Territorial Identity: The Productive Periurban Landscape as Logic to be Projected

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ABSTRACT

The periurban landscape is thought as a bordering territory between the urban and rural world. It is submitted to pressures when using the soil, where the real or potential inclusion of new lands to the city area transform it into a “battle landscape”. Consequently, it becomes a highly fragile interface. The rescue of territorial identity of horticultural and agricultural areas as sensitive places, as well as the valuation of the new emergent landscape for planning, seem to bring keys to its protection. Modifying the projectual and normative logic is needed. The Latin-American cities are now looking at these challenges from the point of view of urban supplying and consuming food from the surrounding area and local development. It is in relation with the particular cultural and economic interland production. The work develops cases, measuring and analyzing in particular the spaces under transformation and the calling of the territory in the metropolitan enlargement of the city of Santa Fe, Argentina.

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1. Introduction

The European authors deal with the periurban space, oriented to recognize processes of "decadence" due to the loss of the productive role of small localities facing economies of scale, with the consequent emigration of the economically active population and the abandonment of them. Ciná (1999, 2015) and Sabaté Bell (2010) are strive to show that their vision, sometimes referred to as "patrimonialist", actually hides the effort to allow the inhabitants of those villages to continue living with dignity from the recovery and conservation of the know-how that contains identity values linked to primary production and its transformation.

This section of our research work has followed the way marked by the already mentioned experiences, but we find differences and want to show our own theory.

Some Latin American cases gathered from the Latin American Landscape Initiative (LALI) have highlighted local interests in the issue of the productive landscape. The Colombian project stands out as an assertion of the coffee landscape (Rincón Cardona, 2011). As a result of academic, institutional and State actions, the declaration of World Heritage (UNESCO) [1] enhanced the traditional primary activity at the national scale, not only as a cultural and economic practice, but also as a catalyst for tourism, seeking to create alternatives to territories that are still undefined and with conflicting destinations.

In Argentine experiences it is possible to recognize, in the first place, those that consider the problematic located in the peri-urban edge of metropolitan areas seen from the defense of
safe feeding, the alimentary sovereignty (Basky 2005; Giobellina 2014) and, in second place, seen from the productive recovery and the construction of a cultural landscape (Bórvid, 2016). These may be large national metropolis or the so called “del interior” or second-order towns of the country. Although with different intensity and different stages of progress, the causes, manifestations and consequences of the transformation processes of the peri-urban are similar. In all the cases small localities surrounding the big city that fulfilled the role of daily provisioning of fresh products were reached by the expansive wave (and devastating) of the wild real estate speculation, uncontrolled by absence or limitations of the instruments. Situation that recognizes a certain demand from sectors of the population that are also victims of that action.

The reading of the circuit can begin at any point: for ex., recognizing that the population of young middle sectors seek an accessible location for their home. They only find it in new developments (which consume microminifundista food production space) in places near the central city and are the clients of the urbanizer estate activity that is supported and sustained by the decadent and unprofitable productive activity of the owner of the land. It usually has consequences for the new inhabitant due to inadequate services, soils that are not completely suitable and, above all, due to the lack of equipment that causes a daily pendulum movement to the central city without the correct means of transport adapted to increasing demands. For the community it means: moving away from the production of fresh food, unemployed workers (leasing families and their employees), recharging the demand for mobility (in all its aspects, whether it is collective transport or roads), residential areas disintegrated.

Addressing these issues, there is a possibility of working together through direct and indirect actions: -projects for horticultural protection (green belts, agricultural parks), -public actions in the estate market through mixed operations. -indirect instances that begin with the need to establish similar norms oriented towards joint policies from urban-residential and rural-productive for all jurisdictions involved but also a wide variety of actions aimed at: -to connect different agents in networks to deal with such a complex situation.

With the aim of understanding these processes at a local scale, the work is aimed at characterizing and measuring the productive area of the peri-urban metropolitan area of Santa Fe, threatened by the accelerated changes in land use by recent urbanization processes.

