

CONSTRUCTION OF A PERI-URBAN SPACE TYPOLOGY FOR LA PLATA DISTRICT (ARGENTINA).

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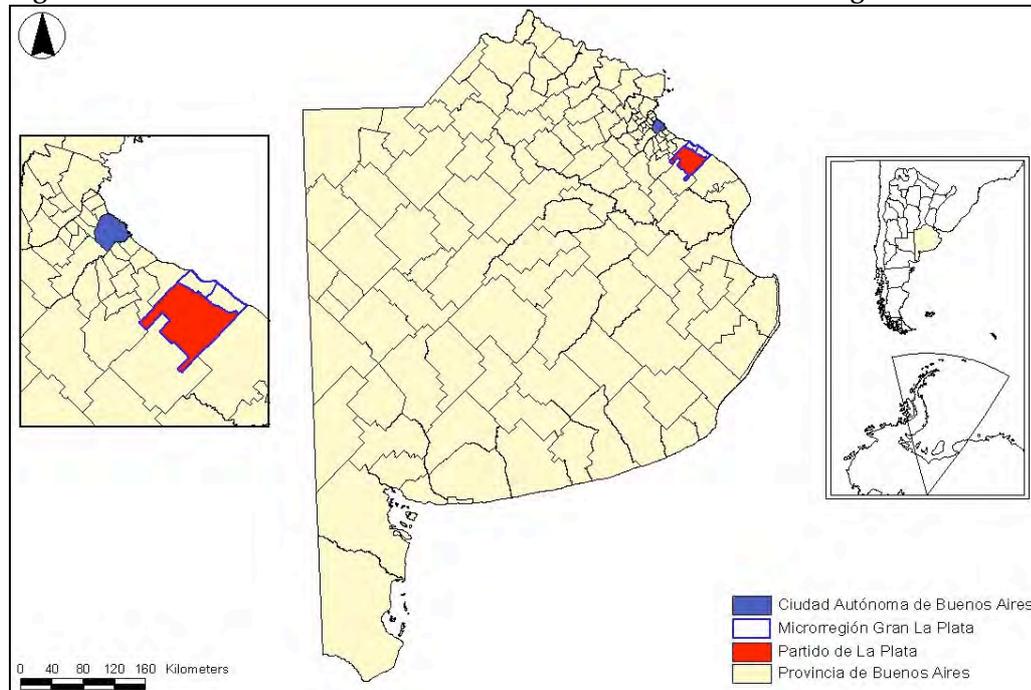
Presentation.

Topic B: From knowledge of territories to territorial action

1. Introduction

La Plata City, capital of Buenos Aires Province (Argentina), is located 60 kilometers from the Federal District, forming together with the neighboring cities of Ensenada and Berisso, the so-called Microregion of La Plata, with a population of approximately 750 thousand (Figure 1). It is morphologically dissociated from the Metropolitan Area of Buenos Aires by Pereyra Iraola Park, the only and last barrier to urban expansion from the south of that area (Ravella, 2005).

Figure 1. La Plata District Location within Buenos Aires Province (Argentina).



Source: Author's elaboration.

From the urban transformations that have taken place in La Plata District, mainly from the late '80s, there was a marked change in the city's morphology as a result of both endogenous and exogenous processes that are part of an overall process characterized by rapid urban population growth, the physical expansion of cities into the suburbs and the globalization of the economy and communications. In this sense, La Plata City has overflowed from the original tissue to the periphery, being verified, in parallel with this growth, changes in the peripheral structure, with new commercial, and recreational services, gaining more autonomy from the traditional center.

In the last few decades, emigration to the periphery in search of new job opportunities and a new habitat created led to the occupation of land in the physical limits of the city, more specifically in the border between urban and non-urban areas, the so-called peri-urban space. With the expansion of the city, land that is earmarked for primary intensive farms have now other land uses typical of an urban area.

Urban growth toward the periphery would be generating not only loss of productive land but also new forms of fragmentation and spatial segregation, with spaces increasingly specialized and stratified on an unequal socioeconomic structure: a) closed urbanization characterized by isolated housing and residential areas; b) periphery production by population sectors without access to the legal land and housing market generally related to spontaneous settlement.

