URBAN PROBLEMS AND DISCIPLINARY PARADIGM: AROUND A "REASONABLY" COMPACT CITY?*

Antonio Font

The discipline of urbanism and its practice have evolved further and further away from their beginnings of utopian ideas and social reform. Over the years, they have taken shape by adopting specific modalities based on the problems to face.

Over the course of different historical eras, we find paradigmatic examples of theories and designs that aim to respond to the significant urban problems of the corresponding age. If we think, for example, about the age of the industrial city and that of modern urbanism, we can make out a clear relationship between planning tools – the regulatory plan and the planning strategies derived from it (partial and special plans etc.) – and the problems and demands of urban growth that correlate to the stage of capitalism known as "Fordism".

The international energy crisis of the mid-1970s, and the changes it entailed for industry; the influence of advancing communications technology; and the service industry's replacing the industrial sector as the motor driving urban development are, without a doubt, the elements underlying the "explosion" of the city[1] – a phenomenon that we have witnessed in the West, as well as around the world.

A new urban model has emerged that is very different from the traditional compact shape of the city: growth by contiguity or "oil-spill" growth, it has generated a dependent periphery that has evolved discontinuously as a sprawl throughout entire regions. This kind of growth consists of autonomous, yet interactive heterogeneous fragments, and has obvious consequences at least in terms of how we consume open land and transform the landscape; in how multidirectional flows are generated; in the appearance of new ways of inhabiting land; and in the behaviour and lifestyles of its inhabitants. In this context, the fact that designers are progressively turning away from Master Plans to instead embrace the "urban project" – itself a more flexible and effective problem-solving tool – means that a demand for greater flexibility and adaptability in the field of urbanism is in point, echoed in industry, administration and government.

Although urban planning in Spain has experienced moments of greatness – such as the years following the transition to democracy, which witnessed the morphological urban design of the early 1980s – it is undeniable that in the ensuing years, during which urbanism was standardized and bureaucratised, a crisis occurred in the field of rational, or modern, urban planning[2]. The latter has been under siege by the neo-liberalist school of thought, and by the first consequences of the "welfare state" crisis; rational urban plans have thus evolved to more banal urban projects.

David Harvey, among others, has condemned our society's scant interest in planning and in those tools that can rein in the free market: «[…] bearing in mind the volatility of capital, in the post-modern condition, urban planning does not exist – only design [can be said to] […]»[3].

* This article is an updated version of the same article contained in the monography Font, Corominas, Sabaté (eds.), *The Territories of the Urbanist*, Universitat Politècnica de Catalunya (UPC), Barcelona 2005, published to celebrate the tenth edition of our Professional Master in Urban Planning and Design.

So, are still Master Plans and Urban Projects efficient tools to face the contemporary city problems? If so, at what conditions? Which should be their objectives and contents bearing in mind the performance troubles of Master Plans and the lack of integration of Urban Projects even in territories with a proved tradition in urban planning culture? Can we continue to limit our mindset to the compact city and its extension into adjacent areas, that is, to traditional patterns of growth? To models that preach a concentrated and hierarchical city (as concerns road and transport networks, facilities, centralisation and density)? Can we limit ourselves to the most basic tools (drawings, zoning, subdivision and ordinances), as we deem them to be adequate to deal with the problems we face today?

The new reality of the "territorial city" seems to require a different sort of regulatory plan, which must be far less prescriptive and far more flexible; more strategic and focused on larger areas or territories; more open, and networked; less homogeneous and more diverse. Urban project, however, having distanced itself from its genuine objectives[4], has unfortunately evolved into a tool that supports real estate market's needs to reshape Urban Master Plans – whether these modifications are justified or not. To date, urban projects' sites have either been located in the consolidated city itself, or in its immediate periphery. In the current phase of the urbanisation process, taking into account the new conception of what is "urban" in terms of its nature and its spatial characteristics, it is appropriate to wonder about the "urban project" applicability not only in the consolidation or restructuring of the compact city and its adjacent peripheries, but also in the low-density settlements, in the activities' spots that are polarised along arterial infrastructures or in the pre-existing peripheries with no urban quality at all.

