

BOOK REVIEW

Agustí Nieto-Galan. *The Politics of Chemistry: Science and Power in Twentieth-century Spain*. Cambridge: Cambridge University Press, 2019. 284 pp.

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How to write a history of a scientific discipline in a country that in the same century was ruled by a Monarchy, a Republic, and a Dictatorship? How to balance international and local factors to offer a historical account of the political role played by chemistry and chemists in Spain in the twentieth century? How to convince the reader that science is not a politically neutral activity? These are some of the challenges faced in this book by Agustí Nieto-Galan, professor of history of science at the Universitat Autònoma de Barcelona (UAB). The successful result benefits from the outstanding previous research by the author on science in the public sphere, the identity for chemistry in modern Spain, and the resources employed by many chemists to obtain scientific authority in the academic sphere as well as prestige as experts in the public arena.

The book provides a rich account of the political dimension of chemistry. It shows how chemistry, as a scientific discipline, as well as its practitioners (chemists, pharmacists, engineers and industrialists) became powerful ideological agents of their time, which implied changes

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in their research interests, the links between academy and industry, and government policies. Scientists not only gave support to and benefited from the different political regimes existing in Spain, but contributed to their creation and consolidation in a decisive way. In many cases, their ideology determined their scientific activity, while in others they became relevant politicians thanks to their scientific prestige. Their activities as ministers, presidents of institutional boards, directors of journals, laboratory directors, professors, teachers, science popularisers or entrepreneurs were shaped by their ideology and, simultaneously, influenced the politics of their time. As a discipline, chemistry had a multifaceted personality. In some cases, chemists wanted to be associated with the positive values of pacifism and internationalism to promote the public image of the country, in others they presented the discipline as a decisive tool to win the Civil War, or as a neutral activity to recover international alliances. The book also shows how recent understandings of the discipline are affected by the history and memory constructed through the different regimes. In this sense, the book offers an excellent account of the construction of the distinction between pure and applied chemistry. For instance, it shows how the Francoist regime took part in the debate about the different values of chemistry, by linking theoretical and supposedly useless works with “liberal” chemistry, while stressing the productive uses of the chemistry done by Francoist scientific institutions.

The book is organized associating chronology with ideological and political frameworks. In this sense, it provides an excellent opportunity to re-evaluate the continuities and discontinuities in the twentieth-century science and politics in Spain. After a historiographical introduction, where the relationship between science and power and the political nature of chemistry are analysed, the book is organised in the following seven chapters: 1) Dreams of Modernity; 2) A Republican Science; 3) War Weapons; 4) Totalitarian Ambitions; 5) Autarchic Ambiguities; 6) Technocratic Progress; and 7) Liberal Dissent. The last four points (4, 5, 6, and 7) consider an alternative chronology to explain Franco’s regime through the lenses of the chemical community, providing interesting clues to re-evaluate other historical issues.

Nieto-Galan shares with most of the chemists studied an analytical attention for accuracy. Such depth of detail has been possible thanks to an intense historical work full of references. The book also includes a comprehensive index, a footnote section, a useful abbreviations’ list and a chronology, very helpful for both local and international readers. Some readers might miss some specific names or more details about their activities. Others, on the contrary, might feel puzzled by the number of actors and institutions considered, as well as their evolution in different periods. However, the book overcomes these challenges thanks to its organisation and its readable format, providing convincing evidence for its claims about the role played by both the Spanish chemists and chemistry as a discipline in the co-construction of power. In this sense, Francoist chemists were essential for the regime not just because many of them held prominent positions in the government, but also because of the ways in which they employed their technical knowledge, international connections, and scientific authority. Moreover, the

book provides a solid platform for further research on the construction of scientific identities, analysing how dichotomies about the pure or applied nature of chemistry were created, how science was employed to justify religious values or political ideologies, and how the image of chemistry created by the dictatorship affected later historiographical approaches. As Nieto-Galan suggests, this book about twentieth-century Spain provides insights that can illuminate how the chemical community participates nowadays in debates about environmental issues, public health questions, or state and corporate power. It also promotes further discussion on how prosopography contributes to bigger pictures, and the relevance of writing more scientific biographies (including, of course, women) for a better understanding of chemistry and society. Finally, the book not only analyses the bidirectional relationship of politics and chemistry in Spain, but it also boosts the reader to think about science, history and memory. In a country with almost forty years of dictatorship, the continuity of certain institutional practices, honoured names (while others are still dismissed) or public and private privileges can be reconsidered thanks to the reflections provided by this book.

This stimulating book sits within a large group of other related works on the connections between science and politics –and their impact on the present– written by scholars such as Robert Proctor, Naomi Oreskes, Tiago Saraiva, or Carsten Reinhardt. Such a framework, along with many other historiographical approaches, allows the author to offer a rich and nuanced view on how chemistry not just reflected the political context of its time, but also contributed to create ideologies and consolidate regimes. Some recent books by María Jesús Santesmases, Xavier Roqué and Néstor Herrán have studied the biomedical sciences and physics during Franco's regime, but Nieto-Galan focuses on the discipline of chemistry, its related institutions, practitioners, journals, laboratories, and industries to show their active political role. Readers interested in history of chemistry, its worldwide evolution throughout the twentieth century, and its connections with other disciplines will enjoy the introductions and conclusions included in each of the chapters. The ones looking for the specific evolution of chemistry in Spain will find plenty of data and references. Moreover, the readers concerned about the role played by science in the co-production of power will find a large number of case studies involving the Monarchy, the Republic, and the Dictatorship. In this sense, the book provides an extraordinary understanding of the role of chemistry and its practitioners in the shaping of science and society in the twentieth century.