

# Housing Estates and Ordinary Peripheries

## Mapping Simultaneous Forms of Urban Growth

by Isabel Ezquerro, Carmen Díez-Medina & Javier Monclús  
University of Zaragoza

**Keywords:** Mapping, comparative cartographic analysis, housing estates, “ordinary periphery”, urban quality.

**Abstract:** Using adequate and updated representation tools is essential to analyze certain aspects of urban morphology, focused on the ability to adapt urban forms to the new conditions of contemporary cities. Specialized literature studies the housing estates that were projected in the peripheries of European cities between the fifties and seventies of the twentieth century. Whereas less attention has been paid to the “ordinary peripheries” that gradually were developed around them in that exceptional period of urban growth.

This text offers a comparative study of the urban evolution in the last fifty years of two housing estates of Saragossa and the peripheries that grew gradually around them, with a focus on their urban quality. It is about contrasting a unitary action —housing estate— against another form of urban growth that results from a gradual development —“ordinary periphery”—. This analysis tries to overcome the critical views on the housing states, which usually take as model the urban quality of the traditional city without considering other types of peripheral urban growth.

The objective is to explore, using various intentional representation techniques, the transformation processes that both forms of extension of the city have undergone. This methodology will help to assess their urban quality and to detect the opportunities or difficulties they show for updating fifty years after their construction.

### 1. Introduction

Collective housing estates – *polígonos*, *grand ensembles*, *Großsiedlungen*, etc– are repeatedly debated from different perspectives on the national and international scene (Urban, 2012; Wassenberg, 2013). It is increasingly common to consider the processes of change they have experienced in relation to their urban integration and their degree of obsolescence (Ferrer i Aixalá, 1996; López de Lucio *et al.*, 2004). These approaches aid to offer solid diagnoses for possible intervention strategies.

Recent studies also propose comparisons between different housing estates from the same city, from different cities of a country or from different countries (Díez Medina *et al.*, 2018; Ezquerro, Monclús and Díez Medina, 2018). However, there are not many works that relate them to the “ordinary peripheries” which were configured in their surroundings. Namely, a comparison between the spatial characteristics of a form of urban growth characterized by an

unitary planning, design and construction – housing estate – with another that results from gradual urban growth, more or less controlled and planned – “ordinary periphery” – Both forms of urban growth have built most of the current “inner peripheries” developed between the fifties and seventies in Spanish

This analysis explores the advantages and disadvantages of both forms of urban growth. The intention is to overcome the critical views on the housing estates – where functionalist principles of modern urbanism were generally applied –. These criticisms usually take as reference the traditional city without considering other forms of peripheral urban growth.

The Spanish society underwent a radical change in the fifties and so on, its cities. In parallel to the new urban processes and the consolidation of modern planning, there is a transformation of the traditional forms of urban planning. They moved from relying on alignments and heights to adopting mechanisms of typological and functional zoning. The new forms of urban growth by polygons turned out into “a fragmented and discontinuous condition that contrasted with the continuity of the ancient city” (Moneo, 1982). The new hierarchical planning tried to alleviate the lack of land for equipment, which the previous procedure had scarcely contemplated. Fernando de Terán pointed out that the complexity of these processes caused the spatial confusion in which most of Spanish cities grew during those two decades, just when their greatest development took place (1996, pp. 176-177). As he said, “cities were marked by that motley and discordant physiognomy, composed of heterogeneous pieces which were badly assembled, aggravated by the elevation of heights and volumes that the pressure of private initiative pulled out” (Terán, 1996). López de Lucio has reviewed the issue of collective housing focusing on the public space. He refers to it as “the privileged space of daily life and life experience of almost the entire population” (2013, p. 11). The urban landscape drawn by these housing estates is characterized, in the words of the author, by the lack of definite limits between public and private space, in addition to providing vast and undifferentiated free spaces.

