

RE-THINKING INFRASTRUCTURE PROJECT FOR THE METROPOLIS: LABORATORY GRANADA

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ABSTRACT

Nowadays, urbanism must be able to reflect on the usefulness of certain infrastructure, transport infrastructure mainly, based on new policies for distribution of land uses. In the context of a new culture of sustainability and urban efficiency, this kind of urbanism seeks a reduction on the demand for mobility and expressly designed solutions. The coexistence of nature and artifice in metropolitan contexts is currently an important issue on which to re-think and to re-know its many possibilities. We could consider 'place' as 'urban and territorial material,' re-interpreting the quality of places. We could also look at it through the classical argument of 'points + lines + spots' inherited from landscape ecology. These and other methods are useful for understanding the urban fabric. They provide new meaning to the fabrics' intrinsic values thanks to the presence of infrastructure. From the perspective of the transport infrastructure project, this reflection should facilitate a methodological evolution aimed at creating a new technology that understands design as a negotiation between citizen demands and spatial offer of 'place'. This technology would overcome the theoretical distance that exists between the perspective of the city as an autonomous compact entity and the 'splintered' present day metropolitan reality, defined by more open lexical and combinatory systems overlapping with conflict. Thus, now more than ever, extending the mechanisms of a creative project; transforming some spatial concepts into instruments such as outline, crossing or section, fusing landscapes, hybridizing functions, or adding different times of the territory, etc., are also technological keys, for the integration of large scale infrastructure.

Keywords: Urbanism, Infrastructure, Design, Metropolitan

INTRODUCTION

Urban design always attempts to recompose complex entities through an analysis of specific elements. It frequently uses a constructive methodology that observes parts or components of the whole and serves to evaluate protagonism and generate

hierarchies. Using fundamental criteria, an idea of the object of study or intervention is formed, whether it is a specific area, a neighbourhood, a street or a complete city.

Constructing culture from a wide base, with a critical capacity to select the past and a long range lens when selecting criteria of exploitation and utility (Solá-Morales, 1981)

A few years earlier, the architect Carlos Aymonino explained that to understand the significance of a city it is necessary to identify its physical range, analyzing its morphology while classifying the elements, understanding also the possible relationships between them.

The construction and growing specialization of different productive activities, the integration, constantly variant, with a power of more or less expansion, constitute the economic-social causes of those effects that directly determine the quantitative characteristics that define cities: that is, the coexistence of spaces with a certain grade of separation, used at distinct moments by the same number of people. (Aymonino, 1981)

In Aymonino, the importance given not only to identifying the elements, but also to their spatial and temporal intertwining can be seen. At the same time, he evaluates the constant process of transformation and movement of the elements that give reference to a place, not only forming a technical or formal point of view, but also through internal organization, which is characterized by a multiplicity of hierarchical relationships, independent and intensely selected.

THE ROLE OF INFRASTRUCTURE IN THE METROPOLITAN CONTEXT

Among contemporary landscapes and daily movements, a drifting theoretical space can be observed, incapable of moving in the correct direction, lost in the attempt to understand what is going on, infinitely slower than an urban reality which is years ahead of our own, in a permanent state of mutation.

The dominant concern in the majority of Urban Planning forums is the search for meaning in urban events and the consequential responsibility of architects, urban planners and other increasingly diverse and qualified professionals in the territorial construction field to create it.

The multi-scale condition

The multi-scale condition of the urban events is evident in all places. All urban “objects” possess this capacity for creating relationships at a short distance, a medium-distanced and at a great distance (Rivas, 2006).

Mobility infrastructure establishes an ideal framework to fragment disciplinary borders, reinforce theoretical compartments, techniques and the proposals created out of sectorality, in this way responding to a fortunately ambiguous reality.

Infrastructure for the mix

Territorial lines, distribution and access channels as well as intercity motorways are even more intense and permanent vectors in our daily lives. Making them the object of study, it is possible to understand, perhaps in a more palpable manner than with different forms or uses (public spaces, natural spaces, logistical centres, residential packets, etc.), the potential of an a priori labor which is hybrid, inter- disciplinary, complex and which offers grand spatial capacity.

Among our landscapes and contemporary movements, the need to reconcile a structural view of territorial regulation with another sensible one is shown, in light of the minimal events which occur in the area.

The multiple speeds superimposed in any roadway which crosses the city or its area, and the capacity to establish smaller or greater relationships than its size, position and continuity offer makes it more and more necessary for the project to respond to this multi-scaled nature.

RE-THINKING INFRASTRUCTURE PROJECT

Contemporary urbanism must be able to reflect on the usefulness of certain infrastructure, transport infrastructure mainly, based on new policies for distribution of land uses. In the context of a new culture of sustainability and urban efficiency, this kind of urbanism seeks a reduction on the demand for mobility and expressly designed solutions.

