

usually servants, weavers, shopkeepers, craftsmen as well as members of the clergy. A third came from the city, a half from the rest of Tuscany. The length of stay averaged about twenty-one days. Temporary guests and impoverished aristocrats could use special chambers. As noted elsewhere, the hospital was being transformed into a house of recovery.

A final chapter discusses the 1515 “*ricettario*” or pharmacopoeia from the Santa Maria Nuova Hospital containing a collection of 1,000 recipes. