The Long Winding Road to Sustainable Mobility in Spanish Cities

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Abstract

Urban mobility in Spanish cities has been undergoing notable changes and transformations in the last forty years. This paper looks at the main characteristics of these changes under four headings corresponding to four main periods: "institutional reconstruction" (1979-1985), "cautious infrastructure expansion" (1986-1995), the "big-construction bubble" (1996-2007), and the "grumbling sustainability turn" (2008-2020). The all-important catalyser for change was the early institutionalization of public transport authorities and the multilevel governance structures based on consensus. The major moves away from the pro-car policies that occurred in the '80s and '90s and the corresponding re-allocation and re-design of the space preciously dominated by cars to create an attractive environment for residents and pedestrians was another characteristic.

In the current time period, Spanish cities are developing procedures and structures to effectively promote and implement innovation, to tailor decisions to each particular context, and to meet the challenges of air quality and climate change. Although financial resources remain scarce, the task ahead is being addressed by dedicating the energies and staff previously focused on large infrastructure developments to the preparation of innovative schemes in a new context of stronger public participation, based on co-creation and participatory budget processes.

Introduction

This paper reviews forty years of urban mobility policies in Spain, identifying four main stages in a process that, while delivering improved and more sustainable mobility conditions to citizens, has also raised new challenges. This is a story of heated debates, with some successes but also some missed opportunities.

One of the most prominent outcomes achieved by many Spanish cities has been the recovery and modernization of their public transport systems. This was due in part to the resources allocated for undertaking ambitious investments. However, it was the early institutionalization of public transport authorities (PTA) and of a multilevel governance structure based on consensus, which were primarily responsible for the amazing results - even during those periods of political polarization and scarce resources. It is also remarkable how some Spanish cities in the 1980s moved away from pro-car policies which had been extremely resistant to innovation, and how quickly some of the space dominated by cars was redesigned to create attractive environments for residents, and pedestrians in particular.

Some of the actions undertaken raised new challenges. As easier access to financial resources and quick economic development became the norm, professional practices and political visions began to focus too heavily on infrastructural solutions, ultimately leading to the consolidation of a "build-big" machine that spent much-needed public resources on expensive and poorly thought out infrastructure schemes. Another issue was bargaining between local governments desperate for funding and the developers that could provide it. A situation that gradually undermined or circumvented urban development regulations. Moreover, urban design was not always creative, and it could be argued that laziness led many architects and engineers to rely on copy-and-paste solutions, many of which used unattractive designs in spaces reclaimed from car use or featured oversized streets in new developments.

Private and professional lives are a mix of success, failure and something in-between. This short paper highlights how all of these outcomes took place in Spanish cities in the following four stages: (1) Institutional reconstruction (1979-1985), (2) Cautious infrastructure expansion (1986-1995), (3) the Big-construction bubble (1996-2007), and (4) the grumbling sustainability turn (2008-2020).

Institutional reconstruction (1979-1985)

After four decades of dictatorship, the first local democratic elections took place in April 1979. The newly elected mayors took office at a time when virtually bankrupt municipalities were suffering from high unemployment rates and poor living conditions. In the 1960s and 1970s, people were living in underequipped and overcrowded neighbourhoods surrounding the cities. The car had become the mode of transport of choice, though only a fraction of the population could afford it. Public transport had not kept up with the expansion of cities, and many of those living in the new high-density neighbourhoods often had to rely on informal transport networks. To make matters worse, the oil crisis and the global economic downturn in the early 1970s effectively stopped the existing (and slowly implemented) plans to create or expand metro services in the larger cities. Finally, although public transport fares remained artificially low to mitigate public unrest, this policy resulted in the steady deterioration of the quality of public transport services.
The reaction of the elected city councils was quick and generally effective. First, they negotiated with urban developers to provide the financing and implementation of

the most urgently needed facilities. Then they dedicated resources to the improvement of buses and other public transport services. Most significantly, however, they created the institutional and professional frameworks required to implement their actions. The traditional figure of the 'municipal traffic engineer' thus gave way to 'multidisciplinary teams' which were open to the needs of pedestrians and public transport users and interested in the quality of public space. As a result, dedicated professionals increasingly monitored the performance of bus and other public transport companies, while some metropolitan areas created public transport authorities, following best practice developed in other European cities. This was, in short, a time for institutional reconstruction. Mayors wisely lent deaf ears to those promising magic solutions such as the privatization of municipal bus companies and opted instead for a long-term strategy in which reinforcing the professional capacities of the municipal services played a central role (Arias, 2002).