The coexistence of nature and artifice in metropolitan contexts is currently an important issue with many possibilities that need to be re-thought and re-know. We could consider 'place' as 'urban and territorial material,' according to the way Viganò (1999), Solá-Morales (2008), Zardini (2005), etc., teach us from their different scales, re-interpreting the quality of places.

From the perspective of the transport infrastructure project, this reflection should facilitate a methodological evolution aimed at creating a new technology that understands design as a negotiation between public demands and the spatial offer of 'place'. This technology would overcome the theoretical distance that exists between the perspective of the city as an autonomous compact entity and the 'splintered' present day metropolitan reality, defined by more open lexical and combinatory systems overlapping with conflict.

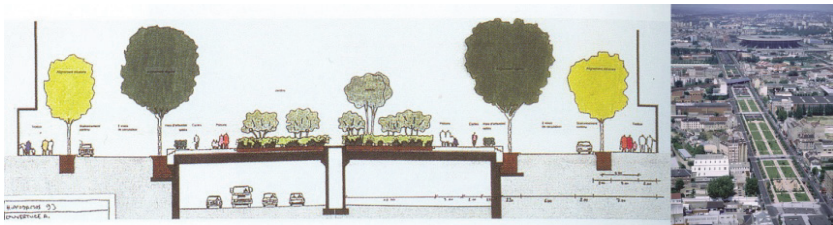


Figure 91: Jardins Wilson Project in Saint Denis, Paris, by Michel Corajoud (Lotus 110, 2001)

Space through its section: widths and links

Let's talk about urban planning projects in which the infrastructure is wisely domesticated without underestimating it, without effacing it, but finding the formula which will be woven into the fabric to be created, incorporating it into the landscape of the city as a "positive" element (Smets, 2001).

From the simplicity in this gesture, the Jardins Wilson Project in Saint Denis de Paris, by Michel Corajoud, is an approach to the work with sections of main streets which cross a consolidated urban fabric, in a neighbourhood in transformation at the outskirts of Paris, from its industrial vocation to an increased outsourcing of its capacity to residential uses.

By increasing the surface level of the corridor occupied by the infrastructure, a great quantity of new area is achieved, which can be occupied by the required public space. Together with this idea of "complex section", it is very important to assess the strength and intelligence of the project in obtaining some excellent dimensions for the functioning of space from this process of sin- king traffic, as it necessitates "interesting" lengths and widths in the dialogue between one facade and the other, in order to allow for tree-filled spaces of great size.

The moment of the crossing: possibilities and events

These projects have another complexity-increasing mechanism in common, the interaction of the horizontal diversity. Now we consider the rehabilitation of the processes which multiply the horizontal channel; In other words, rehabilitating segregation and differentiation in the connected routes, roads, and different traffic.

Why is this moment of crossing extraordinary? As the possibilities for differentiated movement are generated, the number of directions which must be organised increases, because the crossing and the consumption of space in the infrastructure is much greater and does not take advantage of this spatial capacity in areas which are exclusively dedicated to traffic. These are hyper-connected places which are references for multiple roads, with very high agglutinating potential. If we play with the separation of the different channels instead of their concentration, we obtain accessible "air" which at the same time possesses an unprejudiced aesthetic sense, enabling experimentation with its form and function.

In this way, for example, the MVRDV project for the Stadsboulevard a 20 in The Hague intersperses residences, public space, offices, etc. within the motorway's environment of freedom and openness.

The surrounding area of the infrastructure: implied space and architecture

The edges of infrastructure should be observed to interpret how spaces of conflict (in friction with the road) can be recovered and offered to all of society in the form of natural space, urban space or cultural space. In this way, what is in question is the very environment of the infrastructural network, its very shape as well as the forcefulness of its placement.

There is an architecture which is attached to the machine of mobility. This architecture emerges surrounded by a logic of noise and velocity, somewhere between its physical and environmental ends, in the tight strip which separates it from the urban or the natural; essentially, a border space between the two mediums. The space planning close to the motorway has to find arguments for use and scale which force these nowhere lands to understand the means by which infrastructure bursts in.

INFRASTRUCTURAL TYPOLOGIES

To be able to present synthetically a “reconsidered” infrastructure in the previously described terms, the means by which these objects are implanted in the territory should be distinguished. These means can be seen as “typological infrastructure”, permitting understand of the specific needs and classifying competencies. At the same time, they are useful to understand the multiple sizes and scales of relationships that can unite in a single infrastructure. These are superimposed technologies in a single infrastructure that try to respond, in many cases, to the demands of the distinct, congregated typologies.