Is it feasible to figure out a new generation of urban projects that will provide a coherent response to the new modalities of growth, and will take into account networks and nodes of mobility? Can these new urban projects encompass the polarisation of activities across entire regions, and society's demands striving for environmental sustainability and a protected landscape? This leads us down the path from "urban project" to "territorial project", which itself comprises a reformulated design strategy for organising the region and encompasses new objectives based on the problems posed by the "new territoriality".

New problems and new paradigms

Hand in hand with the emergence of this new territoriality, the physical changes we have witnessed in the configuration of our cities and regions, and in the behaviour and lifestyles of their inhabitants, pose new problems and exacerbate existing ones. This necessitates a formal recognition of new paradigms, to explain or solve the problems at hand. Bit by bit, new theories trickle into the profession of urbanism (and *vice versa*), and these are even more slowly transformed into legally binding measures (such as legal provisions and government policies).

Although this exploration strives to focus, in a synthetic manner, on the most significant individual problems faced by the field of regional planning today, and the criteria and doctrines that have emerged in response to them, I propose the following, provisional summary of six basic questions. These, in my opinion, will serve to focus our attention on the most important functional, environmental and morphological aspects that a reformulation of the urban project principles will entail.

a) Mobility multiplication and the location of new activities.

The way in which economic activities have sprawled throughout regions, together with changes of the

locations of centrality have resulted in an "elongated" and "extensive" use of regions[5], in which movement flows in all directions, and reflects a far more complex system of mobility than the traditional metropolitan model of suburban commuters working in city centres, in which the region was defined as a periphery dependent upon a centre, and exhibited a typically radial flow of traffic.

The intense consumption of land over the last three decades for residential, industrial and service purposes has been accompanied by a significant effort to enhance transport infrastructure (by building motorways, widening roads and extending highways), which was aimed at resolving demands for greater individual mobility. This, however, has been undertaken with scant regard paid – with a few noteworthy exceptions – to high-capacity public transport options (such as railways and regional metro systems) as worthwhile alternatives.

The unstoppable demand for greater mobility and the ever worsening traffic congestion in large cities and their metropolitan areas have always been addressed by expanding the system of roadways, both in terms of adding new connectors and widening existing roads. However, given the elevated costs of infrastructures, the consumption of land and energy they entail, and the environmental and landscape issues they pose, our current, incremental model of intervention seems either unviable, or at best, inadequate.

For some years now, the most advanced urban societies on both sides of the Atlantic (such as the United States, Canada and the Netherlands) have produced plans and designs that have themselves arisen from a revision of the incremental model expanding infrastructures for private mobility needs. These tools have placed emphasis both on the need to bolster high-capacity public transport systems, and the need to better understand the relationship between infrastructure and the location of activities, especially those that experience the greatest use in terms of numbers.

Of course, this is not to say that we should ignore needs for new roadways or the need to improve the existing system; nevertheless, urban planners and public officials need to stop thinking of roads as the main framework of regional and territorial vertebration. Instead, railway-based public transport should be used in its place as the element to link nodes in our current and future urban regions.

