





OLIVER HOCHADEL & AGUSTÍ NIETO-GALAN, BARCELONA: AN URBAN HISTORY OF SCIENCE AND MODERNITY, 1888-1929

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How to write histories of science (and technology and medicine) taking into account urban spaces seriously? How the practices of science shaped in profound ways modern cities, and, at the same time, how urban spaces are driving forces for the production and circulation of scientific knowledge? Of course, these questions about the entanglements of science and the city (or about the coproduction of these two institutions) have attracted increased attention in the last decades. The so called "spatial turn" in recent history of science has helped to place specific city's sites at the center of historical analysis. But for the editors of this extraordinary volume, Oliver Hochadel and Agustí Nieto-Galan, there are still some neglected aspects that should be addressed in order to "write a new, genuine urban history of science" (p. 5). A key aspect of this "new" approach is a shift in focus: From metropolis or big cities to smaller or "second cities", and from city-based elites or scientific experts to public or civic science. As a result, all the chapters of the volume are devoted (to varying degrees) to analyze, at the same

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time, very concrete urban spaces and a variety of actors and audiences that helped to shape and negotiate the scientific culture(s) of Barcelona around 1900 (between 1888 and 1929). In other words, the volume is an invitation to combine historiographies of urban science and popular science, to recover the silenced voices of the numerous audiences of science (as active agents in the production of knowledge), and to pay attention of micro-histories and everyday practices in order to capture the tactics to "resist the cultural hegemony of the elite and its science" (p. 11).

Such an invitation is not an easy task, both in theoretical and methodological terms. However, all the ten chapters share—despite the diverse historiographical traditions of the authors and the particularities of each case study— similar historical sensibilities, a high level of historiographical sophistication, and rich and innovative historical sources. This coherence of the volume is the consequence of true teamwork and academic and editorial excellence. Early versions of the chapters, each written by two historians of science (most of them trained in Barcelona), were presented and discussed in three workshops held in Barcelona between 2013 and 2014. And then, each chapter was also reviewed by two referees. The book is divided into three sections, reflecting the aforementioned proposal of doing urban history of science from above *and* from below.

The first section (called "Control - Elite Cultures") is concerned with the perspective from above: How urban built environments related to science operated as cultural technologies to model and control some values and behaviors of different Barcelona's dwellers? An urban park (Parc de la Ciutadella) and their natural history exhibitions (Chapters by Oliver Hochadel & Laura Valls and Ferran Aragon & José Pardo-Tomás), private surgical clinics in the modern district of Eixample (Alfons Zarzoso & Alvar Martínez-Vidal), and amusement parks all over the city (Jaume Sastre-Juan & Jaume Valentines-Álvarez) are the examples chosen in this section. In different ways, these urban sites had a civilizing mission, and tried to promoted a local nationalism (Catalanism) characterized by Catholicism, conservatism and a utilitarian conception of science. The second section (called "Resistance – counter-hegemonies") focus on the perspective from below: How subaltern urban groups tried to react against the hegemonic scientific culture explored in the first section, and how these groups produced their own meanings of science? Here, the local urban movement of anarchism and their uses of science popularization as a means of emancipation is explored (Álvaro Girón Sierra & Jorge Molero-Mesa). Spiritism, which was very popular in the last decades of the nineteenth century

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in Barcelona, is another example, in this case, of heterodox healing practices (magnetism, hypnosis) that challenged hegemonic conceptions of science (Mònica Balltondre & Andrea Graus). El barrio Chino, a poor quarter full of "amoral" attractions, serves as a site to explore the configuration of an underground medical culture, where urban sanitation, public health and sexual pleasure were entangled in complex ways (Alfons Zarzoso & José Pardo-Tomás). Finally, the third section (called "Networks - experts and amateurs") is concerned with technological innovations and the interactions between producers/experts, sponsors, mediators, and users of these technologies. The consolidation of an amateur astronomy network (Antoni Roca-Rosell & Pedro Ruiz-Castell), the entry of commercial radio broadcasting (Meritxell Guzmán & Carlos Tabernero), and the spread of electric lighting (Jordi Ferran & Agustí Nieto-Galan) contributed to transform the cityscape of Barcelona and some habits and practices of their dwellers. The complex interactions of these networks also articulated a local and rich technological culture with evident tensions between experts and amateurs/users.

The two world fairs held in Barcelona (1888 and 1929) that encapsulate the time space of the volume, the rapid industrialization and modernization suffered by the city during this period, and the richness of the case studies presented, may make readers wonder about the meanings with which the editors refer to Barcelona as a second city (in contrast to European metropolises). In addition to the fact that international scholarship on urban history of science have been mainly concerned with capitals or big cities such as London, Paris, Berlin, or Chicago, the questions about whether cities as Barcelona, Milan, or Hamburg (and the list may include many other cities outside Europe and North America) require a "different interpretative framework" and about what exactly are the "distinctive features of the urban history [of science]" (p. 9) of these cities, seem to required further comparative investigation and reflection. Undoubtedly, this volume brings valuable tools for such an academic endeavor. In the end two issues are evident: the rich and complex scientific cultures of Barcelona around 1900, and the vibrant and innovative community of science historians who work and live in the same city at the beginning of the 21th century.