Figure 1: Outline Metropolitan Area Santa Fe - Paraná. The peri-urban space of the northern extension stands out. Source: of own elaboration.

1.1. ORIGINS OF THE PRODUCTIVE HINTERLAND IN SANTA FE

The productive space dedicated to the extractive activity, was part of the identity of the cities of Spanish foundation in America. Santa Fe is one of them, and since the very beginning city and territory were configured as a balanced unit, where the agrarian base solved the problem of supply, while without this variable resolved there was no possibility of existence.
The first land division of the current Santa Fe territory, ensured rural production, and was entrusted to Captain Montiel in 1653. After transferring the original city, he replicated the particular form of territorial distribution used in the first foundation. [2]

The Lonja is the cadastral macro-form distributed over the territory, as a productive and patrimonial unit, these units follow one another in an itinerant way, with narrow fronts and long paths ending on water courses. For Collado and Soijet (1997) these divisions constitute the true primary element, structuring the expansion with a permanence recognizable up to now. [3]

The Lonjas differed from each other by their connection and position with respect to the real road that crossed them, called “Las Lomas” (“Las Lomas Road”) or “Ascochinga”. Lands linked to the Setúbal Lagoon were called Pago de Arriba (located on the east). Lands facing the Salado river were called Pago de Abajo (located on the west).

The Pagos were established in the Act of Montiel (1653) with the first layout that separated the rural world from the urban world in this period [4]. Shaping the city to a larger extent than its current jurisdiction, including the settlements known today as Monte Vera and Recreo, its northern limits would be close to the localities of Arroyo Aguiar (northwest) and Candioti (northeast).

The original macroform remained stable until mid-nineteenth century, when it began to change due to the accession of Argentina to the agro-export model (international division of labor), which promoted agricultural activity and large European immigration flows as the base of support to this new world juncture in which the country was inserted. The extensive colonial supply markets began to be subdivided to designate the possession of land to the new settlers, although they retained some formal continuity in this subdivision (parceling of the land) while preserving the width of the historical pattern.

Figure 2: "Plano de Labranza de Santa Fe de la Vera Cruz" of 1653 (Prepared by the Municipality of Santa Fe 1905). Data source: CERVERA, M.M. "History of the City and Province of Santa Fe". Volume 1. Editions UNL 1979. p.376.
Source: own elaboration: The landmarks are highlighted as jurisdictional limits, and the Payment 25 corresponding to the current town of Monte Vera. (Center line: Las Lomas Road; on the east Pago de Arriba; on the west: Pago de Abajo.)

The new territorial structure is verified with more precision in the area known as Pago de Abajo in old Santa Fe, where new colonies emerged subdividing the territory into productive squares [5]. The reasons for these facts could respond to several factors: (1) the farms belonged to well known rich families of Spanish ancestors like the Vera Muxica and López (Baldaccini: 2012: 56); (2) places with the greatest connection to the area of the primitive location, as indicated by Collado and Soijet (1997); (3) lonjas with the highest proportion of flood lands that could not become a sustainable productive place.
This territorial structure began to dilute in an accelerated manner during the first decade of the 21st century, when the laws of the estate market began to exert greater pressure on the productive areas, partly due to the need for urban land demanded by the central city (Santa Fe), and partly due to internal problems of declining extractive activity, which have contributed to the mutation of land uses (Santa Fe: 2009).

1.2. CURRENT RURAL USES

The rural activities of the northern agglomerate Gran Santa Fe, according to the land use legislation of the towns of Recreo and Monte Vera, are divided into: Intensive Rural (fruit and vegetable production) and Extensive Rural (livestock production and monocultures), while for the Santa Fe city, soils for rural uses in the continental territory [6] are called Future Urbanization Units (FU1 and FU2), stating in their nomenclature the condition of instability that these activities have within jurisdictional limits of the city [7].

Beyond the denominations, in the regulatory plan that is conformed with the union of the different productive spaces of the three governments of Northern Santa Fe (Santa Fe, Monte Vera and Recreo), a certain physical continuity is observed in the regulations, which sees its greatest expression in the central union of the districts of Monte Vera and Recreo. These constitute a joint surface of 17183 acres (hectares): Recreo with 12494 acres (5056 hectares) and Monte Vera with 4690 acres (1897.71 hectares) destined to the Intensive Rural regulatory activity. Although this is an ideal amount enabled by current regulations, it shows an assessment of a certain identity of the territory by its governments that maintain that denomination up to now.

There are records of past decades that registered fruit and vegetable activity approaching 50% of the total territory currently established for this use (Santa Fe: 2009) [8], data that exposes the significant reduction of the area destined to intensive production of fresh foods (fruits and vegetables).

Reports shown by the Ministry of Production of the Province of Santa Fe (Santa Fe: 2009), and by the National Institute of Agricultural Technology (INTA) in its Rural Extension Agency Santa Fe (2009-2012), point out the drastic reduction of intensive productive land that has had the Santa Fe horticultural cord between 2001 to 2006. More than 55% of its land modified its use. The documents detail in the first instance that the climatic factors were the substantial part of this dynamic (floods of the years 2003 and 2007, to which this research adds episodes of 2011, 2015 and 2016), and also describe other elements that have contributed to this transformation, among which those of an external nature stand out: the emergence of new production centers at the national level, the increase in inputs; and internal causes: the scarce incorporation of technology, the loss of manpower, the change of type of crops for others of greater profitability (sojización), all factors that accentuate the decline of local horticultural production.
The research team would add to the indicated by the official organisms, the precariousness in the possession of the land by the producers. The fact shows the fragility of the activity, besides the incidence of the urbanization projects that have been installed during the last years in the districts of Santa Fe (North rim), Monte Vera (center and South) and Recreo (West), both state and private, which fostered a new dynamics in the land market, accelerating mutations (Mantovani and Peralta Flores: 2015) [9].

1.3. TENURE OF THE LAND

Based on the data collected by this team and those published by the Provincial Institute of Statistics and Census (IPEC) and others, it was possible to analyze the state of the land in the productive area in relation to its tenure.

According to IPEC, in Recreo and Monte Vera Districts the percentages of the land worked by their owners and by the tenants fluctuate year by year. However, Recreo maintains in general terms a higher level of incidence of owners engaged in agricultural activity: 91% (2014); 62% (2015); 60% (2016), while Monte Vera has been varying this indicator, with an upward trend: 44% (2014); 49% (2015); 69% (2016). It is important to say that these values are not segmented for the fruitful use and it marks the pattern that this territory has in relation to this variable.

This research has registered 504 plots dedicated to the horticultural and fruit activity in the study area. When doing the reading of the land tenure only on this base, the numbers that emerge become others: more than 60% of these plots would be under the figure of the "tenant" (person who rents). Taking these data to their surface-plot equivalent, they also become a high incidence percentage of this work dynamic, which generates a higher level of instability for the sector's producer.

<table>
<thead>
<tr>
<th>TIPO DE AREA</th>
<th>SANTA FE (ha)-borde Norte</th>
<th>RECREO (ha)</th>
<th>MONTE VERA (ha)</th>
<th>TOTAL (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBANIZACION ES FUTURAS (usos rural intensivo)</td>
<td>371,54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RURAL INTENSIVA</td>
<td>5056,00</td>
<td>1897,71</td>
<td>6953,71</td>
<td></td>
</tr>
<tr>
<td>RURAL EXTENSIVA</td>
<td>4456,90</td>
<td>6159,61</td>
<td>10616,50</td>
<td></td>
</tr>
<tr>
<td>RURAL ANEGADIZA</td>
<td>410,43</td>
<td>1547,55</td>
<td>1957,98</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Table Synthesis of hectares dedicated to the productive uses in the Santa Fe’s periurban area, based on the municipal and communal regulations of the localities of Santa Fe, Recreo and Monte Vera.

1.4. ATOMIZED PRODUCTION

Surveys have also detected a new modality: small producers are grouped informally -or by family link- to work the horticultural plots in order to assume the expenses of extractive tasks together. According to the "Synthesis Plane" done by this research, 37 plots were declared under this condition (out of a total of 188 official records) which determines that 20% of these productive units are under this new dynamic. This emergent situation seems to install a new social situation: that beyond the fragility, precariousness and uncertainty that supposes the non-ownership of the land, creates a new support that allows this team to think about an alternative of possible continuity in human terms, in order to face the weaknesses expressed...
It is evident that this reading must be deepened to see the real conditions these ties have, as the projection that this will bring onto the territory. Specific studies should be addressed from different scientific disciplines that contribute to the understanding of the phenomenon. However, the assumptions suggest that the strategies used are a reflection of the Bolivian peasant culture and its way of managing work.

1.5. NEW INSTRUMENTS: RELEVANCE AND MANAGEMENT

The Provincial Institute of Statistics and Censuses (IPEC) managed until January 2017 a "Register of Sown Areas and Production", through a manual process carried out by the municipal and communal States. This information base is the last one that has been made with this modality. The novelty is the modification applied to the registration, because the Government of the Province of Santa Fe implemented in May 2017 a new unified system, the "Unique Registry of Primary Productions " (RUPP: Registro Único de Producciones Primarias). It emphasizes production instead of the "producer" subject, and that must be completed in a self-managed manner by each producer. It replaces previous formats that were made in a dispersed way [10]: Agricultural census of the Provincial Institute of Statistics and Censuses (IPEC), and Provincial Registry of Primary Productions (RPPP) that carried out the Santafesina Agency of Food Security (ASSAL).

The measure centralizes, integrates and completes information, entails a migration of the statistical system, while facilitating loading under digital platforms, online, without the need for the producer to report to the technical offices of their districts.

In a short period of time (2015-2017), the design and application of this modality is recognized as an advance compared to the initial conditions in which they set out the objectives of this research oriented to productive and social problems, and to the shortcomings detected in that context.

2. Material and Methods
2.1. The present work is the synthesis of a multiple reading of the territory, based on field surveys and secondary sources. Data were taken from official records of the year 2017, in addition to the readings of satellite images 2015 and 2016 (google earth) and the information requested to people identified as local qualified informant (2016) [11]. The material was territorialized on the basis of GIS (Geographical Information System) and has allowed us to build a synthesis plan that we call "Usos productivos frutihortícolas del periurbano norte santafesino" (Frutihorticolas productive uses of Northern Periurban of Santa Fe) dated in January 2017. Document that approaches the current state of activity, and spatially locates the incidence of productive plots within the territory.
The database generated results from the processing of the information obtained in the Subsecretaries of Production of Recreo and Monte Vera towns, who provided the information of the producers who came to these offices to complete their tax obligations, as a statement of its productive activity. It was necessary to cross the data of producers, ownership of the land and cadastral base, because the forms did not link the activity register with its visualization in the territory in terms of plots.

This was the first indicator that showed the need to propose the implementation of a tool that would allow linking the information associated with the territory as a basis for planning. So far, the State seemed to be only interested as a formality for tax purposes or statistics (predominantly economic), and for the granting of subsidies in cases of catastrophes (crop losses due to floods).

2.2. The “Plano Síntesis” (Syntesis plane) was a substantial advance for our team and research work, however certain incompatibilities, or doubtful readings, were noticed, which made us think about the need for a more intense fieldwork (census plot to plot), to verify the real uses that some lots have, and that allows generating a record with a greater degree of reliability in all its elements.

A table was drawn up that indicates the level of incidence that the different registers with which we worked have. As a result, 188 plots of horticultural and fruit use have been declared to official bodies (109 of the Commune of Monte Vera and 79 of the Municipality of Recreo) [12].

The sum of both readings, concludes that the Santa Fe horticultural cord has 504 plots dedicated to this extractive use, with approximately 3000 ha dedicated to this type of crop. However, this area should be revised since it represents the total area of the plot according to the land registry as a productive unit, but does not mean a real value of what has been produced, because not all its extension is able to sustain the activity. Even with these limitations,
2.3. A third indicator reflects the cultural interest awakened among political officials, in the local community and in some associations of producers, about the need to rethink these spaces taking into account the value of the productive landscape and the elements that structure its territory. Interests point to environmental terms, rescuing economic activity in the town, the environmental assets, and the ecosystem services that contribute to the metropolitan set.

3. Results and Discussions

3.1. The urban-rural interface and the spaces for the production of local food to supply the cities are currently the focus of many disciplinary perspectives that, even with different objectives, converge in the scenario of the planning of a "New urban agenda" (Habitat III, Ecuador 2016), last reference of international consensus.

Analyzing the productive space of the periurban of Santa Fe has been a challenge in academic and scientific terms. The insufficient and scattered official information. The scant understanding of data importance linked to the physical space at the time of taking decisions at any level of government. The inefficiency (or pettiness) of certain organisms when transferring the available data. All were difficult and complex situations for the working team.

The record that was tried to cope with innovative readings, where the participation of other fields of study allowed to arrive at a certain result.

The importance and necessity of “seeing” the information on the plans (seeing the plots) and linking data to real places has been demonstrated. It is a useful tool for generating appropriate public politics.

3.2. Another result of the work was the contribution made to the understanding of the deficiencies in the registered information system, and the linkage with government agencies that assumed an active role in this line of work. The proposed new scenarios articulate georeferenced data and instruments for the management of a sustainable and participatory planning of the peri-urban space, in a metropolitan key.

In this sense, it has been possible to start a path towards the visibility of the problem in obtaining reliable, integrated and dynamic update data on horticultural production and the dynamics that take place in productive peri-urban areas.

3.3. The construction of the idea of metropolitan planning has been experienced in some local governments on demands for technical assistance, as well as in the provincial agencies involved in obtaining and processing data. They recognize that nowadays they only contribute with partial elements to this mission.

As a result, the completion of the work was in continuity with the preliminary idea of the provincial government, to take as a matter of State the management of these spaces, based on the focus on their productive activity. In fact, this developed academic work contributes to the foundations and arguments for the functionalization of a new planning instrument that focus its model on the figure of the Agrarian Park.
The guidelines for the conformation of the "Agrarian Park Santa Fe Metropolitana" ("Parque Agrario Santa Fe Metropolitana", October 2017) articulate four locations in its extension (Santa Fe, Recreo, Monte Vera, Arroyo Aguiar). At the local level, it is a first step promoted by the State, which is oriented to the organization of land use coordinated between several jurisdictions. This also implies the definition of legislation conducive to the protection of areas of food production (predominantly fruits and vegetables).

3.4. Conciencia agroecológica. The subsistence of the productive activity in periurban areas is being oriented on principles and actions oriented to the transformation of the cultures realized with traditional methods, towards the agroecological production. The current discussion about how this process should occur is part of the debate of several disciplines, and is considered as the only alternative of development in spaces of coexistence between urban and rural areas.

Concurrently, quality food is an emerging goal and increasingly demanded in these new scenarios. Where teaching is also addressed on the change of consumer habits, food sovereignty, the social and solidarity economy, and the advantages of access to food produced nearby, called kilometer zero.

This also supports the preservation of the space necessary for its production, as a structuring element of metropolitan planning.

4. Conclusion

The territory is not a data, but the result of various processes. (Translated by Corboz, 2004: 27).