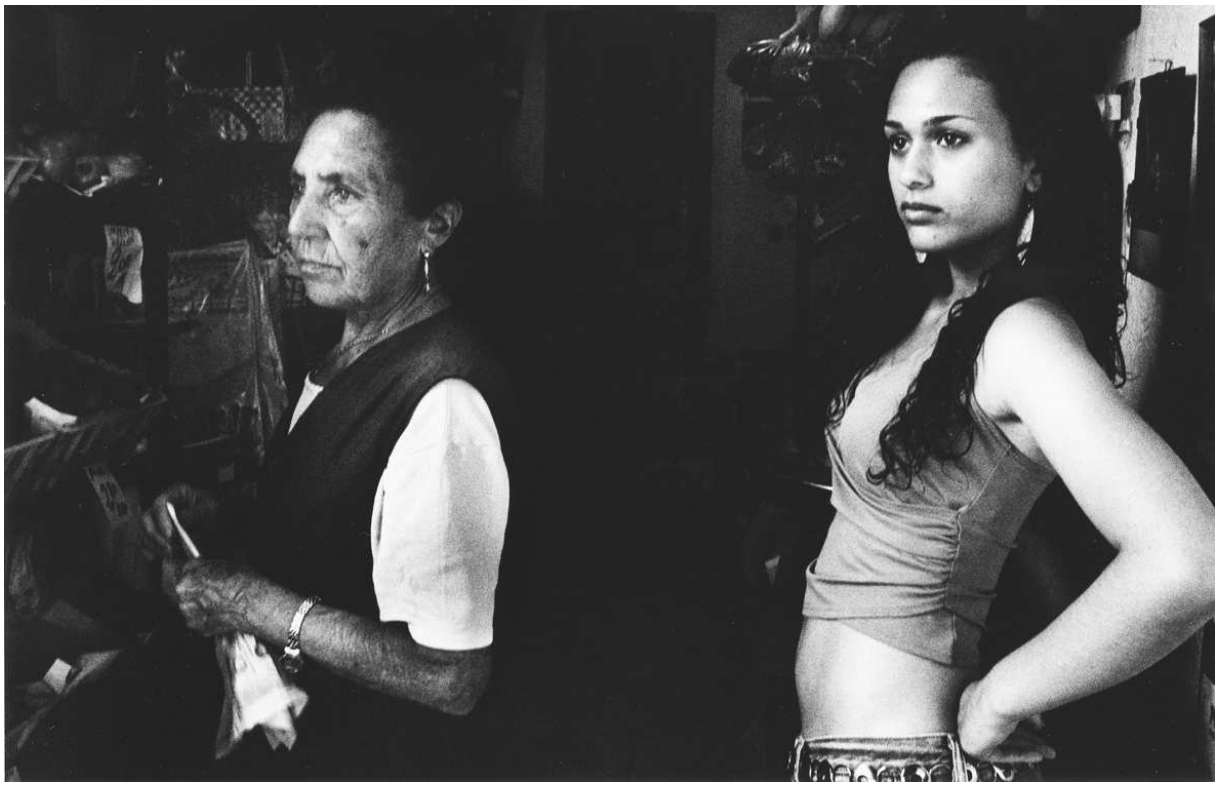
A more in-depth examination of the relationship between infrastructure and the location of activities and the flows of traffic that these generate is of utmost importance at present. Only in doing so will we be able to streamline greater demands for mobility through a high-capacity public transport system, whose existence or planned route should serve as an ineluctable criterion in determining where such activities should be located, in addition to granting zoning permits for them.

An example of this, given the trend towards large car parks adjacent to large-scale shopping centres, would be the possibility of relying on nearby public transport hubs so as to restrict private parking: this could be used as a measure to prevent the main roadways in the system from becoming congested, or at least to alleviate congestion. This could additionally lessen congestion caused by the widespread lorry-based transport of merchandise, which should be redirected, in large part, to shipment by ship or by rail.

Individual mobility is a right, not an obligation, and planning the location of activities, both in relation to places of work and residence and in relation to public transport facilities, is an issue of fundamental importance.

b) Centrality based on a structure of multiple nodes.

The process of territorial dispersion of industrial activities and housing has been accompanied by the decentralization of the so-called "banal" tertiary activities, while "managerial" tertiary activities – such as FIRE (Finance, Insurance, Real Estate), legal, administration activities – have stayed or located in



traditional city centres. These activities' links to centres of power, together with their added value, make their permanence in central locations – where property values are higher – both advisable and possible. They thus play an important role in conveying the centrality of the urban core.

