

Analysis of Spatial Location of Immigrant Currents from Regions of Spain in the City of Rosario, Santa Fe, Argentina with Geographic Information Systems

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The city of Rosario in the province of Santa Fe was developed from 1854 by the contribution of a broad current of immigration of European origin, mainly Italians and Spaniards. The Spanish Association of Mutual Reliefs of Rosario was the second of its kind in South America.

On the basis of the archives of this Institution investigative studies were made to analyze from the use of Geographic Information Systems the spatial distribution in the territory of the city of the different regional communities of Spain as far as their time of arrival, relation of proximity between the countrymen of the same collectivity, and the spatial dispersion of the same ones as far as the vertiginous growth of the locality between its origins and 1950.

In greater detail, an analysis of the spatial location processes of three significant communities, the Aragonese, Catalan and Galician, is carried out in order to analyse the different installation processes, the existence of selective segregation and the peripheral centre relationship for the location of each of them.

From the entry forms of the Archives belonging to the Spanish Association of Mutual Reliefs of Rosario, the data of

the same have been loaded, in order to analyze them from a spatial point of view using the technology of the Geographic Information Systems (GIS) for their ability to process, link and generate information as they are an effective tool when relating multiple variables.

In this way, we try to show the results in graphs that allowed to obtain valuable information about the distribution of Spanish immigrants in our city. GIS are applied to georeferenced entities and combine literal information (usually textual and numerical) with graphical information. In addition they provide not only a basic cartography of the phenomenon but also give the possibility of assembling details that allow reinterpretations of the phenomena studied.

The investigation was carried out on approximately 80,000 files and their contents were processed in order to obtain consistent data. In this case, each map was elaborated from the subset of cards that possessed the complete data and those that did not comply with this requirement were left for another opportunity. For the preparation of the maps two study zones were delimited: one, the city of Rosario and the other, Spain. For the work in our city we tried to

geographically locate the partners of the entity so that each point on the map represents a partner from which various variables are analyzed. They are: geographical location, year of income, age, sex, marital status, nationality, province.

In addition, due to the volume of information to be processed, it was decided, in a first stage, to limit the analysis to the central zone, between Boulevard Oroño, Avenida Pellegrini and the Paraná River.

The second zone is Spain. We work with partners born in that country and analyze the issues by province, date of entry and Autonomous Communities.

Rosario Center

As already indicated, the maps relating to Rosario are limited, for the time being, to the central zone. The representation R01 shows a satellite image in the background, the cartography of the city in vectorial format and a multitude of points that reflect the geographical location of the partners in the area studied and serves to contextualize those that follow. From this point of view, it is possible to appreciate the great volume of information collected and the potential of the data it possesses.

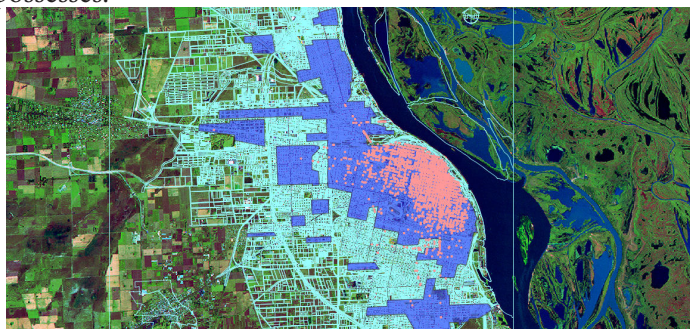


Figure1: From afar, satellite image, cartography, dots representing people.

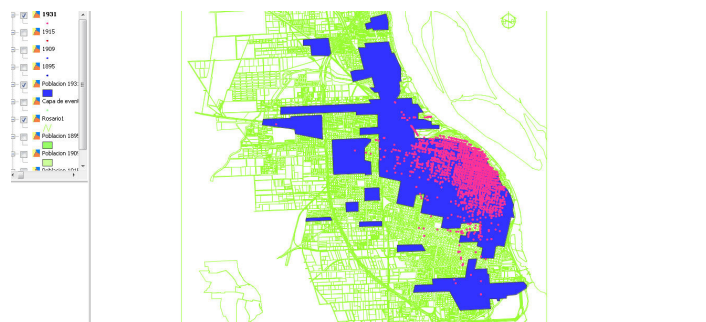


Figure 2: Shows a fairly uniform geographical distribution of the population studied.

