructure work that would have clashed head-on with the citizens' opposition that rose up a few years later in response to other large projects (Northern Quarter, Marolles neighbourhood, southern beltway, etc.) and the crisis of the great narratives of modernity (see below).

Expo '58 was thus, in my opinion, a unique opportunity for highway engineers. Not only did it make road infrastructure works necessary (even though we must remember that the automobile fleet at the time was close to one-tenth what it is today and a scant ten percent of the Expo's visitors were expected to drive their cars to the fair

⁷ The Royal Decree of 14 January 1969 "concerning productivity bonuses for the civil engineers of the Ministry of Public Works" that was adopted at the instigation of Public Works Minister Jos De Saeger for the purpose of attracting engineers, who were more tempted by private sector jobs, to civil service positions, was a first powerful incentive for this flood of public works. These bonuses were broken down into three parts: a bonus for "special missions", a "promotion" bonus, and a "responsibility" bonus. The latter, which was called the "concrete bonus" in the inner circle, was reserved for the Secretary-General, civil engineers of the General Technical Departments, and civil engineers on secondment to the Minister's office. It was set at 0.2 per 1000 of the amount of the works to carry out for the project's author and 0.3 per 1000 for the engineer in charge of directing the works' performance and oversight. How, under such conditions, could one not carry out large-scale public works, be they road or underground projects (see the overscaling of certain underground stations in Brussels). This bonus was converted into a lump sum reserved for the "1ers *Ponts et Chaussées*" (top civil service grade highway engineers) during the creation of the Brussels-Capital Region, regardless of the amount of concrete poured. The "De Saeger Circular" that was decreed by the same Public Works Minister and set a minimum number of parking spots in new buildings according to their use (e.g., 1 parking spot per 50 m² of office space), also had a major impact on Brussels by stimulating "the pouring of concrete" for the car. The Brussels-Capital Region did not abrogate this circular until 12 December 2002 (the "Draps Circular").

grounds [Demey, 1992:21]), but it also offered the engineers a decisive argument, for the road infrastructure works effectively made it possible to stamp the city with the very image of modernity that the Expo wanted to give of Belgium and Brussels. This modernity referred first of all to a notion of progress that was associated with a growing individualisation of society. "Individual transport must be fostered because it is an incoercible factor of economic and social progress. If it is ignored or scorned in a command-and-control conception of things, the inevitable result will be urban disorder and the waning of the city centres' vitality" [Hondermarcq, 1964, quoted by

Figure 2: Omer Vanaudenhove and the "Brussels, Crossroads of the West" plan

Demey, 1992:55]. Next it referred to an aesthetic current: "...cities are living beings, they grow, vegetate, or die depending on whether or not they adapt to the necessities of modern life. Now Brussels must live and grow, and all our efforts should be directed towards such grandeur. Completing the works will give a shining demonstration of the fact that, far from destroying the city's beauty, its modernisation will have conferred on it a more grandiose appearance in line with its dignity as a European capital on all scores" [Ministère des travaux publics et de la reconstruction, 1956:77]. And that was indeed the clincher: making Brussels the capital of tomorrow's Europe. In the middle of the European motorway network, "our Capital, the

crossroads of the West's major traditional routes, will be able, with total legitimacy, to claim a choice place in the United Europe of tomorrow", Omer Vanaudenhove wrote in the conclusions of the Ministry of Public Works and Reconstruction's publication *Bruxelles, Carrefour de l'Occident* [1956:95] (Brussels, Crossroads of the West). Vanaudenhove, who was known as the "road angel", alluded once more to this destiny during the inauguration of part of the new boulevards of the inner beltway, on 28 September 1957, just shortly after Belgium submitted its official candidacy to house the seat of the European Commission and Council of Ministers⁸. "Henceforward, in any event, the argument would be used copiously to justify large-scale works, notably to continue outfitting the inner beltway" [Demey, 1992:29].

The archetype of a "nomological" problematisation of the road order

It is interesting to dwell a second upon the vision of road traffic that underlies the remarks and actions of Henri Hondermarcq⁹ and his successors quasi paradigmatically. It is effectively typical of the problematisation approach¹⁰ that Pierre Lannoy [1999] terms "nomological". In such an approach, the natural state¹¹ of the road order is clearly described as one of conflict: conflicts between the various occupants of the street, between the various traffic flows, even between different social classes. The road must thus be "pacified...by organising speed"¹² through traffic regulations and road engineering aimed primarily at separating the traffic flows (car traffic is effectively hobbled most by all of the obstacles that reduce speed, *i.e.*, pedestrians, cyclists, mass transport, parked cars, and so on). So it is that a new "science", that of "traffic engineering", was born in the United States, a science that Hondermarcq espoused. Indeed, he wanted to be one of its spearheads in Europe to reduce the lag in traffic regulation that had built up in the Old World¹³. Thanks to this science, writes the Public Works and Reconstruction Ministry, "...it is now possible to determine with certainty the moment at which work on different levels absolutely must be foreseen. Such studies, very advanced ones, are what enabled our

⁸ Brussels effectively got the headquarters "provisionally" in 1959.

⁹ Hondermarcq's visionary role must nevertheless be recognised, for he had already proposed in 1951 creating a ring road around Brussels (and its layout today effectively corresponds to what he had foreseen, with the exception of the southern segment) and predicted that the number of passenger cars in Belgium would exceed three million by the 1980s.

¹⁰ A problematisation approach is a way for the parties concerned to define and treat a matter that is deemed problematic.

¹¹ By "natural state" Lannoy [1999:38] means "the character of the phenomenon that is inherent in its nature such as it defines this nature outside all pondered and responsible intervention".

¹² This history of transport can, moreover, be read as a history of speed [Studeny, 2005].

¹³ "Traffic has become a technique and techniques are matters for technicians," is how he put it [quoted by Demey, 1992:55]. Back from a study trip in the US, he estimated that the US was 25 years ahead of Europe. Traffic engineering was effectively born in the US in the 1920s under the impetus of Miller McClintock for one, as P. Lannoy's [2003] detailed analysis reveals. The spearhead role that Belgium wanted to play in this area was not entirely new when one knows that the International Association of Road Conventions held its second convention in Brussels in 1910, after the Paris Convention of 1908 [Lannoy, 1999].

country's technicians to designate accurately which of the intersections with the inner beltway had to be changed so as to allow traffic to flow on various levels"¹⁴ [Ministère des travaux publics et de la reconstruction, 1956:64]. Another type of friction that our engineers studied closely is the operation that "in 'traffic engineering' [in English in the text] terms is called weaving"¹⁵, that is to say, the moment when tunnel traffic wants to leave this main channel and vice versa. "Road engineering provides the solution to this problem in that it lets you determine the minimum weaving distances that are necessary" [Ministère des travaux publics et de la reconstruction, 1956:66]. So it is that "in the case of the boulevards of the inner beltway, no single weaving section between the successive future crossroads will be less than 100 m", which will allow the weaving of 1200 vehicles per hour under good conditions. At the time, the expected rush hour traffic was not supposed to exceed 700 vehicles per hour. Today, some 60,000 vehicles use the inner beltway each day¹⁶.

Brussels's difficult reconversion to a model less dependent on the car

Slowing down whilst remaining (hyper)mobile

The example of the weaving sections coming out of Brussels's tunnels is interesting. Whereas the engineers of the time considered these sections to be a model of rationality and progress, since they make it possible to keep traffic fluid, today not only do they generally work poorly, because of the saturated road network, but they have become a major town-planning problem as well. They effectively symbolise the car's dominance in public space in many places, due to the fact that they turn very broad arteries into uncrossable obstacles for other users (pedestrians, cyclists, and so on). Typical examples of this are Vergote Square and Avenue de la Toison d'Or/Gulden-Vlieslaan, which have urban motorways cutting right through them.

This is because another vision of urban traffic developed, another problematisation approach¹⁷ that Lannoy [1999] terms "ethological", has developed since the inception of traffic engineering. Several scientists thus showed that "extending roads does not make traffic more fluid, but on the contrary increases the number of vehicles on the road, which results in maintaining, even increasing, the congestion rate" [Lannoy, 1999:44] and, consequently, the pressure that is exerted by cars, just like the risk of accidents, is inherent in the traffic phenomenon. "Neither one nor the other can be eliminated, but they can both be reduced" inside what would hence-

¹⁴ To cope with what M. Halsey [1941, quoted by Lannoy, 1999] called *intersection* friction (between perpendicular traffic arteries).

¹⁵ Or "internal friction" (between vehicles travelling in the same direction). Besides intersection friction and *internal* friction, M. Halsey [1941, quoted by Lannoy, 1999] also considered *marginal* friction (encounters with obstacles situated along traffic lanes, such as parked cars, pedestrians, cyclists, etc.) and *frontal* friction (between vehicles travelling in opposite directions).

¹⁶ Between 6 a.m. and 10 p.m., in both directions. Source: SPF Mobilité et transports, *Recensement général de la circulation 2005*, n°32, November 2006.

¹⁷ The introduction of a new problematisation approach does not for all that mean the previous approach's disappearance. The two can co-exist or hybridise, for example.

forward be considered a system. In this system, all parties (from the motorist to the other users, with the decision-makers on the various levels of power, transport companies, and so on in between) have a role to play, unlike the “nomological” approach in which responsibility is in the hands of the community’s representatives (elected officials, institutions, and government administrations) alone. Seen from this angle, it is rather significant to underline the fact that after the country’s “public works” and “transport & highways” powers were largely regionalised, they are now reunited under officials, be they ministers or deputy mayors, in charge of the more comprehensive matter of “mobility” [Misonne and Hubert, 2003].

We can say that the institution of an “ethological problematisation approach” in Brussels that aims to reduce automobile pressure through a better sharing of public space amongst all users (motorists, public transport, pedestrians, cyclists, etc.) has been at the heart of discussions since the Brussels-Capital Region was created in 1989. This has been reflected as of the first Picqué government with the building – at the instigation of then Public Works Minister Jean-Louis Thijs – of exclusive rights of way for trams in the streets that were broad enough to accommodate them (Rue de Stalle/Stallestraat, Avenue Brugmann/Brugmannlaan, Rue Royale/Koningsstraat, etc.). This policy to protect alternative modes of transport instead of the car triggered much debate (see the controversy over the crossable or non-crossable nature of the exclusive rights of way on Rue de la Régence/Regentschapsstraat and “neck” of Avenue Louise/Louisalaan under the second Picqué government or the controversy surrounding the plans to redo Rue de la Loi/Wetstraat to create a double bicycle path on this main artery).

Whereas these discussions are far from over today, at a time when dispelling the “trouble spots” in the city’s surface mass transport network calls for changes that would clearly be unfavourable for the passenger car [Courtois and Dobruszkes, 2008], another way of conceiving of sharing public space came to light recently with the revamping of place Flagey/Flageyplein in Ixelles/Elsene. After many twists and turns, the project that was finally chosen¹⁸ through an international competition (2006) opted for a “single area” approach giving “soft” transport modes the lion’s share of the square but without marking the physical boundaries between users too clearly. The planned overhauls of Place Rogier/Rogierplein¹⁹ and Place de la Monnaie/Muntplein²⁰ share the same philosophy. Will these examples create a new school of thought and will they confirm the ascendancy that architects, town planners, and landscape architects appear to be taking over engineers?

In any event, erasing the marks left by the mammoth projects done for Expo ’58 seems very difficult. So, as part of a study on revitalising the area just outside the city’s central pentagon that was commissioned in 2003 by Junior Minister W. Draps, in charge of Spatial Planning the Brussels-Capital Regional Government, the town

¹⁸ That of the German landscape architectural firm Latz & Partner in partnership with the Brussels firm D+A International. For more about the Flagey case, see *Cahiers de la Cambre Architecture* [2005].

¹⁹ The project that was selected, also through an international competition (2006), is that of the Brussels architectural firm Xavier de Geyter.

²⁰ The winner of this competition (2006) was the town planner and architect Benoît Moritz (MSA).

planning consulting firm Clerbaux-Pinon proposed putting the long weaving section of Avenue de la Toison d'or/Gulden-Vlieslaan underground so as to recreate an urban promenade and to lay out a public area that would link this avenue to Waterloo Boulevard on the other side of the tunnel. Clerbaux-Pinon had to acknowledge the many technical difficulties (changing the car parks and their in-ramps), practical problems (magnitude and length of the work), and financial difficulties (limits of the regional budget) of making such changes.

In the same vein, the "Botanique" master plan²¹ that the Brussels Government adopted in 2006 provides for putting the existing transit lanes of Victoria Regina Avenue, along the former Botanical Gardens, in a tunnel so as to make the boulevard named after the gardens more user-friendly and reconnect it to the gardens. However, this project is no closer to having a budget and timetable than the previous one.

Figure 3. Putting Victoria Regina Avenue underground (on the left) as planned in the "Botanique" master plan (on the right)

Many of today's public works projects in Brussels are trying, not without difficulty²², to re-establish user-friendly areas where the will in prior decades had been to "adapt the existing urban network, which was necessarily based on the data of the past, [to modernity]" [Ministère des travaux publics et de la reconstruction, 1956:10]. This undertaking commits without necessarily challenging the existing infrastructure's

²¹ Work of the town planner and architect Benoît Moritz (MSA), in partnership with the French architect Yves Lyon.

²² The public poll about Rogier Square's revamping that was conducted in June-July 2007 showed clearly, for example, how difficult it would be to combine the demand to restore this square primarily to pedestrians and cyclists with the passage of close to 1500 buses of the regional transport company De Lijn a day and keeping the existing underground parking entrance ramp.

Figure 4. Boston's Central Artery before (above) and after its placement underground

Photos: Andy Ryan, in McNichol, Dan, *The Big Dig*, New York: Silver Lining, 2000, p. 15

capacity (in the above-mentioned examples, talk has been about putting existing thoroughfares underground, not eliminating them or reducing their size), but even considers, depending on the case, improving their performance levels²³.

This merely seems to be a paradox, to the extent that this type of revamping, which gives soft transport modes the lion's share, must accommodate a more mobile population. Indeed, people have never moved around as much as they do today. Just as an example, the number of vehicle-kilometres²⁴, which is a good indicator of the volume of automobile traffic, is continuing to rise in Belgium, even though the trend is continuing at a slower pace²⁵; the number of trips made by STIB/MIVB's riders, for its part, rose 60% between 2000 and 2006. Far from being static, our society has become hypermobile, in any event when it comes to some of its components. People thus want to be able to continue moving around faster and faster and farther and farther²⁶ whilst continuing to enjoy areas for rest and relaxation or "slower" strolling²⁷ when they stop or slow down.

Brussels is not the only city in the world that is trying to reconquer public space that has been degraded by the colossal urban road infrastructure projects of the mid-twentieth century. Boston is undoubtedly one of the most striking examples of this trend. It effectively achieved the exploit of putting the close to 3.5 km Central Artery (an elevated urban motorway similar to the Leopold II viaduct, but with more lanes) built in 1959 underground in order to free up the surface, create a greenway in its stead, and get rid of the barrier that this urban motorway created between the

²³ Putting Victoria Regina Avenue and the open Toison d'or Tunnel underground would not rule out improving the accessibility of the existing public car parks. Place Flagey/Flageyplein's overhaul has been accompanied by the creation of an underground car park. Replacing the viaduct above Leopold II Boulevard by a tunnel in 1986 made it possible to increase the number of express lanes from three to four, never mind the space that this freed up on the surface.

²⁴ Number of vehicles x mean distance travelled.

²⁵ Road traffic tripled between 1970 and 2003 to reach the index value of 317 (1970 baseline = 100) [Defeyt, 2005].

²⁶ We must also touch upon the rise in air travel. In 2005, the total number of plane passengers in the 25 countries of the European Union increased 8.5% over 2004 to stand at more than 700 million. The year-on-year rise in 2004 was 8.8% (source: Eurostat).

²⁷ The 30 km zones, the number of which has been rising in Brussels [Région de Bruxelles-Capitale, 2006] as well, and the *zones de rencontre* or 20 km "meeting areas", belong to this current of thought.

town and its seafront. This tunnel, along with the above-ground improvements, was inaugurated in 2004, and whilst it undeniably provides some relief when it comes to the quality of city life, it continues to be challenged as "autocentric" (the underground thoroughfare has the same vehicle capacity as the old elevated motorway) and not truly able to reconnect the frayed urban fabric [Finstein, 2005].

For its part, the city of Madrid inaugurated this year the tunnel replacing the western part of the former M30 beltway (the equivalent of Brussels's "inner beltway") to restore access to Madrid's river, the Rio Manzanares, regenerate the waterway, and improve its environment, all under the umbrella of the "Poryecto Madrid Río" or Madrid River Project. Ultimately, no less than 1,170,000 m² of green areas will replace the former motorway, along with an urban beach, 42 km of bicycle paths, a dozen bridges for bicyclists and pedestrians, playgrounds and leisure areas, and so on.

Figure 5. The "Madrid Río" urban revitalisation project

Source: <http://www.munimadrid.es> (tab: "Urbanismo e infraestructuras")

The technological breakdown of intermodality?

Today, the great narratives of modernity are in a crisis. Modernity has become reflexive. The car is no longer seen solely from the standpoint of flexibility, but also as a constraint [Urry, 2005:71]. Still, individualisation is still on the march and leading to growing independence from spatial and time constraints [Ascher, 2004]. That being so, auto-(or self-) mobility and “automobilism” or the cult of the car are no longer synonymous [Remy, 2007]: Now that the car has shown its limits (increasingly expensive to run, stuck in traffic jams, searching for increasingly rare parking spaces), the demand for autonomy and individual control over one’s movements for each and every one of us is tending nowadays to be met by various means (car, mass transport, bicycles and motorcycles, etc.) that are chosen according to the type of trip to make, time of day or year, and intended destination.

The third problematisation approach that Lannoy [1999] has identified and called “technological” might be well suited to intermodal mobility. It is characterised by the break with the isolation in which the user was confined until now: the isolation of the motorist who is not informed of the traffic jams or roadwork that s/he is likely to encounter, the isolation of the traffic light that is not coordinated with the adjacent crossroads, the isolation of the urban public transport passenger who does not know how long s/he will have to wait at a stop, etc. “Breaking with this isolation will be dependent on dynamic management of both the infrastructure’s use and the task of driving, or even [transport and road] safety policy itself, for which telematics is both the model and the tool” [Lannoy, 1999:47]. Information and the network are key elements of this problematisation approach. In a way, it amounts to building, in real time, “a perfect trend information system in which individual rationality is exercised” [Lannoy, 1999:51] and of going “from an extensive road culture to an intensive network culture or from a supply-driven policy to management of the demand”.

