

## Book Reviews

phenomena. Only in mid-century did the situation improve; but it was not until the last twenty-five years of the nineteenth century that, having overcome the serious crisis facing it at all levels, the country was able to lay the bases that would allow it to renounce definitively a doctrinal physiology burdened by numerous ideological obstacles, and to enter fully, in the first third of the current century and with first rate figures, into laboratory research. In order to demonstrate this evolution the author uses different techniques, from bibliometric analysis and prosopography to the study of institutions and the textual analysis of handbooks. The result is an exhaustive study of Spanish physiology during the nineteenth century. He shows how a thorough and complete history of the medical and biological sciences in Europe requires contributions such as this, based not on the setting for the creation of the science, but rather on a country like Spain in which it was mainly consumed. This helps us to understand the assimilation and diffusion of ideas and scientific research and the complex processes of social acceptance and institutionalization of science in different social and historic frameworks.

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S. W. F. HOLLOWAY, *Royal Pharmaceutical Society of Great Britain 1841–1991: a political and social history*, London, The Pharmaceutical Press, 1991, pp. xvii, 440, illus., £35.00 (0–85369–244–0).

Pharmacists have suffered from a lack of historical attention by comparison with doctors. The expansion of research into the social history of medicine has seen increased attention paid to the organization and social composition of the medical profession, especially in the first half of the nineteenth century. The volume of this new work on doctors is considerably greater than the attention which has been paid to pharmacists and the rise of the pharmaceutical profession. Sydney Holloway has long been known for his almost single-handed work in this area. Now he has produced a history of the professional organization, the Pharmaceutical Society.

The publication was funded by the Society and is thus an “official history”, although, as Holloway points out, he was given complete freedom to publish as he saw fit. Lack of manuscript Society sources was a problem, but Holloway has, nevertheless, succeeded in putting together a lucid account, focusing primarily on the legislative milestones on the road to pharmaceutical professionalization. Jacob Bell, son of the Quaker founder of the pharmacist’s shop in Wigmore Street, had the vision of the establishment of pharmacy as a science and as a profession. Chemists and druggists, whose number increased markedly at the end of the eighteenth century, were considered part of the medical profession. Gradually, the professional pharmaceutical chemist became separated from doctors. This was achieved by a series of organizational and legislative changes—by the establishment of the Society itself in 1841 and its examining functions; by Pharmacy Acts of 1852 and 1868, which defined pharmaceutical chemists and their specific functions, in particular that of dispensing poisons; and by the 1858 Medical Act, which drew together physicians, surgeons and apothecaries, and demarcated them from the chemists and druggists.

The process of professionalization was not an easy one. The Society was beset by a rival organization, the United Society of Chemists and Druggists; and, even after the 1868 Act, the pharmaceutical ideal of an individual proprietor pharmacist was not easily established. Unqualified proprietors continued to sell patent preparations, chlorodyne in particular. The rise of the company chemists, led by the ex-medical botanist and unqualified Jesse Boot, threatened professional status. The 1908 Pharmacy Act brought compromise with the company chemists and strengthened the boundaries against unqualified practice. The 1911 National Health Insurance Act, passed after a complex struggle in which the insurance industry, doctors and pharmacists formed a temporary alliance against the threat of Friendly Society control, also achieved considerable gains. It recognized the principle that dispensing should be limited to pharmacists (although the effective separation of prescribing from dispensing came only with the NHS in 1948); and it enormously increased the volume of business.

## Book Reviews

The 1933 Pharmacy and Poisons Act gave the Society increased control over a wider membership; and established control by the Home Secretary of the scheduling of poisons. Holloway's coverage of the post-war period is less detailed, but, none the less, includes significant recent developments such as the Society's establishment of the College of Pharmacy Practice in 1981 and its continuing commitment to the education of pharmacists.

This is a fascinating history, which pays due attention to the significant role of women pharmacists (two of whom have been recently Presidents of the Society). It draws our attention to the social context of pharmacy while tracing its legislative history. Kate Arnold-Foster and Nigel Tallis have chosen illustrations which aptly underline the rise of the profession.

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ELIZABETH W. ETHERIDGE, *Sentinel for health: a history of the Centers for Disease Control*, Berkeley and Los Angeles, University of California Press, 1992, pp. xx, 414, illus., \$42.50 (0-520-07107-7).

This book is a magnificent demonstration of the contribution to the general history of a period that can be made by the in-depth history of a single social institution. The Centers for Disease Control, located in Atlanta, Georgia, is only one of many agencies within the United States Public Health Service, but the analysis of its background illuminates the entire public health movement in the United States over the last half-century. The author is a historian, rather than a public health specialist.

The 24 chapters present an extremely interesting account of the development of this organization from 1942 to the present. The early chapters explain the origin of the CDC in the wartime programme against malaria. This mosquito-borne disease had been endemic at a low level in the southeastern states, but there was fear that large movements of soldiers might cause it to flare up. The leadership and inspirational role of Dr Joseph W. Mountin is fully explained.

In the early 1950s, the scope of the CDC was broadened to encompass concern for other communicable diseases. The CDC saw its role as "epidemiological intelligence" for any infectious disease, especially if its identification was obscure. The CDC was supported by Congress particularly for work that might be necessitated by biological warfare.

When the Salk vaccine against poliomyelitis was discovered, the CDC played a major role in the evaluation of field trials. It acquired in the 1960s the USPHS branches responsible for tuberculosis control and venereal disease control. The Tuskegee experiment on untreated syphilis, however, gave a black mark to CDC for unethical epidemiological field research.

A major contribution of the CDC in the early 1960s was the development of an effective vaccine against measles. Widespread use of the vaccine brought down the incidence of this childhood infection dramatically. In the 1960s, also, the CDC extended its scope to international health. This meant assignment of staff to other countries, especially for malaria control. CDC was also responsible for procedures in U.S. spacecraft to prevent transmission to the earth of organisms from the moon or outer space.

The worldwide eradication of smallpox was an achievement of the World Health Organization, but the leadership of this vast programme came from the staff of the CDC, especially Dr D. A. Henderson. The repercussions of this triumph have elevated the status of public health throughout the world.

One débâcle of CDC concerned the threat of swine influenza in 1976. Since the virus had been the cause of the devastating pandemic of influenza in 1919-1920, there was reason to be extremely cautious. When no such virus disease occurred, CDC was criticized for the false alarm.

The last chapters of this book explain the work of CDC in the 1980s. There was further attention to childhood immunizations—both in the United States and Africa. Environmental health breakdowns, such as the Three-Mile Island nuclear accident in Pennsylvania or the contamination of water in Love Canal, New York, are reported. The identification of "toxic shock syndrome" in young women was another CDC accomplishment.