In the understanding of this evolution, an attempt has been made to find a point of entry for the sustainable organization of rural activity, which allows the development of peri-urban communities in balance with the overflows of urbanization. It is a difficult task but at the moment it has helped to channel convergent interests in the revaluation of the traditional uses of the productive space of proximity. It has contributed to the knowledge of the existing production and its understanding as a generator of consumer goods, as well as its patrimonial and environmental value. In this sense, the question of the productive territory begins to be recognized as "cultural landscape".

On the other hand, the analytical readings cooperated in installing the idea of legislation and protection of the use of productive land as an instrument of metropolitan planning, among the actors and institutions that are part of the activity, and public and political management. The integration of statistical data and of own surveys in synthesis plans of the state of fact between two jurisdictions, product of complex construction, leaves a path initiated towards possible joint planning agreements.

Thinking about the productive Santa Fe’s periurban as a cultural landscape, synthesis of the patrimonial heritage of the community and the territory, can be erected as an opportunity for its sustainability. Report that must still be
consolidated, but that seems to find an echo, in the new policies of provincial management, which impel the figure of the Agrarian Park as an instrument of transformation and development.

References and Bibliography

[2] Santa Fe had a first foundation on the coastal area in the current location of the city of Cayastá, which for different communicational and defensive reasons had to be moved before reaching one hundred years. See more detail in the paper Mantovani and Peralta Flores: Borders and interfaces. Views on the landscape of the northern peri-urban Great Santa Fe. VII International Seminar on research in Urbanism. Uruguay, 2015.
[4] The research team assumes by metric deduction that this initial milestone that separates the rural from the urban world in the colonial period, could be considered the current limit of the capital's jurisdiction.
[5] From the promulgation of the National Constitution (1853) the province of Santa Fe enacted a law by which the Executive Power was authorized to donate land to spontaneous immigrants in concessions that did not exceed 20 square blocks to incorporate them into production. Provincial Law (August 12, 1857), Province of Santa Fe. Official Registry, Santa Fe, Editorial La Revolución, 1889, Volume II, 1848-1858, page 36.
[6] The district of Santa Fe maintains productive rural use in island areas considered as: Rural District Anegadizo (RUA), which comprises 70% of the total area of the ejido, although its natural conditions make the extractive activities within this territory they are difficult because of the water risk they entail: the territorial discontinuity, the permanent mutation due to sediments and the ascents and descents of the plains rivers, are considered by the Urban Regulation Regulation (ROU) as they are the only areas with productive potential.
[7] The change of name of Rural Activity to UF arose after the configuration of the new Regulation of Urban Ordinance (ROU) Ordinance N° 11748 in the year 2010
[9] The District of Santa Fe between the years 2004-2007 incorporated to its urban plant 2594 houses of public management, that modified approximately 105 hectares of productive land (Federal Plans of management of the national State), in the last year new plans of urbanization have continued with the tendency of urbanization (2011: Housing Program of management of the provincial State, called My land your house: 12 hectares). While private urbanizations have been the factors of greatest impact on the productive land of the Monte Vera District: Las Moras Urbanization (2008: 33 ha); and the subsequent urbanizations: Praderas 1 (2014: 7 hectares), Praderas 2 (2015: 7 hectares) and Praderas 3 (2015: 19 hectares).
[11] The qualified informants were the Undersecretary of Production of the acting local governments (years 2015-2017).
[12] The Monte Vera Commune made 136 records of areas planted in January 2017, but 109 plots with producers were carried out in plan (27 plots could not be located and 41 producers did not present a real estate entry); while in the registry of the Municipality of Recreo, I present 89 horticultural plots but 79 plots could be located in the plane (10 plots did not match their numbers with the GIS base, 2 producers did not present a heading and 1 was discharged).

Sabaté Bell, Joaquín (2010): Planes de las ciudades (I). De la cartografía urbana al proyecto territorial. En: Revista Café de las


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