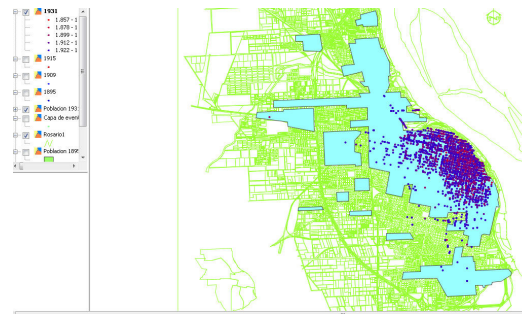


Figure 3: In the image 03 the year of entrance to the entity is taken as parameter that covers from the year 1857 to the year 1950.

In order to be able to observe more clearly this data was grouped to the entrants by decades. The lightest tones correspond to the oldest income and the darkest to the most recent.

1857-1877

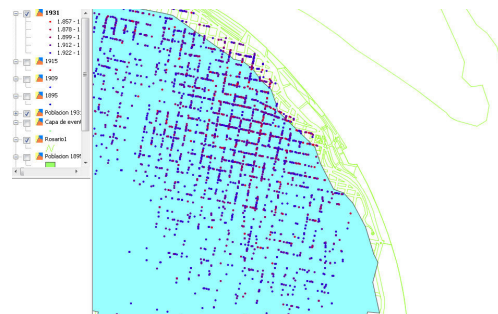
1878-1898

1899-1911

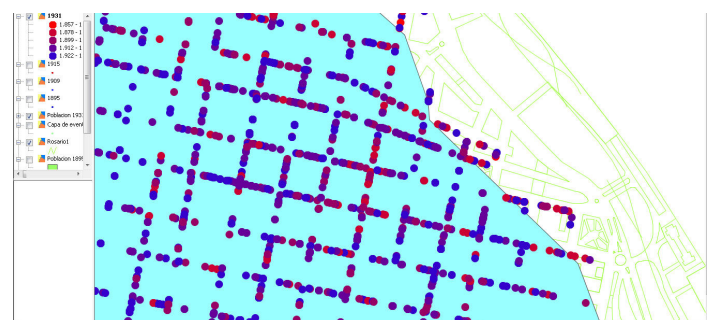
1912-1921

1922-1930

Same image as above but with a closer view. The blue dots are the last ones entered and the red ones are the oldest.



Closer approach to the previous one.



people of Spanish nationality and the green dots represent the others,

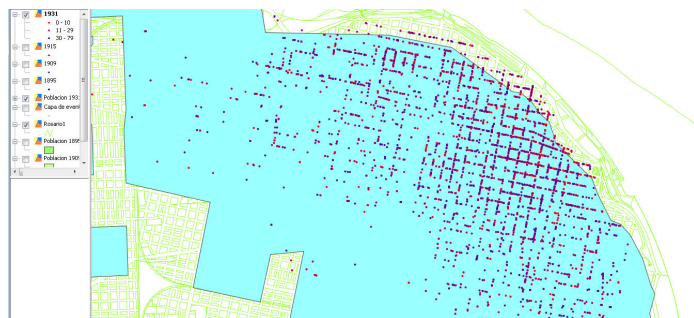


Figure 4: analyses the age of entry into society and, as in the previous case, is grouped by decade in order to be able to observe the global phenomenon clearly. The lightest colors correspond to people who entered at an early age.

0-11

11-29

30-79

Close-up of the previous image. The big red dots are children (0 to 11 years).

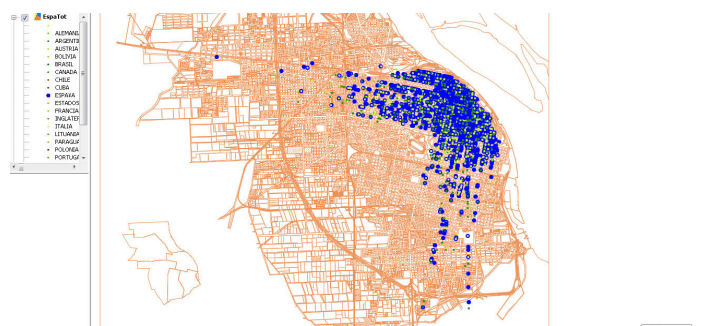
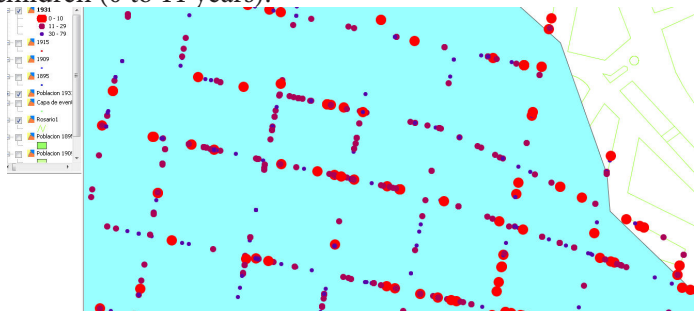


Figure 5: Spain.

The country of origin variable corresponds to image 05 and is the one shown below. Given the amount of data, the countries of origin were considered: Spain and the others, due to their scarce representativeness, were grouped generically in the category others.

Close-up of the previous image. The blue dots represent

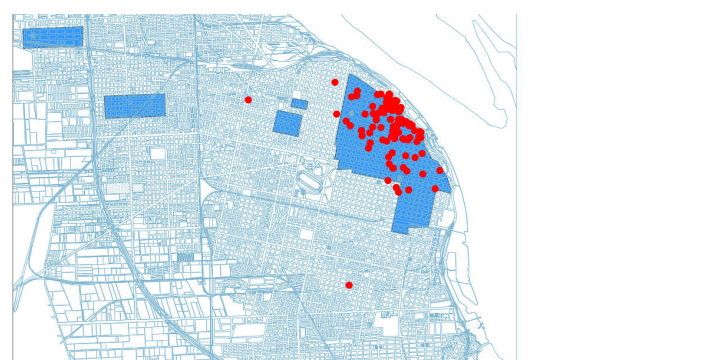
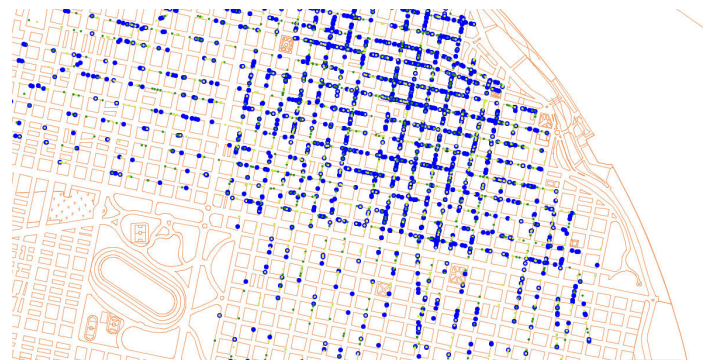


Figure 6: Population Spot 1895.

Where did people live in Rosario in 1895?
Where were the Spaniards and the other communities?

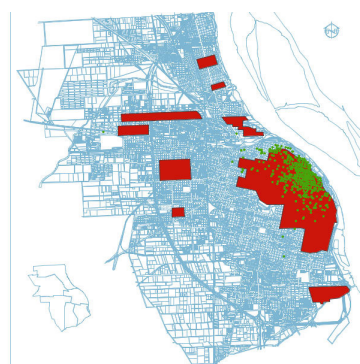


Figure 7: Population Spot 1909.

Where did people live in Rosario in 1909?
Where were the Spaniards and the other communities?

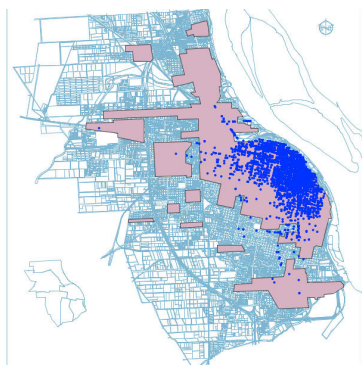


Figure 8: Population Spot 1931.