The process, by which part of the tertiary sector is decentralised, beyond those services that are closely linked to new residential or industrial areas interspersed throughout the region, entails the emergence of new scenarios or "landscapes of a new centrality"[6]. In these spaces, due to the search for a high level of regional accessibility, and for proximity and visibility to arterial infrastructures (motorways and main roads) and strategic places (such as exits, junctions, crossroads and stations), innovative activities tend to cluster.

Large shopping centres, which are increasingly accompanied by businesses such as leisure facilities (multi-screen cinemas, children's play areas and nurseries), restaurants (whether they be fast food, cafeterias or conventional restaurants), garden centres and automotive shops. Furthermore, industrial warehouses directed at new technology businesses, referred to alternately as "technology", "activity", "business" or "thematic" parks, comprise the new locations of central activities.

The search for new locations along major motorways, at points of easy accessibility and where facilities are

visible, is the consequence of how contemporary urban regions work: they are the sum of historical city centres and areas of new, sprawling growth, to which we must add these new fabrics of innovative activities.

It thus comprises three different landscapes (compact city, low-density development and networked scenarios) that act as superimposed layers to make up the spatial structure of the current city, or what might be referred to as the current urban region.

As noted by Giuseppe Dematteis, centrality is no longer located in the centre, yet instead stems from belonging to a network[7], which, in this case, is represented by the network of arterial infrastructures, to which we must add the remaining material and immaterial networks to which a company is linked. In addition to the traditional logic of locating services in close proximity to consumers – first in city centres and later in the sprawling developments surrounding cities – we must now contend with the logic of finding strategic regional locations. Here, the city is comprehended at the metropolitan scale, and desirability stems from achieving maximum accessibility from anywhere in a given region and a "*façade*" onto the main circuits of shipping and travel that run through it. This correspondingly lays the groundwork for a geography of centrality, one of a progressively greater number of nuclei in which any spot in the region could potentially become a city due to the level of centrality and accessibility of the facilities it offers.

This phenomenon also entails the need for new urban and regional models and paradigms, to replace those still focused on the city and the territory shaped by the Fordism. These new models, then, will have to serve as a paradigm for the discourse on how to achieve balance when one is designing for regions. Along these lines, the evolution from a closed urban system (in which every component possesses certain types and quantities of facilities according to an established hierarchy) to an open system (in which the specificities and complementary nature of individual places must be fully taken advantage of to optimise network synergies) entails an about-face for regional design.

c) Mixed-use development versus functional specialization.

As opposed to the nineteenth-century, bourgeois city, in which no distinction was made between uses inside the urban fabric, the Modern Movement's "functional city", as summarised in the Athens Charter, did make a distinction between urban uses: residences, workplaces, a circulatory system and leisure areas. Though this may seem to be a caricature of urban life, it nonetheless served as the theoretical groundwork underlying the discipline.

From an economic point of view, this same period (from *circa* 1900 to 1973) is commonly known as the assembly-line or Fordist age, in which profitability was boosted by the vertical integration of industrial processes under a single roof.

Both in the industrial process and in the Fordist city and region, agglomeration economies were based on scale economies and urbanisation externalities, becoming the underlying logic of European cities growth and industrialisation from World War II up to the oil crisis of the 1970s.

Such a system of logic, applied to the industrial city and region, will bring a separation of urban functions, which prevents them from entering into conflict with one another; thus, the possibility of endangering economic efficiency is avoided. To achieve this goal, modern urban design, that is, rational planning, had at its disposal the critical tool of zoning. This practice allows one to assign specific uses to different parts of the city, and slates reasons of functionality, hygiene, visual beauty and even "social harmony" for the ensuing specialisation of the city into functional zones.

The appearance of zones dedicated to a single function (such as housing communities, industrial zones, leisure spaces and massive parking facilities), paired with the

evidence that different sectors of society have amassed in ghettos, point to an overall tendency for our urban, functional and social spaces and landscapes to become more banal.

Furthermore, the consolidation of a region's spatial structure according to specialised functions has generated a demand of mobility between residences, workplaces, shopping centres and leisure spaces, etc. In the conventional metropolitan areas built in the 1960s and 70s – whose configuration still followed a radial layout of centre and dependent periphery – this need for mobility gave rise to the well-known concept of "commuting".

