Integrating the train into the city: some thoughts from Spain

Luis Santos y Ganges, translated by Eric Rosencrantz

Are inner-city railways condemned to form boundaries or barriers within the city? Based on a critique of the situation in Spain, the author suggests a few ways of integrating the railway into the city. His proposals shed some revealing light on the rationale behind efforts to redevelop derelict railway land in France, too, such as the Jardins d'Éole rehabilitation project in Paris.

The railway system is a fully-fledged urban element unto itself, a vast, complex space that forms an integral part of the city. This view of the matter, however, has been far too often neglected by urban planners and local authorities. To be sure, the railway system can become a macro-element that proves difficult to integrate. But this is no reason to claim that the railway constitutes in and of itself a nuisance for the landscape and life of the city, a useful but un-urban element, hence an infrastructure that needs to be concealed, even banished beyond the city limits.

And yet this is the predominant view in Spain, where some fifteen state-owned corporations (not counting those currently being set up) are entrusted with projects along these lines. The "high speed for all" policy serves as an argument for the so-called "urban integration of the train" policy, which actually consists in turning the railway system upside down as it passes through the city. In our estimation, this is a useless and costly preconception. Only important reasons can justify such radical solutions as elevating, burying or rerouting the tracks.

The "intolerable barrier" cliché: the state of the railway–city issue

Besides the problems arising behind a railway track (the "barrier effect"), its immediate proximity entails various easements and drawbacks for urban life – what might be called the "border effect". In a chapter aptly entitled "The curse of border vacuums" from her book *The Death and Life of Great American Cities,*[1] Jane Jacobs explains that massive or continuous single uses create urban borders. But these borders are not mere edges: they destroy neighborly relations to the point of becoming social borders. With regard to the railway, Jacobs notes that the immediate environment on either side of the tracks proves particularly dysfunctional. One side may be more dysfunctional than the other, but in any case urban life will be affected along this border.

The problems that most often plague the relationship between the railway and the city are, in our estimation, the following:

- From the railway perspective: safety issues (inadequate safeguards, level crossings, imprudence on the part of many people), shortfalls in rail line capacity (under-penetration at the station) and the difficulties inherent in the mixed handling of passenger and freight traffic at the same station.
- From the city perspective: the border effect produced by railway corridors, the barrier effect due to the dearth of crossings of any kind but also to the presence of level crossings and crude grade-separated crossings, and the deterioration of environmental quality due to

[1] Jacobs, Jane. 1991. *The Death and Life of Great American Cities*, New York: Random House, Inc.

unsuitable and poorly maintained railway safeguards, grime, heaps of equipment, exhaust fumes, noise and vibrations.

In the general interest, we need to find solutions that are satisfactory from either perspective: the railway has got to address the city's problems more seriously, and urban planners have got to take the railway's needs and problems into account, making the greatest possible effort to integrate the railway into the urban fabric and turn this "border" into a "seam".

Furthermore, the physical barriers constituted by railway tracks have become reference points for real-estate operations, as well as for urban planning and administration. Society has ended up assimilating two distinct phenomena – the barrier effect and socio-spatial segregation – using the railway as an ulterior motive for socio-economic segregation and zoning, although it is not the cause thereof (contrary to what is often claimed).

As a result, railway infrastructure itself becomes a focus of contention actually brought about by other factors: urban planners assigning "roles" to urban spaces, the lack of city-wide facilities, the mediocrity of the existing buildings, the scarcity and crudity of the crossings, insufficient funding, etc. So getting rid of the physical barrier will by no means suffice to break down the social barrier.

Reconciling railway and city requirements

What exactly does the urban integration of the railway involve? This question should be approached from two different angles:

From the railway's perspective we need to:

- supply and maintain railway system safeguards; remove and replace level crossings;
- separate the passenger station from other facilities (freight station and rolling-stock depot – engine shed, maintenance, shunt yard, etc.) so the former can serve its purpose and the other facilities have sufficient space and accessibility;
- facilitate access to rail services through municipal policies to improve accessibility, urban design and connectivity (central siting of station);
- maintain or improve station centrality and, if possible, give the station a double facade, i.e. direct access from either side of the tracks;
- turn the passenger station into a center of urban activity (providing integrated services and forming nodes of tertiary-sector activity at railway stations – something that is more and more widespread in Europe); however, higher-density service-sector activity at stations should be geared to having minimal impact on their functional requirements (clear-cut connections for passengers, waiting facilities and thoroughfares, parking areas, etc.), while at the same time allowing urban planning-based control of uses and densities to avert future costs of congestion.

From the city's perspective, there are three sides to urban integration of the railway: "environmental fit", "permeable barriers" by keeping railway lines at a constant height (multiple and suitable grade-separated crossings) and "fringe improvements" (parallel roads running beside the tracks, suitable safeguards, greenways, and sound urban planning). From this angle, one can list a series of general criteria and potential solutions to the urban integration of the railway:

- Adapt railway safeguards to urban design: develop the edges of the corridor according to environmental and landscaping criteria (security and quality of safeguards).
- Alleviate air and noise pollution, as well as vibrations (measures to remedy nuisances). Planning should prioritize urban design and give rise to further measures: putting in sound barriers (an integral cost of urbanization), appropriate design of public facilities, and

regulations concerning soundproofing of facades, observance of minimum distances from the track, reduction of the height and density of residential buildings in the immediate vicinity, appropriate layout of volumes, etc.

