



CERDÀ AND BARCELONA. A DISCUSSION ON SPATIAL WELL BEING AND URBAN PLANNING

Montserrat Pallares-Barbera, Ph.D.

The Cerdà's Plan of Urban Expansion of Barcelona (1861) incorporated additional 1,600 hectares to Barcelona's medieval core of only 190 hectares. The Map proposed an orthogonal street pattern filling in the entire space between the core and the ring of peripheral villages. The planning design consisted of a grid of 113.3 by 113.3 meters in length and width, with streets 20 meters wide. He planned for two parallel buildings on each block, from 10 meters to 20 meters deep, with gardens in between, laced with pedestrian paths across the middle; that linked each interior open space together independent of the street network.

During the eighteenth and nineteenth centuries Barcelona developed into the home of an active bourgeois civil society and industrial center. At the end of the nineteenth century, because of political constraints, Barcelona had the same dimensions than in the fourteenth century. In 1854 the city's population density was 802 inhabitants per hectare (Paris' density in 1860 was less than 400; and the highest world density in 2010 is Manila with 431 inhabitants per ha). Between 1837 and 1847, the average life expectancy of population was 38.3 years among the rich classes, and 19.7 among the poor.

The Cerdà's Plan was projected with the objective to get 6 cubic meters of air per person; it proposed a density of 250 inhabitants per ha; it recommended three schools (boys, girls and infants) for each 1200 inhabitants; and it had the ambition to reach 40 square meters of housing per person. The Master Plan for Barcelona, approved by the Queen in 1860, started developing 40 years later.

The Map contained 33 schools, 3 hospitals, 8 parks, 10 markets, and 12 administrative buildings. This project studies the functional areas created by the services projected by Cerdà and discusses the following structural questions: How does quality of life can be increased in cities? Can urban policies be transformed and adjusted to fulfill population needs? Might mechanisms to distribute resources in space help to achieve a more even spatial justice?

Data-gathering is being collected from original sources, like maps and Cerdà's original books. Variables such as distances and population are calculated; and several scenarios are analyzed using spatial decision support systems (SDSS), Arc GIS, Network Analyst in order to find service areas and other location-allocation problems.