The widespread "explosion" of the city[8] over the last three decades has seen an intensive and sprawling use of land, and has also entailed a change in the model of mobility. This new model generates a wide range of flows between traditional centres and new developments, which have given rise to an enormous amount of traffic and led to the nature and periodicity of movement becoming ever more heterogeneous. Even in regions that have substantially modernised their basic transport networks – at high financial, aesthetic and environmental costs – a state of almost permanent congestion, coupled with an irrational use of energy, has come to be the norm. In the framework of the discontinuous or sprawling metropolis, so as to

minimise the demand for inter-regional mobility and to achieve a better balance and more interesting use of space by urban structures, we must overcome the limitations of single-function or specialised spaces and move instead towards new patterns of mixed-use development. Of course, such development must match compatible uses, and must proceed from a dynamic understanding of the ongoing evolution of urban activities. This then requires construction typologies to exhibit a flexibility of function and form, in industrial, service and residential developments alike.

d) Urban reuse and recycling versus open land consumption.

Though the strategy of internal reform and urban improvement has long been a tenet of urban planning in Europe, interventions have largely taken place at the district or neighbourhood level, and have more typically dealt with public spaces (such as roadways, open space and facilities) rather than with residential or industrial elements. Likewise, these efforts have mainly focused on rehabilitation at the scale of single buildings. Probably, some of these efforts have not been worthy enough since some urban fabrics can not be upgraded to the actual standards of comfort and habitability at rational economic and social costs; the worst examples, driven by "fashionable" technical and political criteria and a too conservative vision of the built heritage have led to unsuccessful social and economic consequences (such as "gentrification").

However, the new problem facing us today – in addition to that of protecting and preserving our built heritage while acknowledging its social value – takes shape according to how most of our urban regions utilise land, and the resulting issues of land use, destruction of the landscape and environment, and the spreading flows of mobility. This new question is whether the dominant pattern of ex novo growth, as opposed to urban reform, continues to serve as the best option in our urban regions, and whether it will prove to be the best and most sustainable option for meeting our present-day needs, and those of generations to come. Clearly, even in periods of economic crisis, when needs for infrastructure have barely been met (in terms of roadways, public transport, open space and facilities), cities have grown by extension. Furthermore, the ongoing processes of sprawl are generally deficient in terms of producing these necessary elements and therefore cause negative externalities that have repercussions on the entire society.

In Spain, especially, this takes place even more relentlessly than in the rest of Europe. Here, land plays a decisive role in the process of urban growth, due to its influence on the costs of real estate (housing, industrial facilities and commercial space) in a non-diversified real estate market, and due to the fact that in many cases land owners and real estate developers behave as conservative lobbies. Not to mention the significant difficulty of managing interventions in the existing urban fabric, mostly in small municipalities with little availability of land to develop. Little by little, this has created a new real estate strategy and a flourishing second-hand real estate market, whose prices creep ever closer to those of new buildings; nevertheless, this market can not compare to new urban extensions market. However, it does not appear that such an indiscriminate urban expansion can best meet our needs: evolved from an "oil-spill" model to one of a mosaic of isolated fragments making up the discontinuous and sprawling city, it causes a high consumption of land, evidences the inadequacy of its strategy for transforming the landscape and environment, and it entails unbearable costs in terms of infrastructures, facilities and services that these sprawling cities will require.

e) Open space: from "empty spaces to develop" to "spaces of balance".

In the Modern Movement's model of rational planning and the functional city, the rural land bordering cities

were thought of as an "urban reserve" for future urban expansion. They were seen as a delimited spatial entity distinct from the countryside, which was even seen as being subsidiary to the city. Naturally, achieving a sort of balance required open spaces (such as parks, squares and gardens) within the confines of the traditional compact city, aiming at serving a functional, hygienic and aesthetic purpose. However, both the "oil spill" growth patterns of conventional metropolitan development – which are lacking in many aspects, such as open spaces and urban layout – and more current patterns of sprawling and polarised growth have undermined the duality of historical models of city and country, by which the two were thought of as mutually exclusive and spatially distinct.