Seen from this angle, Brussels once again seems to be badly off. First, effective information management requires giving priority to having a seamless functional network rather than a seamless administrative territory. Now, we all know the institutional situation of the Brussels-Capital Region, which is unable to conclude cooperation agreements with the neighbouring Walloon and Flemish regions to manage an “urban transport community” such as exists in many countries. Second, STIB/MIVB has not yet managed – for reasons that have to do with its own policy at some times and to Brussels’s institutional complexity at other times – to impose an effective information system for its vehicles (remote controlled traffic lights at crossroads are far from the rule, for example²⁸) and for its passengers, who are rarely informed “in real time” of what is going on (the waiting time panels at stops are either missing or damaged; phone or text message information is exorbitantly expensive if it even exists; Mobile Internet is still not an option for most public transport passengers; and so on). Now, we are aware of how important it is for users – potential as well as current ones – to have access to a service that makes their lives easier

²⁸ Article 36 of the 207-2011 management contract between the Brussels-Capital Region and STIB/MIVB provides for “equipping, by April 2008, 150 crossroads on the priority thoroughfares and the rolling stock servicing these axes” with a single remote-control system (p. 43). Rather symptomatically, the ink had not yet dried on the signed contract when a two-year delay in setting up this equipment was announced.

rather than more complicated [Montulet *et al.*, 2007]. Meanwhile, GPS devices are phenomenally popular with motorists and they are given real-time assistance (radio traffic bulletins and navigational advice, cell-phone traffic updates, and so on) to make their journeys smoother!

Conclusions

In deeming that the city had to adapt to the car and not the other way round, Henri Hondermarcq embraced the idea of modernity that drove Belgium and Expo '58. Along with the policy-makers of the time he never envisioned another perspective on Brussels that that opened up by a certain American model combining fluid automobile traffic and urban aesthetics. In these visionaries' views, this was moreover the best way to ensure the city's grandeur and make Brussels the capital of the future United Europe (if not to say the United States of Europe). In a way, it was a time when the central government was drawing up an "International Development Plan" for Brussels before the notion existed and doing "urban marketing" in favour of its capital.

Expo '58 thus gave a decisive and lasting boost to a policy in which everything kowtowed to the car in Brussels at a key moment, that of the car's "take-off". In creating a deadline, the crucial opening of Expo '58 set the tempo and contributed greatly to making Brussels, with fewer than two inhabitants per vehicle, one of the capital cities with the highest car ownership ratio in Europe²⁹.

The forecast scenario for 2015 [Région de Bruxelles-Capitale, 2006], based on the current trend, is that of the crushing dominance of the car over the entire territory concerned by the extension of the future Regional Express Network³⁰ (REN - or RER in French). A true ring of congestion will surround the Brussels-Capital Region, which will itself be clogged with cars. According to this scenario, traffic will be so bad that the differences in travel times by car and public transport will be nil.

This crisis situation, which is already largely perceptible today, may be an opportunity to seize in order to turn the trend around. As we round a new technological bend, only a massive investment plan in Brussels's urban mass transport and the latter's inclusion in a management and information system embracing the appropriate functional scale (the REN zone) will be able counterbalance the road network expansion plans that marked the last three decades starting with Expo '58. Such a policy cannot be waged without thinking about road traffic and parking conditions, especially when it comes to the "supporting measures" to set up with the REN, as well as the external costs of travelling by car and the latter's contribution to financing

²⁹ The same holds true if we compare Brussels to towns of similar size.

³⁰ Or 135 municipalities with a total population of close to 3 million that includes the Brussels-Capital Region (19 municipalities, population of 1 million), the first suburban ring (33 municipalities, a pop. of about 600,000), and the second suburban ring (83 municipalities, a population of close to 1.4 million)

Figure 6. Number of inhabitants per car (2001)

Source: Urban Audit (<http://www.urbanaudit.org>)

public transport³¹. Nor will it be possible without setting up civic participation schemes based on successful experiences that lead to a better environment and quality of life and grounding the redoing of urban areas that have been degraded by the great road infrastructure projects of the past in town-planning and architectural considerations.

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³¹ Various measures can be envisioned, such as a mileage tax or an urban toll in one part of the Region's territory (for example, the Arts-Loi neighbourhood), as has been done successfully in other cities (London, Stockholm, etc.).

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