The cornerstone of the new mayors' long-term strategy was the adoption of new local plans, defining land use and infrastructure development schemes for the next eight years and beyond. The drafting of Local Plans attracted a crowd of young professionals, which resulted in visionary yet realistic proposals focusing on re-balancing cities, giving priority to the provision of services, including accessibility to neglected high-density neighbourhoods. Clear priorities guided the redesign and implantation of transport infrastructure projects In Madrid, for example, where new metro lines were constructed close to the surface, and with convenient connections among them, saying good-bye to the "build cheap" approach of the 1970s, with stations up to 50 below surface. Urban motorway projects were also cancelled in favour of urban boulevards, as was the case of the remaining section of the M-30 beltway in Madrid, which was renamed as *Avenida de la Ilustración* or Enlightenment Avenue. In other cases, authorities opted for compact designs, providing much needed public space and social facilities on the spared land (Barcelona's Ronda de Dalt y Ronda Litoral). (Aparicio, 1993).

Cautious Infrastructure Expansion (1986-1995)

During the 1980s, the economic situation was improving and the well-targeted investments in urban transport infrastructure had paid-off in terms of safety, through-traffic diversion, and more reliable mobility across all modes. While transport projects in cities continued to be implemented, local, national, and newly established regional governments were able to dedicate more resources to them. Once the most pressing gaps had been addressed, it was time to reflect on the long-term future of mobility in Spanish cities.

By this stage, some planners and a few politicians began embracing the then brand-new concept of sustainability. For others, the future had to be built (physically) upon the functional and political successes of the recent past. There was a strong public consensus on the expansion of transport infrastructure as a path to modernization, and the local building industry, which had grown rapidly and aimed to continue, was eager to deliver. The decade 1986-1996 was therefore one of increasing contradictions: On one hand, the planning tradition of cautious infrastructure expansion largely continued, completing the consolidation of the suburban railway networks and the expansion of the metro system in Madrid and Barcelona, as well as the planning and implementation of road bypasses in most urban areas. On the other hand, an increasing number of engineers, planners and politicians joined the "think-big" coalition.

In the wake of the Barcelona 1992 Olympic Games which had dramatically changed the face of the city and its infrastructure in an astonishingly short time, members of this coalition were largely favoured. More and more cities wanted to follow Barcelona's path to success, looking to the national government to contribute to the financing of new roads, metro lines and even tramways. These were times of increasing and interesting debates in professional and political spheres. The future of cars in Spanish cities was at the epicentre of these debates. Was the population ready to accept car restrictions and a decisive bet on sustainable transport? (Sanz, 1996; Aparicio, 1994, 1995).

For most decision makers, the answer was… 'Not yet'. There was still one final parking facility to build, one last road to enlarge, one more new tunnel to dig… And with progressive local governments largely in retreat, drivers joining the ranks of car-dependency, and cheap small diesel cars allowing people to enjoy the low-tax gasoil fuel thus far reserved for trucks, sustainable transport could not gain wider popularity beyond the realms of academics and professionals. Indeed, the following decade revealed just how far civil engineers could go in filling Spanish cities with ever more expensive pieces of transport infrastructure (Estevan & Sanz, 1996).

The Big-Construction Bubble (1996-2007)

The decade 1996-2007 was deeply influenced by the effects of the 1997 legal reform to facilitate the rapid urbanisation of rural land. The rationale of this reform was the fast-growing prices in the house market, and the naïve assumption that they were a consequence of the legal controls embedded in urban planning legislation that restricted new urban developments to designated zones. Significantly, the legal reform included provisions to increase the power of big developers to push forward their plans vis-à-vis small landowners. Moreover, the reforms also limited to a large degree the ability of the public sector to keep control of the urbanisation process.

The consequence was an acceleration of the already vigorous urban sprawl that had developed in the previous decade. Urban sprawl required transport infrastructure, and contrary to the 1960-1970s growth in which developers avoided the provision of such infrastructure, the new regulations requested developers to provide the required infrastructure in advance. In practice, however, this acted as an effective barrier to smaller developers, and facilitated an oligopolistic urban development market, at least in what referred to road access. The expansion of urban roads and motorways was nevertheless amazing, particularly in Madrid, where the motorway network practically doubled, with a new beltway - the M-50, an 85-km motorway entirely completed in 2004, except for a short 7.5-km section completed in 2007 - and 5 new radial motorways.

Metro networks were also expanded in Madrid and Barcelona, and new systems were opened in Valencia, Málaga or Sevilla. Meanwhile, medium-sized cities opened tramway lines, such as Coruña, Zaragoza, Alicante, Murcia or Santa Cruz. The frenzy of transport infrastructure construction peaked in Madrid, with a scheme to enlarge the capacity and partially cover the M-30 beltway. It completed in just 3 years at a cost of more than EUR 5 billion.

In many of these cities the future arrival of the high-speed train was seen as a unique opportunity to engage in ambitious urban redevelopment schemes targeting the rail station and its surroundings (Bellet & Gutiérrez, 2011). The additional cost of covering the rail lines and – in some cases - the entire station was supposed to be met by the profits associated with new urban developments on land owned by the railway company. Sometimes, as was the case in Zaragoza, these schemes were completed, eventually providing over-sized railway stations to the city. In other cases, however, like Valladolid, it ended with the heavily indebted municipality being forced to downsize the initial scheme (Observatorio Metropolitano, 2009).

During this period, pedestrianization schemes in touristic city centres became ubiquitous in a trend that followed the positive experiences of early adopters from the previous decade, such as Vitoria and Pontevedra. Regrettably, though, those in charge decided to keep just the external traits of those actions and forget about their substance. Most schemes did not aim at modal change and reduced car use, but rather, were designed to support the development of tourist-focused businesses in the city centre. In fact, in terms of modal split, this can be considered a 'lost decade', as heavy investments in public transport and pedestrian areas were insufficient and failed to reduce the modal share of private car use. Moreover, car use was in fact sustained not only by road capacity expansion, but also by the generalisation of a "city on the road" with housing, services and commercial activities increasingly sprawling to the city outskirts (López de Lucio, 2006; Sanz, 2005).

The implementation of Infrastructure-based policies was not without criticisms. As the magnitude of the projects' costs kept growing, and their purpose and functionality became more and more doubtful, critical voices could be heard. These were sometimes included in the first technical guidelines to prepare sustainable urban mobility plans in cities (Pozueta et al, 2006), or more significantly still, in official policy documents, such as the Guidelines on Urban Mobility developed within the Ministry of Transport and the Strategy on Local Sustainability published by the Ministry of Environment in 2007.

The grumbling sustainability turn (2008-2020)

This critical approach would eventually gain hegemony. Although it was more as a consequence of the sudden burst of the financial bubble and its ravaging consequences on local budgets, than as the result of decision makers becoming convinced of the virtues of sustainable mobility. Even so, for some cities the change of direction was a case of 'too little, too late', because they were already heavily indebted by the costly projects. Madrid was a notorious case in point, with a burden that would take decades to pay off at a time when public support was desperately needed by its less affluent citizens.

The new paradigm included three main components:

- The promotion of sustainable urban mobility plans by the national government (a new law, passed in 2011, made it compulsory for cities receiving national subsidies for public transport to produce a SUMP)
- The enforcement of the air quality law in cities (including the contents of the EU Air Quality Directive) - which implied the need to produce air quality plans for those cities not complying with air quality targets as defined in the Directive
- The growing influence of local grassroots associations lobbying for the improvement of the urban environment and for a more inclusive mobility system.

These three components built upon some valuable achievements from the past, notably the establishment and consolidation of public transport authorities, which had provided an integrating system in most of the big and middle-size cities in the country, as well as the ability to provide reliable technical leadership in times of economic difficulties and hard choices. Furthermore, in spite of the mediocre results achieved by the implementation of the first generation of SUMPs (Vega, 2016), they have served as a test field to a large community of municipal officials and professionals, ready to apply the lessons learnt with a new generation of decision makers, who are more sensitive to sustainability claims. Ironically, it could even be even suggested that the previous overspending in transport infrastructure led to the present opportunity to focus on sound management of the transport system as a whole, while seriously addressing car restrictions. Indeed, it has always been clear that sustainable transport modes can only grow to the extent that car use is actively reduced.

To conclude, mobility policies in Spanish cities today are pretty much about regulations and no longer about infrastructure. Spanish cities are developing procedures and structures to effectively promote and implement innovation, to tailor decisions to each particular context, and to meet the challenges of air quality and climate change. Although financial resources remain scarce, the task ahead is being addressed by dedicating the energies and staff previously focused on large infrastructure developments to the preparation of innovative schemes in a new context of stronger public participation, based on co-creation and participatory budget processes. Some cities are moving quicker than others in that direction, and there are, no doubt, some occasional backward steps. The process could probably be sped up with firmer support from the national and regional governments, not only in terms of improving local financing, but also through the setting up a more robust normative framework. In this respect, the Air Quality Act has shown that clear environmental targets can send a strong message to local decision makers. It is an approach which could be fostered in the future through regulations regarding the contents and scope of SUMP, cities' contributions to national

climate change targets, and the minimal mobility quality standards for vulnerable social groups. These examples highlight just a few areas in which most local decision makers would appreciate some guidance and leadership.

References

Aparicio, A. (1993). Autopistas y ciudad. ¿Una reconciliación posible? Revista de Obras Públicas, nº 3324. Madrid, Colegio de Ingenieros de Caminos, Canales y Puertos.

Aparicio, A. (1994). El PDI y el transporte en las grandes ciudades. Revista de Obras Públicas, nº 3331, pp. 25-38. Madrid, Colegio de Ingenieros de Caminos, Canales y Puertos.

Aparicio, A. (1995) Madrid y su sistema de transporte: viejos esquemas y nuevos retos. Economía y Sociedad, Junio 1995, 159-170.

Arias Goytre, F. (2002). Problemática urbana actual. Boletín CF S, nº 19.

Bellet, C. & Gutiérrez, A. (2011). Ciudad y ferrocarril en la España del siglo XXI. La integración de alta velocidad ferroviaria en el medio urbano. Boletín de la Asociación de Geógrafos Españoles, 2011, núm. 55, p. 251-279.

Estevan, A. & Sanz, A. (1996). *Hacia la reconversión ecológica del transporte en España*. Los Libros de la Catarata.

López de Lucio, R. (2006). Tsunami urbanizador, ciudad basura y arquitecturas de prestigio. Tres síntomas de la crisis urbana a comienzos del siglo XXI. Arquitectura, nº 346.

Observatorio metropolitano (2009). *Manifiesto por Madrid. Crítica y crisis del modelo metropolitano*. Traficantes de sueños.

Pozueta Echavarri, J., Lamíquiz Daudén, F.J., Adalid, J.L., Aristi, J. (2004). *Guía práctica para la elaboración de planes municipales de movilidad sostenible.* E.T.S. Arquitectura (UPM).

Sanz Alduán, A. (1996). *Calmar el tráfico.* Ministerio de Obras Públicas, Transportes y Medio Ambiente.

Sanz Alduán, A. (2005). Elogio y censura de la peatonalización de los centros históricos. Boletín CF+S; nº 28.

Vega Pindado, P. (2016). Una década de planes de movilidad urbana sostenible en España 2004-2014/A decade of sustainable urban mobility plans in Spain 2004-2014. *Anales de Geografía de la Universidad Complutense, 36*(2), 351-372

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