

**Internal migrations, migration networks and demographic behaviors of migrants
in Madrid at the dawn of the 20th century**

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Migration was the main motor of the transformation of Madrid, a modest town that counted 279,370 inhabitants in 1860, into the dominant metropolis of a centralized state, a metropolis that approached one million inhabitants in 1930. The capital of Spain alone attracted 21 to 23 percent of all permanent Spanish internal migrants (Silvestre 2005). Most of the newcomers were unskilled workers coming from the large surrounding Castilian Plateau, but also from the North of Spain and various other regions. Although such mobilities have already been studied by historical demographers and economic historians, we propose a new approach based on old roots.

Indeed, the study of migratory fields is based on the original works of Ravenstein in 1885 and 1899, and Hagerstand in 1957. Concretely, our analyses are based on the 1905 Madrid census (*padron*). We cover two contrasted districts, Hospital and Congreso, with over 200'000 individuals. 57/58% were migrants. We used a database created by Goerlich & Mas Ivars (2006) with the population of each Spanish municipality at each census and the National Institute of Statistics provided the spatial coordinates. Using those data, the number of migrants born in a given place was weighted by the population of this place to obtain rates, and the distance to Madrid was calculated. Over more than 8'000 municipalities in Spain, around 3'500 sent at least one migrant to our two Madrid districts in 1905. There is a log-linear relationship between the rates and the distances. Observed rates significantly above the theoretical value identify between 450 and 500 municipalities whom the inhabitants were over-attracted by Madrid.

In a second step, we are going to connect the broad spatial scale of Spain with the smaller scale of Madrid's neighborhoods, streets and blocks of houses. We will test the hypothesis that migrants from over-attracted areas, participating in strong networks or ties, lived concentrated in certain parts of the city (in Congreso and Hospital districts). They may also have occupied a specific place in the Madrid labor market.

The third step will be to study the differential demographic behaviors of migrants from over-attracted areas, compared with the behaviors of natives, but also of migrants from under-attracted regions and those from "normally attracted" municipalities. We already linked the birth and death certificates of 1905 with the census, and we now extend this work to births and deaths in 1906. A lot could be done with those data. For the sake of consistency, we will focus on children survival, especially in situations of orphanhood, testing the network protection hypothesis.