Likewise, the development of ecology and environmental science, and the growing awareness of issues of sustainability and conservation have forged a vital new reference framework for urban development, which has gone on to have a profound effect on theoretical principles and the tools used by urban designers at the regional level.

The search for markers of identity, which stem from a place's topography, vegetation, water and built heritage, should be the first step in the design process. Given the tendency of both our physical environment and social behaviours to become more and more affected by globalisation, the task of discerning the specific from the universal contributes to add value to cities, and competition with other territories becomes paramount. This new, discontinuous spatial structure, which resembles a patchwork of multiple traditional city centers, scattered developments and fragments polarized across the metropolitan transport networks, unfolds atop a wide variety of landscapes (such as forests, farmland, waterways and mining operations) of a varying inherent biophysical value. Indisputably, any and all open spaces of outstanding environmental value should be protected. However, adjacent to them there are other spaces whose value in regional plans resides not so much in the value of their biota or landscapes, but rather in their position relative to other elements of greater value or existing urban centres: they act to articulate these more outstanding elements and can even serve as the backbone of reformulated urban structures.

Along these lines, the practice of alternating urban axes and green corridors allows us to strive for a functional equilibrium, a sustainable model of development and an urban and regional landscape that is firmly rooted in the unique characteristics of each and every place. As a consequence, these open spaces in the region should serve as "finalist" spaces in the regional model, within a newly defined relationship between city and nature that resembles neither that of the functional city of yesterday nor that of today's sprawling metropolis. Designing with these "voids" in mind will prove to be of critical importance to our new urban regions.

f) The "reasonably" compact city.

The aforementioned process by which dwelling spaces, industry and the service sector have sprawled across entire regions, are the consequence, amongst other factors, of the problems and limitations of the traditional, compact city. Issues such as congestion, noise, dirt, social control and the difficulty of living in close contact with others, together with the scarcity of suitable housing (in terms of spatial distribution, occupancy and costs) and the extreme cost of real estate in general (in addition to the relocation of centres of employment) all make people search for living space in environments that differ from what is offered by the conventional city.

The "low-density landscapes"[9] that have sprung up over the last forty years in southern Europe are the visible expression of this "other city", made up mainly of single-family houses (whether free-standing or more recently

in terraces), alongside occasional buildings that house industrial outfits or provide services.

The availability of real estate at a substantially lower cost than in the city, the possibility of being in close contact with nature, and personal independence or autonomy are among the reasons people seek out these new, post-Modern Arcadias, whose benefits apparently make up for their inaccessibility, lack of facilities and absence of social cohesiveness, the resulting dependency on the private vehicle and the cost of fuel.

However, from the public sector, it is logical that the problems stemming from the proliferation of these sorts of developments should cause concern. After all, they are responsible for a massive consumption of land, the transformation/destruction of the landscape, a worsening of traffic congestion, difficulty in collecting household waste, the still widespread absence of urban services (especially in terms of sewers and lighting) and public transport options, insecurity, and the anomie suffered by residents of exclusively residential communities.

The magnitude of these types of developments, in terms of their surface area and number of inhabitants, means that they represent a problem that transcends both our priorities for reorganising regions and our search for new patterns that better suit our needs.

Discussing the density and functionality of these developments is of critical importance in this twofold task.

On one hand, while we must focus on improving existing developments by providing them with new facilities, rationalised networks of roads and improved free space, we must also rethink density, as current standards of twenty or thirty dwellings per hectare make it impossible to provide residents with the services (in terms of public transport and waste collection) and facilities they require. Along these lines, a design strategy of controlled density based on the availability of roads and the layout of developed land will prove to be a useful field of exploration in urban design. Furthermore, the predominantly residential character of these communities could be imbued with new life by encouraging mixed-use developments that would generate small pockets of employment compatible with their surroundings.