In the production process of peripheral urban land should be considered the competition between activities as a result of land use changes. In this sense, the impact generated by subdividing land on the Green Belt deserves a particularized approach,

considering the importance of this area from the production point of view and the high percentage (over 70%) of vacant peri-urban lots.

The Green Belt of La Plata is a strip of 5-12 km wide and 36 580 ha. extension (39% of the total District's area). One third of this belt is productive -with horticulture and floriculture activities-, which runs between the city and the suburbs, on the one hand, and the Pampean agricultural field, on the other side (Bozzano, 2002). This area became urbanized after 1970, since then until 2000 the population living there grew by 50 percent, resulting in an "unplanned urbanization" of the peripheral area.

In La Plata's Green Belt can be identified six forms of occupation that coexist in the same territory: peri-urban intensive production, recreation and second homes, towns and landscapes, peripheral urban economy, large equipment and "weak" peripheral (Bozzano, 2002). This urbanization process generated a detriment in the land sector, which led to the abandonment of a significant percentage of the approximately 3000 producers who were in the 80s and 90s in search of finding other more productive lands. Faced with this situation in 2000 the local government states in its new ordinance to the Green Belt as a protected area.

In this context, the objective of this paper is to build a typology of the peri-urban areas of La Plata District that allows us to characterize the diversity of these dynamic areas and to recognize differences and similarities within themselves.

The typology proposed is aimed at contributing to the knowledge of periurban areas through the simplification of the phenomenon, establishing types or categories that serve as bench marks for the explanation of it. Also, the construction of this typology contributes to the development of a replicable methodology for the analysis of these spaces in other mid-sized cities.

2. Typological Construction of Peri-urban areas Methodology

The methodology of building typologies, as an intellectual exercise of abstraction, serves a set of techniques that enable to sort, analyze, classify, structure and "summarize" in a reduced and significant categories. The purpose of the typology is to create new concepts drawn from those defined in the first place, chosen for their relevance to the research problem. Campanioni (2005) noted that "a typology is an invention of individual creativity. The fact of defining types is relevant not only in the process of generating them but also for the consequences of being dealing with them". Each grouping method will lead a different methodical process of building, with different problems and the possibility of drawing conclusions with different characteristics.

Achieving efficient and useful types must begin to comply with a number of assumptions: *first*, the complexity of the study object in question. And *secondly*, the understanding of the limits and scope of the typology as a tool to use.

The process involves three basic operations: selection, merging and downsizing attributes in a process that combines the theory and construction of the study object. It also articulates the application of statistical tools and the analysis, interpretation and validation of results. In this section, the methodological process for the construction of a structural and articulate typology of La Plata peri-urban areas is presented, according to a set of socio-territorial indicators obtained from direct observation, field work, survey plot in the fields of study, and secondary sources.