- Do away with obsolete facilities, avert environmental damage, clean up and maintain line-side grounds, etc. (improve the image of rail platforms).
- Provide the necessary crossings: remove at-grade crossings and provide grade-separated alternatives, while reinforcing the quality and size of existing grade-separated crossings (for less congested crossing).
- Develop public spaces and traffic routes along the edges of the rail line and reduce the breadth of the railway platform: free up derelict land and minimize the space used for tracks and platforms (to attenuate the barrier effect).
- Eliminate rail-related rifts in the urban fabric by reallocating unused railway grounds.

Urban railway integration in Spain: a soft or heavy-duty approach?

The urban integration of the railway can be approached as a "soft" technical intervention, combining environmental improvement, rehabilitation of the areas bordering the corridor, and permeable crossings with a rational urbanization that does not turn its back on the railway and instead tends to alleviate its potential nuisances. This involves an interdisciplinary approach to achieving compatibility between the rail line and urbanization, which could lead to unprecedented levels of integration. A "heavy-duty" method, on the other hand, consists in radically relocating the railway system by means of elevation techniques (on viaducts) or, above all, tunneling (covered rail, tunnels or cut-and-cover tunnels) or rerouting the track. The soft approach to urban integration should be used to solve the problems arising from the relation between the railway and the city. "Heavy-duty" solutions are only suitable for certain particularly troublesome cases.

In Spain, the prevailing demagogic discourse gives soft approaches an air of being stop-gap solutions, which condemns to failure any attempt to justify them as against heavy-duty approaches. However, soft approaches are far more economically and financially viable and more in line with the means available to municipalities and railway administrations. Unlike most heavy-duty solutions, they are not dependent on funding based on the capital gains that are supposed to accrue from real-estate operations involving the freed-up land. Moreover, reclaiming derelict areas calls for an urban planning approach that is not confined to making the operations viable, but that will ensure an equitable distribution of the capital gains thereby generated and encourage urban integration on both sides of the track. Above all, planners must resist the temptations of speculation, often in the guise of "expert" architecture and "equipped" green spaces.

So interventions should not be chiefly based on land use or encourage over-exploitation (capital gains) to minimize the public spending required. Unfortunately, however, this is what is happening in Spain, where the authorities are neglecting their duty to fight speculation – and even behaving like realtors with special prerogatives.

Mirages of self-financing and collateral urban damage

The dangerous "self-financing" cliché, which has gained widespread currency, is that railway land freed up for other uses can and must generate sufficient capital gains for these uses not to cost the participating bodies a thing. This is a generally accepted notion, sold as "zero cost" redevelopment (i.e. zero cost to administrations, not to taxpayers).

Setting up state-owned corporations in which the national government, the (autonomous) regional government and the local government each holds a share has become a common policy tool over the

past decade.[2] In the throes of the current economic and financial crisis, these corporations are now struggling to move ahead with their plans and are waiting for better days to come, though without questioning the model per se. On the contrary, other cities keep rallying to the dominant discourse, although the local situation does not present any particular problems.[3]

In their efforts to orchestrate the redevelopment of the railway system in their cities, these companies come up against the squaring of the circle when they try to combine costly and hard-to-finance railway improvements with high-quality urban development. How else to explain their blatant eagerness to supply as much floor space as possible for occupancy (for tertiary-sector businesses and above all for apartments, which are easier to sell) by forcing building-to-plot ratios up to excessive levels and pushing density up to the very brink of illegality?

Take the city of León, for example, which plans to build 5,853 housing units, 3,254 of which by the railway station; or Valladolid, where 2,777 of the 6,065 housing units to be built will be sited by the station in a "new central location".[4] And yet both cities report demographic stagnation and both had a steadily increasing housing stock till the current crisis set in.

"The integration of the train into the city", as it is officially termed, is actually a very costly plan to remove the railway (by rerouting it or putting it underground) relying on funding from speculative financial and real-estate operations. The inherent risk to this non-sustainable approach is that the planning strategies for the use of the freed-up land will only serve to finance the operation. The planners are, in a word, confusing means and ends, and forgetting that the railway barrier is not only physical. In their zeal to make the railway barrier disappear, they are forgetting to stitch up this urban border to make it an inner-city seam.

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His publications to date include:

- *Urbanismo y ferrocarril. La construcción del espacio ferroviario en las ciudades medias españolas,* Madrid: Fundación de los Ferrocarriles Españoles, 2007.

- *Burgos y el ferrocarril. Estudio de geografía urbana,* Burgos: Editorial Dossoles, Junta de Castilla y León and Fundación Caja Burgos, 2005.

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[2] For example: Zaragoza Alta Velocidad 2002, Logroño Integración del Ferrocarril 2002, Valencia Parque Central Alta Velocidad 2003, Barcelona Sagrera Alta Velocitat 2003, Valladolid Alta Velocidad 2003, León Alta Velocidad 2003, Gijón al Norte, Alta Velocidad Alicante Nodo de Transporte, Cartagena Alta Velocidad, Murcia Alta Velocidad, Palencia Alta Velocidad and Almería Alta Velocidad.

[3] Especially in Vitoria, Granada, Santander, Orense, Vigo, Albacete, Santiago de Compostela and Pamplona.

[4] Plans approved by the municipalities of Valladolid and León and the administration of Castilla y León.