

Learning from Barcelona: Towards Urban Sustainability

Nadia Fava Maria Lluïsa Marsal Llacuna

(Nadia Fava, Universitat de Girona, Escola Politècnica Superior. Departament d'Arquitectura i Enginyeria de la Construcció. Àrea d'Urbanisme. Campus Montilivi. Edifici Politècnic III. Despatx 132.. c/ de la Universitat de Girona, s/n. 17071, Girona. Spain. Nadia.fava@udg.edu)

(Maria Lluïsa Marsal Llacuna, Universitat de Girona, Escola Politècnica Superior. Departament d'Arquitectura i Enginyeria de la Construcció. Àrea d'Urbanisme. Campus Montilivi. Edifici Politècnic III. Despatx 132.. c/ de la Universitat de Girona, s/n. 17071. Girona. Spain. luisa.marsal@udg.edu)

1 ABSTRACT

The compact Mediterranean city is undoubtedly synonymous with the sustainable and libeble city.

Barcelona, constructed in a relatively small area of 92 (square?) km, with a density of 16,000 inhabitants per square kilometer –still one of the highest in Europe–, represents a model that serves to put into question the relationship between the compact city and its administration. It is an administration that, up until Ildefonso Cerdà's 1859 [ensanche] urbanization project, has been understood as "forthcoming developments" leading to a compact and complex city.

Nowadays the first steps towards urban sustainability should include planning tools, understood as the supports that allow for forthcoming developments.

The big challenge for new master plans is to introduce progress made in other disciplines –far removed from strictly urban roots or disciplines–, highlighting those innovations that stress the sustainability of those planning instruments.

Thus, for a while now, urban planning has incorporated urban ecology recommendations, aiming for compacity, allowing for denser and more energy efficient urban patterns, clearly departing from low density, extensive models.

In the same way, the introduction of generous proportions of complexity or a higher diversity of uses and activities makes it possible to move away from the unintentionally single use functionality of exclusively residential areas. Mixed patterns promote social integration and diversity.

2 INTRODUCTION

Even though livability is primarily a subjective experience, and one of the main questions that planners are concerned with, there is currently a growing consensus regarding the characteristics of a livable city for designing livability.

In fact, cities are now emphasizing the importance of competing on the basis of livability and the quality of life offered, and it is becoming an increasingly important factor in modern business location decisions, especially among high technology and knowledge firms (Richard Florida, 2008).

Standard economic criteria for the livable city comes fundamentally from Mercer's Quality of Living Survey and from Monocle Magazine.

In the first case, they adopt 39 criteria that include safety, education, hygiene, health care, culture, environment, recreation, political-economic stability and public transportation. On the other hand, Monocle Magazine includes some non-scientific criteria, such as safety/crime, international connectivity, climate/sunshine, quality of architecture, public transportation, tolerance, environmental issues, access to nature, urban design, business conditions, proactive policy developments and medical care.

But the criteria adopted by citizens are, at least in part, different. The Livable City Organization has as its goal to help create "new community models that focus on the interconnected relationships among growth issues such as transportation, housing, environment, affordability, neighborhoods, culture and the economy in an equitable and sustainable manner".

But from the early 1960s, economists and planners such as Jane Jacobs, Gordon Cullen, Lewis Mumford and Kevin Lynch, who shared a mainly negative image of suburbanization after the massive construction during the 1950s and 1960s and during the first petroleum crisis in Europe and the United States, were focusing on the change in the meaning of the livability of public space, reclaiming, basically, the missing sense of identity in the territory (MOORE,C.W., 1965). More recently, Michael Sorkin (1992) demands a more

authentic urban reality, a city based on physical and cultural proximity (FREESTONE,R., GIBSON, 2006), beginning an appreciable chapter in the recuperation of public space. Relations of proximity that not only improve security on the street but also encourage economic and cultural creativity as a consequence of the fluidity of connections.

Our article stresses on idea of the importance of liveable and sustainable society, based on the relation of proximity, as one of the basic criteria of a liveable city inside compact city model linked to its territory. As Richard Florida (2009) explained a great city is not a big village, but a number of relationship that are multiply their potential

The manner in which Barcelona has developed through the expansion project of Ildefonso Cerdà in the middle of XIX centuries, which for almost a century was denied, may have a new interpretation in terms of liveability in a different and compact city.

2.1 The communication is divided into two sections

Interpretation of the project by the engineer Ildefonso Cerda, 1855-63 of Barcelona expansion and its actual construction, using criteria of the urban ecology as like compactness, complexity, efficiency, stability and social cohesion (BUSQUETS J., COROMINAS M, 2009; MAGRINYÀ, F., 2009; RUEDA, 1995)

The result is that the project includes some of the criteria of a good liveability like those we adopt nowadays in the era of globalization.



Fig. 1: Ildefonso Cerdà, Expansion project for Barcelona, 1859



Fig. 2: Barcelona, 2008

A prospective scenario for the Barcelona of the 21st century using criteria of urban ecology in particular made by the Agencia di Ecologia Urbana of Barcelona(Rueda, 1995). It is an intentional model, based in the functional model proposed by Gatpac (Group of technical architects for Contemporary Architecture) in 1934,

that aims to lay down the patterns and the direction that Barcelona must follow in a process towards sustainability in the new information age