Where did people live in Rosario in 1931?
Where were the Spaniards and the other communities?

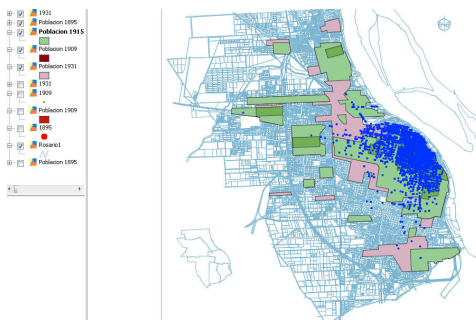


Figure 9: Population Stains.

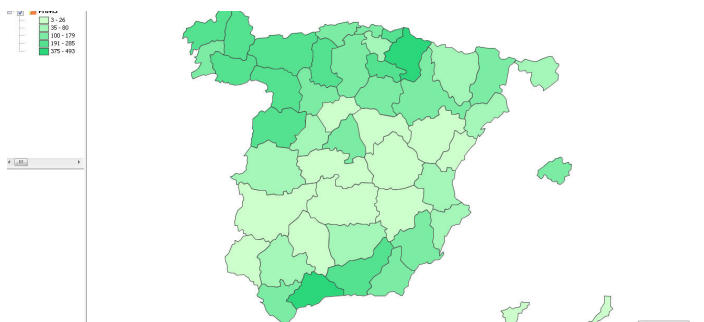


Figure 10: Spain.

In the work area corresponding to Spain, we mainly analyse the phenomena of spatiotemporal occurrence of the registered partners.

The Figure shows the map of Spain with the current division by provinces. To represent the number of arrivals of each of them is assigned a shade of color according to a graduation that represents with lighter tones to the smaller quantities, darkening as the number of associates grows

for each province. It is clearly observed that the majority of immigrants come mainly from the North and South and to a lesser extent from central Spain.

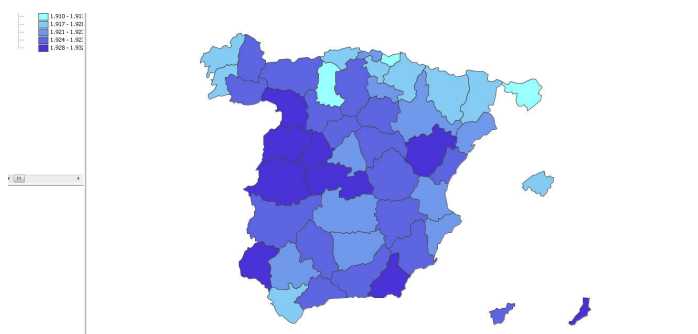


Figure 11: Per decade of income.

Analyzing the spatial distribution of the partners arriving from Spain, we can verify that the date of arrival for the different provinces is not homogeneous either. To represent this process territorially we present in the Image the Spanish provinces with a palette of darker tones than the provinces of origin of the associates who entered in average, later to the Society.

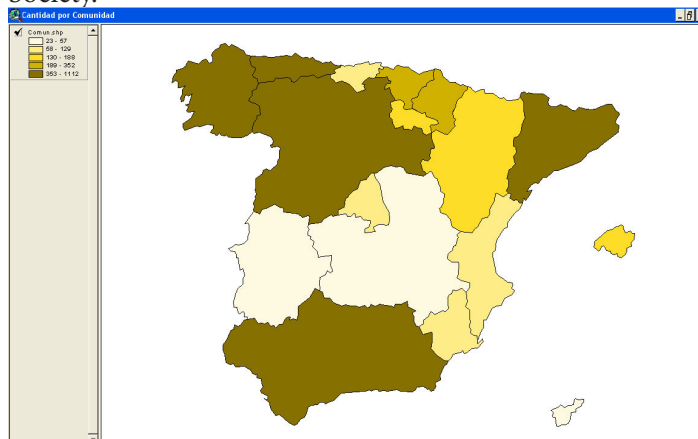


Figure 12: Communities.

shows the map of the grouping of the Autonomous Communities with the representation of the number of associates with origin in each of them.

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