tives. After all, one of the orientations informing critical fabulations is precisely *making alliances* in order to cultivate transformative collective actions by standing with the groups with which we inquire.

Critical fabulations is a compelling reading for STS scholars interested to find their distinctive way into design as much as for designers to rethink and retool their practice from a critical point of view. It is a tool that can help building fruitful bridges between design and STS, fostering promising alliances and possibilities.

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Tiago Saraiva and Marta Macedo (eds.)

Capital Científica. Práticas da Ciência em Lisboa e a História Contemporânea de Portugal [Science Capital. Science Practices in Lisbon and Contemporary History of Portugal], Lisbon, Imprensa de Ciências Sociais, 2019, pp. 410

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Capital Científica [Science Capital] examines how Lisbon became not just the official (political) capital of Portugal but also the capital of its scientific system and how scientific knowledge helped build the contemporary city outlook.

This book is an edited volume that brings together ten chapters authored by some of the leading scholars in History of Science in Portugal, from the main universities and research centers dedicated to this discipline, such as Tiago Saraiva (University of Drexel), Ana Carneiro and Maria Paulo Diogo (New University of Lisbon), Ana Cardoso de Matos (University of Évora), Ana Simões (University of Lisbon, current presi-

dent of the European Society for the History of Science). It stems from two research projects funded by the national agency (Portuguese Foundation for Science and Technology) focusing on the development of science and technology between the mid-19th and the mid-20th century. Although each chapter focuses on a particular subject, they are structured around a few crosscutting issues, such as the importance of place in the production of knowledge, the construction of new urban landscapes, or the role of scientific research and some professional groups (scientists, engineers, doctors) in policy making and policy implementation. As the editors state, science is a lens through which to understand the historical dynamics of contemporary Portugal. At the same time, the book shows how urban problems in Lisbon inspired the work of scientists and engineers and, conversely, how their work changed the city in material, social, and symbolic terms.

The connections between science and the political regimes are made clear. The book is divided into three sections that pertain to different chronological and political periods in Portugal: the later stages of the monarchy (mid-19th century to early 20th century), the First Republic (1910-1926), the Dictatorship (from 1926 until 1974). The first section addresses the role of scientific institutions in modernizing the nation, by mapping the territory, standardizing time and providing expert support to public services such as street illumination, water, and sewage systems, the design of parks, gardens and streets. The second section shows how the Republican project of education and health for all had repercussions on the creation of new hospitals and biomedical research institutes and also of 'people universities', institutions devoted to the education of adults with low formal education. The third section illustrates how the Fascist regime concentrated its efforts on research institutions under its direct supervision, namely State Laboratories and hospitals, and on applied scientific disciplines (namely medicine and engineering), while neglecting universities and persecuting academics.

Some chapters focus on specific research institutions (Chapters 2, 3, 6 and 10), others on teaching institutions (Chapters 1, 4 and 7), or on the intersection between research, teaching, and professional practice (Chapters 5, 8 and 9). A few chapters (1, 2, 3, 5, 8 and 9) examine how the architecture of purpose built scientific institutions, such as the Polytechnic School, the Astronomical Observatory, the office of the Geological Service, the Faculty of Medicine, the Institute of Engineering or the Oncology Hospital, serve both practical and symbolic functions. Some of them (Chapter 1, 5, 8, 9) show how the neighborhoods in the vicinity of scientific institutions suffered significant transformations, in terms of hygiene, rationalization, and civic architecture. Only the chapter on Industrial Institutes and public illumination (Chapter 4) explores the connections between art (literature, theatre, opera) and technoscience.

The chapters cover a fairly wide array of scientific disciplines (astron-

omy, geology, physics, microbiology, engineering, and medicine), though the social sciences are entirely absent. Omissions in terms of institutions and scientific disciplines are acknowledged by the editors in the Introduction. Some chapters pay particular attention to the training of new professionals, such as engineers (Chapters 1 and 8) or physicians (Chapters 5 and 6), whereas others focus on the promotion of science and technology education for factory workers and adults with lower educational backgrounds (Chapters 4 and 7). Most chapters also include some biographical detail of historical figures of particular relevance, such as doctors (Chapters 5, 6, and 9), architects (Chapter 1 and 8), astronomers (Chapter 2), geologists (Chapter 3), industrialists (Chapter 4), or university professors (Chapters 7 and 8). It is notorious the absence of women in these narratives, with the exception of the wives of doctors in the Oncology Hospital that conducted philanthropic work (Chapter 9) and one female researcher who worked in a biomedical laboratory (Chapter 6).

The book follows in the footsteps of other works on the relations between science and territorial or urban contexts (see, for instance, Agan and Smith 1998 or Nieto-Galan and Hochadel 2019) and the relevance of the architecture of spaces in knowledge production (see, for instance, Galinson and Thompson 1999). It is closely connected to the previous work of the editors, namely their PhD theses: Saraiva's (2005) take on science and the city with regard to Madrid and Lisbon and Macedo's (2012) analysis of the role of engineers in producing science and territory in the 19th century.

The chapters seek to establish an extensive dialogue with the international literature on the topic, in particular by drawing parallels with studies on other European or American cities, on architects and urbanists from other countries, on research and education institutions in France, Russia, or USA, and on the history of particular scientific disciplines or technological innovations. Some chapters also draw on research on contemporary science and technology issues, going beyond the time limits of their scope.

As in any edited volume, the quality of chapters is slightly uneven. Some chapters are mainly descriptive, whereas others show more concerns with interpretation and contextualization. Some chapters draw from previous published books and articles, so the innovative nature of these texts is to some extent doubtful. The title of the book is somewhat misleading, since scientific practices, in the sense of the everyday life of laboratories, offices or lecture halls or how science was actually produced, taught, applied or disseminated, are mostly absent. Rather, the chapters mostly focus on institutions, spaces, and agents of science, medicine, and engineering. The absence of an index at the end does not afford the reader an opportunity to browse for particular topics.

Nevertheless, the book is profusely illustrated, with maps, photographs, plans, and portraits. The writing style is clear and accessible to a

wide audience. Given the dearth of publications in History of Science (and STS) in Portugal, this book provides a much-needed contribution to the field. Also, the book brings to the light the "invisible" scientific endeavors carried out in a southern European country during the 19th and early 20th century, putting into question the dominant narrative that Portugal had barely any scientific activity until the accession to the European Community in the 1980s.

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Howard Shrobe, David L. Shrier and Alex Pentland (eds.) *New Solutions for Cybersecurity,* Cambridge MA, MIT Press, 2018, pp.491

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Cybersecurity and cybercrime are fast becoming two of the most important issues of our digital society and, as such, they deserve attention from Science and Technology Studies (STS). We can define cybersecurity as the theory and practice of preventing or detecting attacks on digital systems. We can define cybercrime as the unauthorised access to digital systems for a variety of purposes, which can include disruption, manipulation, deception and crime more generally, among others. Much of what exists in social sciences research especially around cybercrime comes from criminological studies. However, criminologists are debating on the problem of using traditional criminological approaches (that focus on the study of human criminals and social structures) to the study of phenomena deeply ingrained with digital technologies. Thus, criminologists speak about the problem of the "Novelty of Cybercrime" (e.g. Yar 2005). Few authors in criminology have started to look at STS approaches as poten-