Saragossa presented as well an accelerated demographic and urban growth in those years (Adiego *et al.*, 1984a). The “Plan General de Ensanche” was proposed in the 1930s – unlike other Spanish cities. It considered a relatively limited scope, while real urban growth was coming about through actions in “parcelaciones” or “particular neighborhoods” intended for the working-class in an unplanned context (Monclús *et al.*, 2012). The growth by polygons or “residential fragments” was the urban practice that can be identified as predominant after the Civil War. They were usually of small entity and public promotion, responding to the housing problem without configuring new spaces on an urban scale.

In the seventies, these “new fragments” planned through partial plans would eventually be imposed. The role that they played in the configuration of the contemporary city of Zaragoza is important, perhaps greater than in other Spanish cities in that period (del Caz, Gigosos and Saravia, 2004; Ordeig Corsini *et al.*, 2011).

## 2. Methodology. Cartographic comparisons

The use of mapping techniques as an instrument of analysis and project, that is, as an operative tool that transcends mere representation or communication, is not a recent practice. Giambattista Nolli already approached the reflection on the definition of public space or the complexity of uninhabited landscapes in his *Pianta Grande di Roma* (1736-48). At the end of the seventies, the Roma Interrotta exhibition took as its starting point this plan to promote the debate on urbanism at a time when the complexity of the urban project was opposing to the poverty of the

masterplan. Then, Colin Rowe recovered techniques of “figure-ground” for the representation of the city that Joseph-Paul Kleihues, among others, collected in his masterplan for the IBA in Berlin in 1987. More recently, the British collective URBED uses cartographies of this type as a tool for communication and citizen participation in the preparation of urban proposals (Bambó Naya and García, 2017).

Many studies on the urban landscape support as well the analytical cartography. They are inscribed in the tradition of German, Anglo-Saxon and French Geography. Mention should be made of the work of Otto Schlüter who introduced the concept of *Kulturlandschaft* in the academic terminology at the beginning of the 20th century. He was one of the pioneers of morphological analysis, which Carl O. Sauer disseminated and developed two decades later, forming the basis of current research on the subject (Díez-Medina, 2017).

Nowadays, digital technology offer many possibilities in the field of conceptual and methodological research. The trend towards the development of the operational dimension of mapping implies, among other issues, the concern for the specificity of each place, the willingness to expand the tools of conventional cartography by opening the use of digital tools and new representation technologies. In short, an understanding of mapping as an instrument that extends the horizon of applied research in the academic and professional world, as it happens in other disciplines and cultural studies.

This work takes into account all these approaches. It departs from the recognition of the importance that the representation technics have both to think and project the city and to intervene in it. Thanks to the development of new methodologies and disciplines related to mapping, the updating and renewal of the most conventional mapping techniques has opened new research and reflection frameworks for years. We consider incorporating these innovations into the analysis and the project as important as to refine the intentional use of traditional or canonical representation methods. Contrary to what it might seem, explorations of graphic representation techniques with operational and projective perspectives are not frequent in the field of urbanism. This fact has led some authors to distinguish mapping (*wayfinding/wayfaring*), as a more creative approach, from cartography (*map-making*), fundamentally representative (Roberts, 2012).

Descriptive cartography usually prevails on the creative one. However, creative cartography is the one that helps to establish diagnoses, identify problems and discover the potentialities of the places, which are fundamental aspects to recognize the opportunities of urban intervention. On the other hand, to develop a study not only based on quantitative parameters, but also qualitative, it is necessary to reconsider the concept of “map” and take into account the representation possibilities that new digital technologies offer nowadays (Salerno, 2017).

This paper is part of a broader research, which aims to develop an advanced mapping of contemporary residential urban landscapes, with the aim of contributing to offer transversal, interdisciplinary and integrating visions. This is a comparative analysis, still in process, of two different forms of peripheral urban growth, in which different instruments of representation are explored.

Carrying out an “operational” research based on a systematic graphic and cartographic analysis is not an easy task. We work with very different cases of study and we also take into account the transformation processes experienced by the urban fragments studied over time, so the preparation of a specific cartography is as necessary as complex, even more due to the heterogeneous available sources. Therefore, we consider it essential to develop forms of representation and analysis that unify the graphic material and favor the analytical comparison. The identification of the most appropriate tools and techniques – both canonical and recent – that help to

identify and analyze the weaknesses and opportunities arising from the evolution and transformation of the urban environments we compare here, is part of the research itself.

