

that their 'civilised' cultures so uniformly disapproved of it. Individual white people could become overweight because of heredity or a lack of willpower, but, whatever the reason, it was frowned upon. This contrasted with a colonialist belief that Africans and Indians (among others) were not adequately disgusted by fat and might even still make medicinal use of it or find it sexually appealing.

Forth uses an extraordinary variety of sources, from ancient artefacts to eighteenth-century political cartoons and paintings, and from colonial travelogues to weight loss advice books from the early twentieth century. While one of the greatest strengths of *Fat* is its bold scope, it can occasionally be frustrating. The text moves quickly in order to cover so much ground, and so the documents that Forth highlights are often asked to stand in for decades, if not centuries, of thinking about fat.

In excavating this story of how we have come to modern stereotypes about fatness, the work still to be done is clear. Forth opens up the possibility for that future research with this fascinating and original take on the evolving meanings of fatness in European history that complicates both popular and historical assumptions.

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María Jesús Santesmases, *The Circulation of Penicillin in Spain: Health, Wealth and Authority* (Cham, Switzerland: Palgrave Macmillan, 2018), pp. xi + 239, €78, ebook, ISBN: 9783319697185.

María Jesús Santesmases' book proposes a fascinating journey in which she analyses the circulation of penicillin in Spain during the years of the Franco dictatorship and the transition to democracy. This circulation is understood as a transit of penicillin-related knowledge and practices across geographic, political, social, economic, cultural and gender permeable borders. The journey begins after the Civil War (1936–9), when Spain was mired in the worst years of the dictatorship, isolated internationally, and with a population hungry and beset by infectious diseases. The study ends in the years after the death of the dictator, when the country made its transition to democracy. In the forties, penicillin was the great hope with a huge symbolic burden. In the seventies and eighties, the main problem was the resistance to antibiotics that generated a series of regulations which had until then been postponed.

María Jesús Santesmases, a researcher at the Institute of Philosophy of the Higher Council for Scientific Research in Madrid, is especially well equipped to undertake this study. She has a deep knowledge of the current historiography of science. She is skilled in handling all types of sources: print, daily press, judicial archives, industry archives, private archives, oral and iconographic sources. She has years of research experience into the constitution of biomedicine, both internationally and in Spain. She has published extensively from a gender perspective. And last, but not least, her background in chemistry provides a nuanced understanding of the more technical aspects of antibiotics and of the process of constitution of cell and molecular biology.

The book is organised in eight chapters and some brief final reflections. The first chapter explores the political and material context of Spain during the forties under a harsh and bloody dictatorship and with an impoverished and vulnerable population. Drawing on the relevant historiography, it also summarises the first stages of the development of

penicillin at the international level, as well as the arrival in Spain of the first batches of the antibiotic.

The second chapter analyses Alexander Fleming's visit to Spain through the rich vein of material the author has uncovered in his papers and reports published in the Spanish press. Fleming arrived in Spain on 24 May 1948. During the nineteen days he was in the country he visited several cities and was honoured by the authorities as a hero. Fleming represented the great hopes that Spaniards placed in the antibiotic when the vast majority of the population still had no access to it. His visit represented a breach in the isolation of the country and his reception resonated with the prevailing national Catholicism. The public acclaim reflected the social practices promoted by the political regime and bordered on religious adulation.

The third chapter provides a detailed reconstruction of early negotiations on the building of two penicillin factories in Spain combined with a gender-focused approach to understanding the organisation of factory work. From my point of view, this last aspect is especially interesting. Using photographs published in the press, which paid great attention to the start of the national production of penicillin, the role assigned to women in such a process is studied in detail. It is a role consistent with some of the virtues that the regime exalted in women, but conflicts with the 'prescribed' confinement as wife and mother in the home.

The fourth chapter, focused on the 'Management of Scarcity and Trade of Penicillin as a Post-War Commodity', analyses smuggling. In a Spain undergoing food rationing until the early 1950s, the black market was tolerated and, at the same time, a source of wealth for people close to the regime. Penicillin, like other commodities, such as tobacco and nylon, was obtained by smuggling. Gradually this activity became less tolerated, and specialised courts were set up to prosecute cases. The author analyses personal memoirs and court archives, and provides fundamental clues to the understanding of the circulation of penicillin in the forties and fifties 'as both a border-crossing material and symbolic object, representing the ongoing therapeutic revolution' (p. 83).