Fig. 3: Model of mobility based on superblock



Fig. 4: The public space that appears in the proposal of superblock



Fig. 5: Activity density of the superblocks

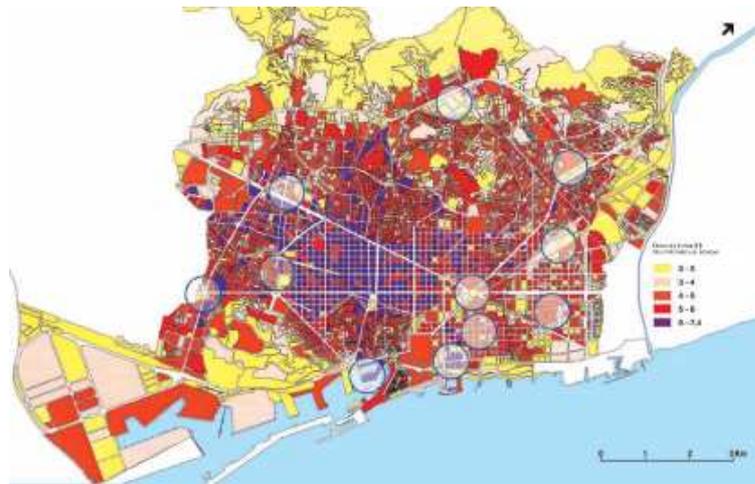


Fig. 6: Areas of new centrality

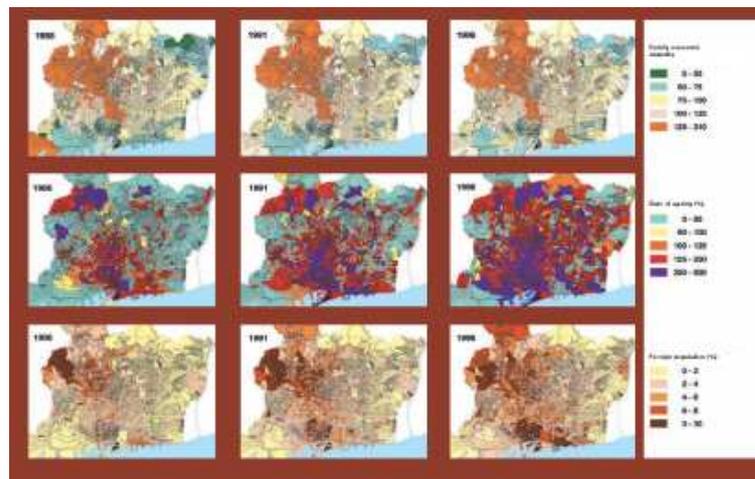


Fig. 7: Stability a social cohesion

3 CONCLUSION

The project of Cerdà, that this year is the 150 anniversary, has its first quality in to be a processual project with a big introspection about which are the qualities of the mediterranean city.

From the analysis of its evolution emerges that the history of the transformation of Barcelona teaches some objective for the mediterranean cities in order to preserve their liveability:

- To defend the compact and diverse city, with a public space of quality.
- To improve mobility and to make the street a welcoming environment.
- To achieve optimum levels of environmental quality and to become a healthy city.
- To increase social cohesion, reinforcing the mechanisms of equity and participation.
- To reduce the impact of the city on the planet and to promote international cooperation.
- To protect the free spaces and biodiversity and to extend the urban greenery.

4 REFERENCES

BUSQUETS J., COROMINAS M., *Cerdà i la Barcelona del futur : realitat versus projecte*, Barcelona : Centre de Cultura Contemporània de Barcelona : Direcció de Comunicació de la Diputació de Barcelona, cop. 2009.

Cerdà : pionero del urbanismo moderno, Barcelona : Institut d'Estudis Territorials : Generalitat de Catalunya, Departamento de Política Territorial y Obras Públicas ; Madrid : Ministerio de Fomento, DL 1998.

CERDÀ, I. *Teoría de la Construcción de Ciudades*. Barcelona, Spain: Ministerio de Administraciones Públicas - Ayuntamiento de Barcelona, 1859.

CERDÀ, I. *Teoría General de la Urbanización*, Madrid_Barcelona, Spain: reprint by Instituto de Estudios Fiscales, Barcelona, (1867-1968).

MOORE, C.W. You have to pay for the public space. In: *Perspecta 9/10: The Yale Architectural Journal*, 1965.

- FLORIDA, R., Les ciutats creatives : com l'economia està convertint la tria de l'indret on viure en la decisió més important de la teva vida, Barcelona : Pòrtic, 2009.
- FREESTONE,R., GIBSON, Ch. The Cultural Dimension of Urban Planning Strategies: an historical perspective. In Monclús, F. J., Guardia, M. (Ed.), Culture, Urbanism and Planning. Aldershot, England: Ashgate Publishing Limited, 2006.
- KATZ, P. , The New Urbanism: Toward an Architecture of Community, New York, McGraw-Hill, 1994
- Libro Verde de Medio Ambiente Urbano. Barcelona, Spain: Ministerio de Medio Ambiente (Dirección General de Calidad y Evaluación Ambiental) and Agencia de Ecología Urbana de Barcelona, 2001
- MAGRINYÀ, F., Cerdà 150 any de modernitat, Barcelona : Fundació Urbs i Territori Idelfons Cerdà (FUTIC) : ACTAR, DL 2009
- RUEDA PALENZUELA, S. Ecologia urbana : Barcelona i la seva regió metropolitana com a referents , Barcelona: Beta, 1995.
- SORKIN M., Variaciones sobre un parque temático : la nueva ciudad americana y el fin del espacio público , Barcelona ; Naucalpan ; Amadora : Gili, cop. 2004.(1992)
- TEYSSOT, G. , Il sistema dei Bâtiments civils in Francia. In Teyssot, G.(Ed.), Le macchine imperfette. Architettura, programma, istituzioni, nel XIX secolo (pp.97). Roma, Italy: Officina edizioni, 1980
- VOLTAIRE, Des embellissements de Paris , <http://www.voltaireintegral.com/Html/23/30Embellissements.html>, 1749