Two paradigmatic examples of the city of Saragossa are chosen for this analysis. Due to their construction date, scale, typological diversity and urban morphology, they show enough contrast to enrich the comparison and extract more solid conclusions.

### 3. Analysis. Two housing estates, two neighbourhoods: simultaneous forms of urban growth

The two housing estates selected for this analysis are Andrea Casamayor (1954-1957), which is in Las Fuentes neighbourhood, and Balsas de Ebro Viejo (1964-1968), between the Arrabal and Picarral neighbourhoods (Ezquerro, Monclús and Díez Medina, 2018) (Table 1).

The first one is developed in a working-class area that the Plan of 1934 points as a zone of expansion of the city. Before the construction of this set, this sector had only had an incipient development linked to the industry in the south. The housing estate – open planned – was built practically surrounded by orchards, in two 216x60m superblocs framed in the layout defined by the Plan of 1943. This is why it is coherent with the fabric and the scale of Las Fuentes neighbourhood which arose in parallel. It developed very quickly, resulting in a fairly homogeneous plot of urban blocks with average height of five plants (Figure 1). The 1968 Plan demanded a partial planning for the area – practically consolidated – that continued being developed by subdivisions, following the Ordinances of 1939 and without reserving spaces for equipment (Adiego *et al.*, 1984).

The housing estate of Balsas de Ebro Viejo was promoted to provide housing for the workers of the cose industrial complex of Cogullada. It was part of one of the three Partial Plans that were drafted for the construction of state housing, according to the Plan of 1957. A central “L” shaped spine of facilities organizes the public area of the set. On both sides of this powerful structure are the different typologies of housing.

Picarral neighbourhood, characterized by its lack of continuity with the existing core, was born as an industrial area linked to the railway, with some areas compatible with housing in the east (Adiego *et al.*, 1984b, p. 56) (Figure 1).

Most of the housing estates were located in areas with a very low level of urban accessibility. The peripheral situation of both study cases is evident in the first image, However, the initial situations of each one are very different. Andrea Casamayor set was built in a new expansion area. The aerial view of 1956 shows its initial condition of isolation, close to the Vizconde Escoriaza housing estate and both surrounded by orchards. The plans of the evolution show how the growth of the neighbourhood of Las Fuentes was not so gradual. In just 10-15 years (1965-1980)

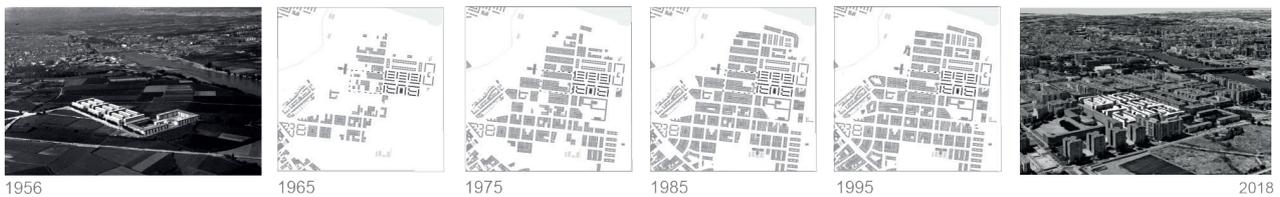
Table 1. *Housing estates.*

Housing estate	dwellings	Ha	building tipology	h.	others
Andrea Casamayor (1 <sup>st</sup> phase)	400	2.93	16 linear blocks	4	2 shops
Andrea Casamayor(2 <sup>nd</sup> phase)	390		11 linear blocks+“L”	5	church +2 shops
Balsas de Ebro Viejo (1 <sup>st</sup> phase)	1208	12.6	29 linear blocks + 19 “L” blocks+5 towers	5 12	Shops+offices +equipments