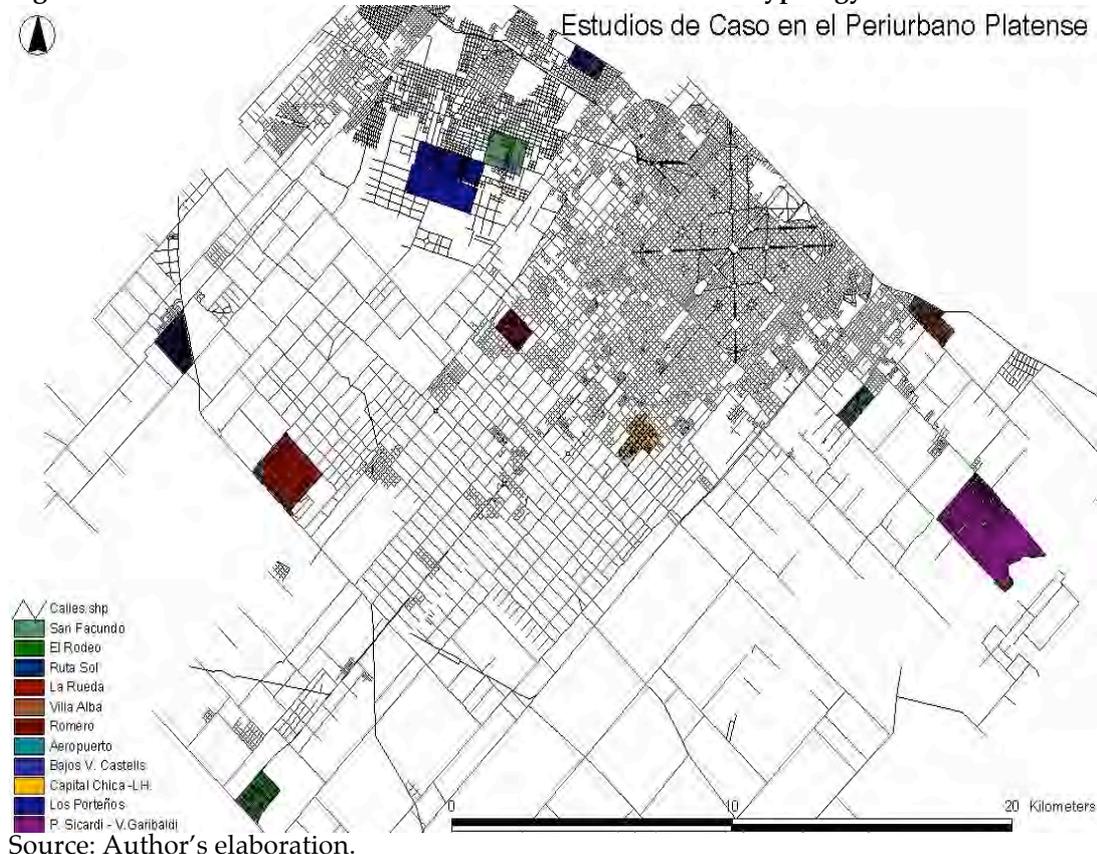
As a first step to building the typology we selected eleven study cases within the periurban of La Plata District: Aeropuerto; Bajos de Villa Castells; Capital Chica; El Rodeo; La Rueda; Los Porteños; Romero; Parque Sicardi-Villa Garibaldi; Villa Alba; Ruta Sol; San Facundo (Figure 2).

The study cases selection was based on the combination of the criteria listed below:

1. Present different characteristics in relation to: land use (urban, productive, industrial, etc.), logic of occupation, degree of densification, consolidation and/or expansion.

2. Be located in different axes of growth (Northwest, Southwest and Southeast) and varying distances from the center of La Plata, in response to differential conditions on accessibility, connectivity to the central area.

Figure 2. Case Studies of La Plata District for the Peri-urban Typology Construction.



3. Be representative of different types of residential urban sprawl, whether formal or informal, opened or closed, details which are strongly related to socioeconomic characteristics of the resident population and hence the social practices which it produced.

In summary, the number and diversity of the cases selected will allow us to generalize the results to the whole District and also to recognize variations, differences and similarities between them.

In order to construct the typology, 40 empirical variables or indicators were selected and grouped in six dimensions or intermediate variables: 1. Population characteristics (demographics), 2. Land use, 3. Infrastructure, 4. Utilities, 5. Occupation logic and 6. Valorization - depreciation processes.

In the next step, the information collected on each peri-urban area was systematized in a data matrix (called *characterization matrix*). The data matrix works as a transducer schedule between theory and empiricism, organizing facts in an apprehensive way. In our particular case, the units of analysis that make the data matrix are the eleven cases selected within the periurban of La Plata (corresponding to the 11 columns of the table). The typology construction is a flexible methodological model that articulates the theoretical process of data construction and classification, with empirical operation of the data matrix processing and analysis. Therefore, it is important to make a proper selection of indicators and variables involved in the construction of typologies because the final results depend on this selection (Campanioni, 2005).

Regarding the empirical variables or indicators used in the construction of our typology matrix, they have been both *qualitative* and *quantitative*. The criteria for selection of indicators and indices that have been used in the typology construction was based on: the evaluation of data -quality and reliability, availability, and appropriate spatial and temporal scale-, characteristics -measurability, relevance, representativeness, sensitivity to change, specific and clear causal connections-, and its usefulness -validity, limited quantity, clarity in the design, applicability, no redundancy, etc.-.

In relation to the amount or number of indicators and indices considered, several authors point out that having too many indicators with an overwhelming amount of detail can lead to confusion on priorities, for this reason, it was necessary to use the concept of "system of social indicators".

The system of indicators presented in this article tries to account for peri-urban areas characterized by its dynamism, change, complexity and fuzzy and imprecise boundaries. And it also tries to reflect the hybrid nature of such areas.

To define the type of peri-urban areas of La Plata was necessary to build a *characterization matrix* and then a *coded matrix*, where both quantitative and qualitative indicators were translated into numerical values. This quantification procedure allowed us to systematize, sort and group -by establishing different ranges- the different areas considered.

Next, the indicators were regrouped into three main dimensions on which we based the construction of our typology: 1. Urban Expansion or Consolidation 2. Land Use and Occupancy Logic, 3. Valorization Trend.

In this way, we could obtain the total values corresponding to the sum of the indicators of these three dimensions for each of the eleven sectors. After this, ranges within each of the dimensions were established.

In relation to the "*urban expansion or consolidation*" dimension, three ranges were constructed that allowed us to account for three types of peri-urban areas (PU): PU with diffuse expansion, PU with semi-diffuse expansion and PU with semi-diffuse consolidation. Similarly, the second dimension -"*land use and occupation logic*"- was divided into three ranges: PU with residential and productive land use and occupation logic, PU with mixed characteristics, predominantly residential and PU with residential land use and occupation logic.

In relation to the third dimension -"*valorization trend*"-, the following three ranges were constructed: PU with low valorization trend, PU with medium valorization trend and PU with high valorization trend.

Finally the typology of peri-urban areas, resulting from the intersection of the three types of peri-urban within each one of the three dimensions, consists of a total of 27 peri-urban types (PU). Considering the different case studies, we have been able to recognize seven (7) peri-urban types inside La Plata District:

- *Periurban Type 1* is characterized by a semi-diffuse tissue, an urban consolidation process, a residential occupation logic and a low valorization trend. E.g. Villa Alba and Capital Chica.
- *Periurban Type 2* is characterized by a semi-diffuse tissue, an urban expansion process, a residential occupation logic and a high valorization trend. E.g. Villa Castells.
- *Periurban Type 3* is identified by a semi-diffuse tissue, an urban expansion process, a mixed (residential and productive) occupation logic and a low valorization trend. E.g. Romero and Aeropuerto.
- *Periurban Type 4* is characterized by a semi-diffuse tissue, an urban expansion process, a mixed occupation logic and a medium valorization trend. E.g. Parque Sicardi - Villa Garibaldi.

- *Periurban Type 5* is identified by a semi-diffuse tissue, an urban expansion process, a mixed (residential and productive) occupation logic and a high valorization trend. E.g. Los Porteños and San Facundo.
- *Periurban Type 6* is characterized by a diffuse tissue, an urban expansion process, a mixed occupation logic and a high valorization trend. E.g. El Rodeo and Ruta Sol.
- *Periurban Type 7* is identified by a diffuse tissue, an urban expansion process, a mixed (residential and productive) occupation logic and a low valorization trend. E.g. La Rueda.

3. Conclusions

Based on the analysis of the territorial changes in La Plata District, occurred primarily from the '80s, is possible to recognize mainly two urban growth directions that respond to different actors, logics and interests. A first one, towards the northwest characterized by medium-high and high- income families, and a second one towards the southeast motorized by middle- and low-income families. This emigration to the periphery led to an increase occupation of land in the physical limits of the city, more specifically in the border between urban and non-urban areas, the so-called peri-urban space. As a result, land that was previously earmarked for intensive primary holdings, now presents other land uses typical of an urban area such as large consumer equipment, recreation and commercial centers, gated communities, informal settlements, etc. This situation allows to define the peri-urban spaces as areas of dynamic and changing nature, but mainly as a space of diversity and complexity.

In this sense, the proposed per-iurban typology intends to contribute to a better understanding of the diversity that characterizes these areas. Its value lies mainly in establishing types or categories that serve as benchmarks for the explanation of the phenomenon.

The typology construction should be understood as an instrument of knowledge which aims to contribute to develop a methodology that can be replicated in other cities for the analysis of their peri-urban areas. As a result of such methodological construction, seven types of peri-urban areas were recognized in La Plata District. These types are characterized by diffuse or semi-diffuse urban tissues, residential or mixed occupation logics, and different valorization trends, depending on the location within each of the District's urban growth axes. Thus, it has been possible to build a comprehensive view of the territorial problems of La Plata's periphery. The diversity of peri-urban areas should be taken into account when defining strategies and criteria to tackle the problem of urban sprawl, in order to reduce the pressure on suburban and rural areas and to improve the quality of people's life and communities.

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