The fifth chapter studies the screening programme in search of new antibiotics established by CEPA (Compañía Española de Penicilinas y Antibióticos – one of the factories established in Spain) and Merck in 1954. María Jesús Santasmases challenges here the usual assumption that science is 'created' in the laboratory and subsequently applied by industry, as demonstrated by the analysis of the CEPA's soil sample screening programme, which was carried out with a strict industrial logic. Furthermore, the participation of the US company Merck illustrates the circulation of knowledge and practices, including research material and microbiological methods.

The consequences of the isolation and identification of a new antibiotic (fosfomicina), as a result of the screening programme, is the topic of the sixth chapter. The author analyses the biological, medical and industrial elements that made the discovery of new antibiotics an agent in the era of biomedical research and offers a detailed description of the role of the research on antibiotics in the constitution of cell biology. The arguments in these sections are sometimes too technical to be followed by readers untrained in the biological sciences.

Although there was an awareness of antibiotic resistance from the beginning, as it became more important, so several European countries launched programmes to control prescriptions. Spain, however, did not join this trend until Franco's death. Previously, it was possible to acquire antibiotics without a prescription. This is the subject of the seventh chapter. In the discussion on the control of prescriptions it is clear that one

topic is absent in previous chapters: references to the role that the Compulsory Sickness Insurance (SOE), and later Social Security, played in the circulation of penicillin. The SOE was launched in 1944 by the Falange, the fascist party that supported the military uprising. Although until the late 1960s it did not cover a significant percentage of the Spanish population, the generous dispensing of prescriptions was an important part of its practice and a key element of the regime's propaganda. Antibiotics contributed to the uncontrollable pharmaceutical expenditure that the healthcare public system had to cope with, and it would have been interesting to read some reference to the prescription practices of the SOE.

The eighth chapter summarises the arguments developed throughout the book, highlighting the strength of circulation as an analytical key. The author convincingly argues that following a scientific object, in this case penicillin, it is possible to study a broad range of agents involved in the circulation of knowledge and practices. The journey of penicillin narrated by María Jesús Santesmases through geographic, political, social, economic cultural and gender events and across borders is not only of interest for the history of medicine and science, but also a privileged observatory for all scholars interested in Franco's Spain.

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Lucas Richert, *Strange Trips: Science, Culture and the Regulation of Drugs* (Montreal and Kingston: McGill-Queen's University Press, 2019), pp. xii + 247, \$34.95 CAD, paperback, ISBN: 978773556379.

What do painkillers, the bitter substance found in apricot pits, cannabis, LSD, diet pills and prescription medications have in common? This is not a trick question, but the central issue grappled with by Lucas Richert in *Strange Trips*. As Richert points out, many histories of drugs focus on a single substance. This can have the effect of reinforcing arbitrary distinctions between legal and illegal substances, between use and abuse, and between condoned and condemned. Such a picture is further complicated by change over time, with drugs oscillating within and outside seemingly fixed categories. LSD, for instance, began life as an experimental drug used in the treatment of mental illness during the 1950s, became a recreational drug of 'abuse' in the 1960s and 1970s, and is now returning to potential therapeutic use in patients with depression and anxiety, as well being taken in micro-doses by entrepreneurs in Silicon Valley to boost productivity. How can we account for this odd journey?

The 'career' of LSD is just one of a number of drug stories explored by Richert in this wide-ranging book. *Strange Trips* takes the reader on a voyage across time and space. Focusing primarily on the USA and Canada, Richert divides his narrative into three sections. The first concentrates on drugs in palliative care settings, especially end of life care. Here Richert attempts to explain why the use of heroin was eventually permitted in palliative care in Canada but prohibited in the US. He also looks at the dispute that surrounded Laetrile, or amygdalin, the substance found in apricot pits, which some patients (including the actor Steve McQueen) believed was an effective treatment for cancer. In part two, Richert turns his attention to what he calls 'hippy drugs', predominantly LSD and cannabis. Like LSD, cannabis has been on its own strange trip, especially in North