Andrea Casamayor, 1954-1957

Las Fuentes neighbourhood

790 dwellings - 2,93 Ha - 269,62 dwe./Ha



Balsas de Ebro Viejo, 1964-1968

Arrabal/Picarral neighbourhood

1208 dwellings - 12,60 Ha - 95,87 dwe./Ha

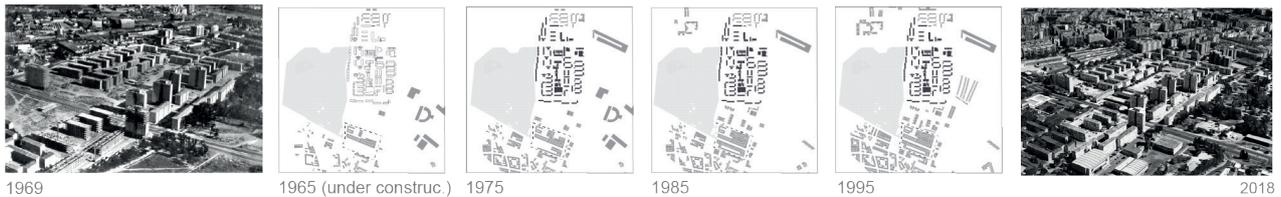


Figure 1. *Developments of both neighbourhoods from the housing estates construction until nowadays. Sources: maps – the authors; historic aerial views – Gran Archivo de Zaragoza Antigua; actual aerial views – Google maps.*

the neighborhood had already surrounded the housing estate completely. On the other hand, Balsas de Ebro Viejo was built next to the first suburb of the historic city, on the other side of the river. This area also had a strong industrial activity due to the railway that had divided the residential growth in two different parts: the historic Rabal and the Picarral area, linked to the industry, in the west; and a new neighbourhood, which emerged next to the rail station in the east. It was not until 1943 that these areas were taken into account in the general planning of the city. Despite this, a disordered and unplanned growth continued characterizing both of them. The housing estate of Balsas de Ebro Viejo started after the definition of the polygon in 1956 next to an area defined as green zone that occupied the grounds of the old riverbed. Subsidized housing groups were relevant in the development of this area. In both cases, Andrea Casamayor and Balsas de Ebro Viejo, the subsequent urban growth substantially changed the relative position with respect to the historic center. However, a much more heterogeneous and less compact tissue surrounds the second one.

It is interesting to study deeply the current level of accessibility of the housing estates in relation to the moment of their construction (Figure 2). It is important to understand to what extent isolation continues characterizing its situation, even in cases where it moves from being “peripheral” to “pericentric”. On the other hand, the analysis of the relationship with the roads also allows checking whether the built road system has contributed to reinforce a possible situation of “enclave”, by acting as fracture elements with the adjoining tissue, which hinders integration. Defining the same initial year for all the study cases, contributes to the homogenization of the cartographies and facilitates the comparison between them. The year 1957 has been chosen for three main reasons. First of all, the availability of cartographic sources. Secondly, the first General Urban Plan of Zaragoza was approved in 1959, so it could be considered an important date in the urban planning growth of the city; finally, this analysis is part of a broader research that includes more case studies. Most of them were designed and built between the second half of the 1950s and the first half of the 1960s. In the case of Andrea Casamayor housing estate, the fact that the layout of the neighbourhood responded to a unitary project —1943 Plan—, contributed to the urban fabric absorbing the anomaly of this set. The inner roads of



Figure 2. Comparative cartographies between 1957/2018.  
Sources: the authors.

the neighbourhood have not undergone significant transformations or enlargements since the seventies. However, the road system has changed considerably in the edges of the neighborhood, as well as the connections with the city through the construction of large infrastructures (the bridges, the second and third belts, etc.). In the second case, a main road of the urban network goes through the set from west to east and divides it in two different parts. Despite of being part of the initial project, it hinders its understanding as a unitary piece. The strong presence of the car, which was also taking into account since its conception, has also impoverished the general atmosphere. The currently situation shows a progressive integration in the urban structure of the city and in a neighbourhood that is undergoing a substantial renovation in recent years.