However, in addition to transforming existing, low-density urban fabrics, the most pressing and technically challenging issue at hand is that of designing new patterns for developing residential and service sector developments based on reasonable thresholds of density and the requirements we have mentioned of sustainability, flexibility, mixing uses and preserving the sense of place.

A "judiciously compact city"[10], which aims to both overcome the costs of today's sprawling cities and to meet the twenty-first century's new demands for urban liveability, will thus achieve a region that is more efficient, environmentally aware and fair to all.

Six new paradigms for a renewed and rescaled "urban project", whose conceptual basis and operability should emanate from a strategic regional plan, as the conceptual and instrumental frame to face the challenges of a new territoriality.

Notes

1 Over the last years, our research group at the ETSAV Urbanism Chair (UPC) has coordinated the work of thirteen University research groups in Portugal, France, Italy and Spain. This work was presented in an exhibition entitled "La Explosión de la Ciudad" ("The Explosion of the City") during the International Forum of Cultures, held in Barcelona in 2004. Subsequently, it was published, under the same name, by the Official College of Architects of Catalonia (COAC), in Catalan and English editions. It was presented in Bologna and Milan, in Lisboa, Valencia and Madrid.

2 Font (2003) was the collective result of a seminar held at Menéndez y Pelayo International University in July 2001.
3 See, for example, Harvey (1989).
4 Perhaps the most comprehensive work on the nature and practice of urban project is Manuel de Solá-Morales (1987). Manuel de Solá-Morales – recently trespassed – was the most renowned Spanish author on urban planning theory and practice, and his works and publications have become essential contributions to renew the disciplinary bases up to date.
5 Although these are used by a number of authors, I believe their origin lies in the work of Bernardo Secchi in the early 1990s and made known through articles in Casabella and the Quaderni della Ricerca; see, i.e., Secchi (1993).
6 Architect Lorena Vecslir's recent thesis, which goes by the same title (and which I supervised), aims to make a synthetic identification of the ongoing processes of polarisation in growth and its material results on metropolitan arterial infrastructures, from a double, phenomenological and design-focused perspective.
7 An affirmation made by the Italian geographer Giuseppe Dematteis in a number of his writings, some of which have been collected in Dematteis (1995).
8 *Infra*, note 2.
9 On the conceptualisation and typification of the various "metropolitan morphological territories", which are representative of the current phase of the process of Western urban development, in reference to the Barcelona Metropolitan Region; see Font (1999). We went on to compare and extend these to the other twelve urban regions in southern Europe summarised in Font, Corominas, Sabaté (2005).
10 This is the paradigm formulated by Roberto Camagni in his research on the sprawling city. It can be found in Camagni, Gibelli, Rigamonti (2002).

References

Camagni R., Gibelli M. C., Rigamonti P. (2002), *I costi collettivi della città dispersa*, Alinea, Firenze.

Dematteis G. (1995), *Progetto Implicito. Il contributo della geografia umana alle scienze del territorio*, Franco Angeli, Milano.

de Solá-Morales M. (1987), *La segunda historia del proyecto urbano,* in "Ur magazine", 5-6.

Font A. (1999), *La Construcció del Territori Metropolità. Morfogenesi de la Regió Urbana de Barcelona,* Mancomunitat de Municipis de l'Àrea Metropolitana, Barcelona.

Id. (ed.) (2003), *Planeamiento Urbanístico: de la controversia a la renovación*, Barcelona.

Font A., Corominas M., Sabaté J. (eds.) (2005), *The Territories of the Urbanist,* Universitat Politècnica de Catalunya (UPC), Barcelona.

Harvey D. (1989), *The Postmodern Condition*, Blackwell, Oxford.

Secchi B. (1993), *Le trasformazioni dell'habitat urbano,* Quaderno della ricerca sulle trasformazioni dell'habitat urbano in Europa, 1, IUAV – Dipartimento di Urbanistica, Venezia.