There are three modes or types of infrastructures in this sense:

- a) Nodal infrastructure or the nodal situations of the infrastructure, such as roundabouts, various nodes, bridges, stations, parking lots etc.
- b) Linear infrastructure or those that are recognized for their linear condition, such as highways, shorelines, suburban roads, arterial streets, etc.
- c) Infrastructure related with an area that constitutes systems or more complex groups. These are networks or elements that are a sum of infrastructure and that branch out into the recognizable landscape or territory: suburban spaces, airport surroundings, industrial areas, territorial links, etc.

METROPOLITAN PROJECT: LABORATORY GRANADA

The following are examples of infrastructure projects that would constitute a new way of dealing with infrastructure, as a territorial or urban object. At the same time infrastructure is treated as an element that belongs to a landscape and is integrated in its forms and functions. This kind of project, or infrastructural urban surroundings, observed and worked on in the Urban Design Laboratory at the University of Granada explains the characteristics or qualities necessary for the achievement of the two fundamental objectives:

1. First, they peruse the integration of the scales and urban time as previously described.
2. Second, they try to reinforce the identity of the new metropolitan entities, seeking to increase cohesion between the pieces of the new urban systems.

The growth of southern Granada can only be understood in the context of its defining geographic conditions. The presence of the Genil River totally changes the inertia of the linear forms, deforming the north-south directional axis and approximating the points of origin of the metropolitan relationships to the two historic bridges that cross it (Puente Blanco and Puente Verde). This deformation creates a network of radial and circular lines where a rectangular, isotropic network would normally exist. In turn, it develops very special metropolitan relationships of proximity and distance between the city and the exurban settlements.

The radial form is emphasized by suburban roads with extremities clearly defined by the nucleus that they communicate (Huétor vega, Monachil, la Zubia, Dílar, Ogijares, Armilla) and Granada as a common destination and point of exchange between them. These roads play a predominant role as a structuring element in the interior growth of the city to the south and in the metropolitan form of this southern area.

Thus, for example, urban infrastructure is situated on the edge of these suburban roads, where they are more accessible and visible. Each line acquires a character from the point of view of the collective spaces and residential neighbourhoods or local networks.

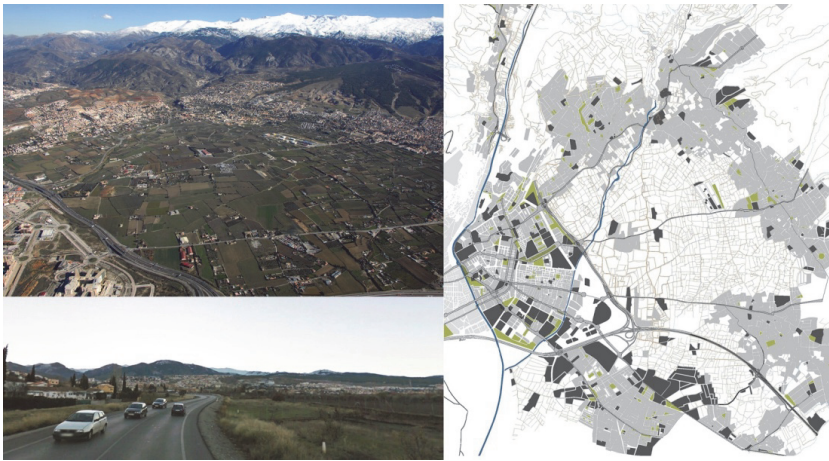


Figure 2: View of metropolitan south of Granada. Structure of suburban roads. Connection between Granada and Huétor Vega. (Bravo, Belén. Doctoral thesis in progress)

The project on suburban roads

Opposite to this traditional connectivity, the new approaches of the metropolitan politics impose the use of new roads that reconfigure the territorial accessibility map without taking into account how this might affect the meaning of the urban uses and activities. The projects on these suburban roads are necessary, new revitalizing actions of these weak infrastructures to make them compatible with contemporary needs and modernize the traditional section. But it is probably much more through reconfiguring the surface; the way that Joan Busquets (2006) explains it in his projects, that qualities of integrated landscape, multimodal capacities and the

aggregative capacity in relation to the different traffics and requirements of metropolitan movement can be maintained,.

CONCLUSIONS

Beyond the traffic's infrastructure, the urban or natural infrastructures must generate guidelines for the colonisation of its necessary uses on its near edges or incorporate apparently strange uses into these in the surrounding environment, to allow for their absorption as participating elements of the whole.

These are some of the challenges of the infrastructural projects in times of urgent necessities to economize resources, a technical instrument that should be at the service of the reutilization of the pre-existing objects, giving them new meaning and avoiding unnecessary infrastructure that start from scratch when it comes to their relationship with the metropolitan forms and the territorial identities in construction.

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