Among the indicators commonly accepted as critical aspects of the housing estates, density is considered directly related to the urban quality of these sets. Although there is no unitary criterion that relates densities and edificabilities of the housing estates with their urban quality, it is clear that to advance in the clarification of this issue it is important to deep in a type of analysis that helps to find relationships between morphology, diversity typological, density and urban quality. It is in this context where we consider most important to carry out the analysis of the housing estates in parallel with the growth of the ordinary peripheries. We have chosen a representative area of the neighborhood of Las Fuentes for this purpose. This area was built in the surroundings of the Andrea Casamayor housing estate in nearby dates. In addition to the quantitative data, that allow a quick and objective comparison, this initial analysis explores the possibility of linking databases to a conventional cartography, in order to incorporate information into a graphic document that helps to identify possible problems and opportunities for improvement (Figure 3). Through Geographic Information Systems (GIS),

heights, number of dwellings and accesses are associated with drawings, which allows drawing conclusions regarding the density of the housing estate in relation to the neighbourhood that was consolidated around it. In addition, the drawings show the morphological diversity. Urban blocks, semi-closed urban blocks, blocks in H, towers in H, etc., make up the neighbourhood, compared to the homogeneity of the housing estate, consisting exclusively of linear blocks. The drawings allow us to understand the differences that the quantitative data also reflect. If we only take into account an area equivalent to that of the housing estate, including two residential urban blocks, not only density of the ordinary periphery is greater, but also occupation and edificability. However, other issues should be taken into account to complement this data. The dwellings typology, the existing uses, the accesses and the configuration of the ground floors, which ultimately contributes to the urban quality of the public space (Gehl, 1987).

These issues can also be analyzed from a perceptual point of view (Figure 4). Comparing the street views of both forms of urban growth offers remarkable differences. The often-criticized features of housing estates such as the lack of definition of their interblock space, their homogeneity and even rigidity, the lack of activity on the ground floor, etc. are evident in these drawings, even more in the case of Andrea Casamayor set. They contrast with the images of the ordinary periphery. It is not intended, however, to arrive at a strict assessment of both of them, but to show that they both have positive and negative aspects and, above all, that these can be complementary. We have in mind some of the contributions that, using more intuitive representation systems based on parameters that are sometimes difficult to quantify, have contributed to enrich the analytical tool of mapping. We refer to contributions of very different types, such as the psychogeographic guides of Guy Debord and Asger Jorn, the collective maps

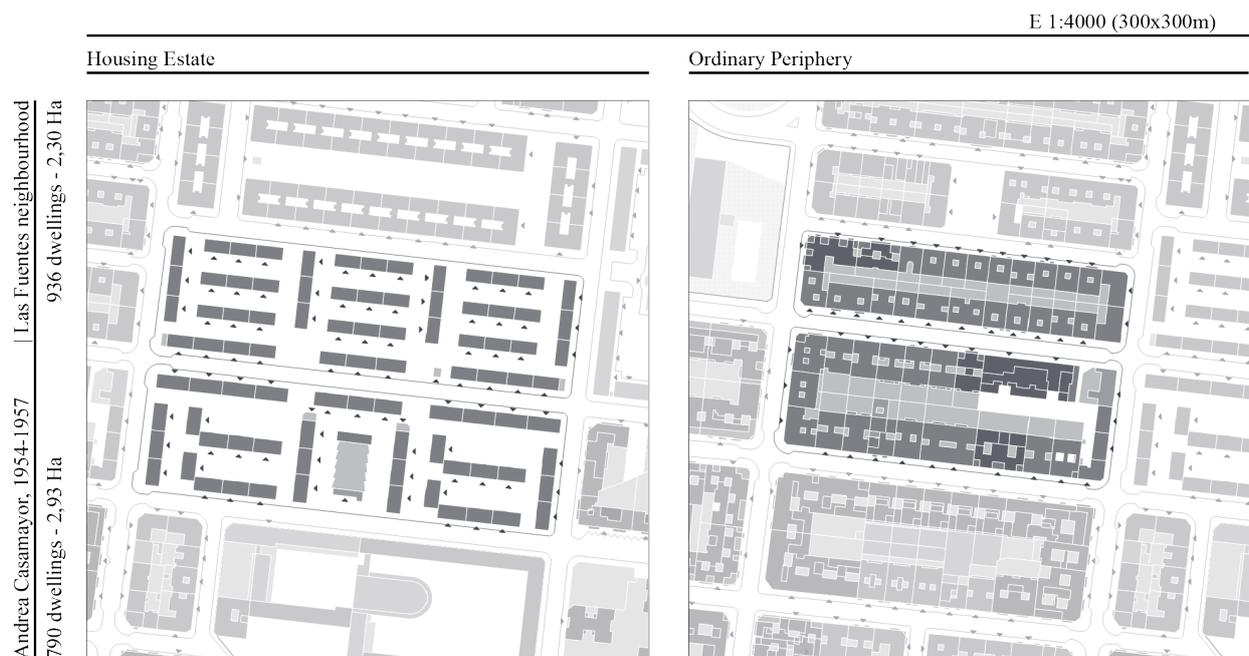


Figure 3. Mapping two simultaneous forms of urban growth. Andrea Casamayor housing estate and Las Fuentes neighbourhood. Sources: the authors.

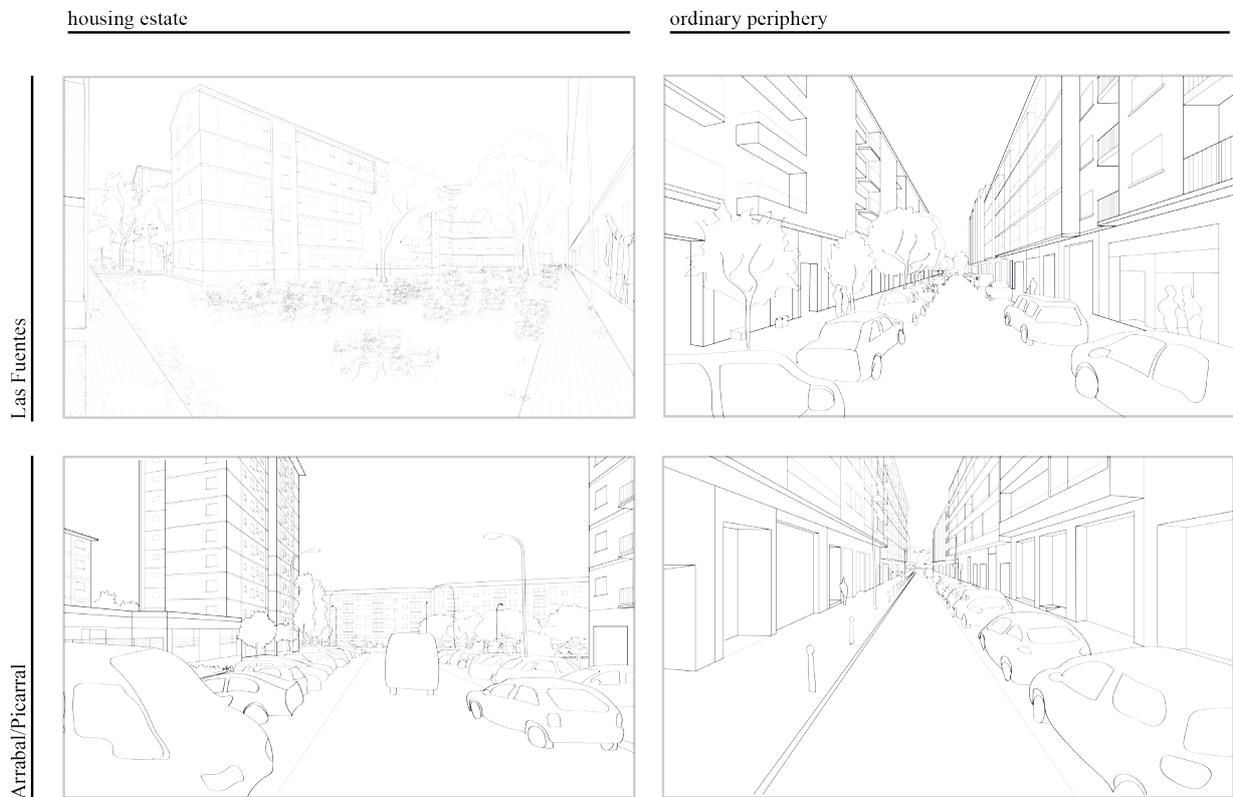


Figure 4. Comparative street views. Different sensorial experiences. Sources: the authors.

of Kevin Lynch (Lynch, 1960), the emotional cartographies of Christian Nold, the quantitative information diagrams of Edward Tufte, or the explorations of Dolores Hayden. As James Corner says, “the function of mapping is not so much to reflect reality as to engender a reformulation of the worlds in which people live”. (Corner, 1999).

In summary, the comparison of the initial and current situation shows how the relative initial situations of the housing estates have changed with the growing of the city. The two case studies analyzed in this work also reflect the different conditions that housing estates can present themselves —dates, scale, typology diversity, etc.—. Andrea Casamayor housing estate illustrates how respecting the urban plan have favored the process of integration of the set in the neighbourhood. However, the urban road system also considered in the case of Balsas de Ebro Viejo, hinders the understanding of this set as a unitary piece and also creates a fragile barrier in the neighbourhood. On the other hand, the monofunctionality typical of the housing estates of its generation, which is more evident in the case of Andrea Casamayor, leads it to suffer the typical problems of most of them: interblock spaces without activity, obsolescence, lack of activity and lack of maintenance. In contrast this case, Balsas de Ebro Viejo presents a major typological functional diversity. Nevertheless, the equipment central spine of the set acts as a barrier and most of the interblock spaces are colonized by cars.

#### 4. Conclusion

On the one hand, this analysis shows how some housing estates constitute recognizable urban pieces in the peripheral urban landscape, as opposed to the disorder and densification observed in the immediate ordinary peripheries. Generating an own identity could be considered as a positive factor. However, the eventual isolation is a problem in those cases in which they are configured as enclaves, both formally and functionally.

On the other hand, it allows us to rethink the criticisms that housing estates frequently receive about the quality of their urban space. The most common, which has to do with their high densities, should be qualified when it is compared to the increasing densities of the neighborhoods. The ordered and controlled-scale spaces of the housing estates contrast with the weakly planned and often motley growth of their environment. Cartographic representations also reveal important weak points, such as the excessive homogeneity and morphological and functional rigidity of these sets, as well as the lack of activities and urban life that “interblock spaces” present.

The final goal is to explore how both forms of urban growth can be complemented and improved. This question becomes even more interesting at a time when the “inner peripheries” of our cities require an urgent integrated urban regeneration.

Combining traditional representation methods with more advanced ones converts graphic explorations into “operational” instruments of research on the urban quality. This should be made with the intention of adapting each tool to the aspects to be explored and the results of the analysis to be communicated. The flexibility in the use of different forms of representation makes it possible to reconcile and relate the information obtained from various sources with more personalized ones, such as field visits and data collection. In order to take advantage of all this material it is essential to explore the possibilities offered by various cartographic representation techniques. From the most conventional ones, revisited and adjusted to the objectives of our study (analysis, evaluation and diagnosis), to the most innovative ones, which incorporate studies of geographers and sociologists, whose value has been demonstrated in research works and intervention practices that are giving rise to a new generation of studies on the subject. The use of Geographic Information Systems, such as QGis, has considerably facilitated the processing and visualization of georeferenced data, helping to draw urban tissues very intentionally and to show the morphological plurality.

The cartographies of these two models of peripheral growth at different times aid to compare the processes that both, in parallel, have experienced over time. Furthermore, they help to detect, among others issues, which cases show a greater ability to adapt to changing circumstances. The multi-scalar approach facilitates the study of different qualitative and quantitative aspects in each one of the proposed scales. Keep digging into the cartographic exploration of these two models will allow a refined comparison between them until now not raised. On the other hand, the analysis of these two housing estates of the city of Saragossa in parallel to the “ordinary peripheries” that grew and consolidated around them, offers important clues to explore various possibilities of updating and urban regeneration. This could be very important at a time when these neighborhoods demand a requalification.

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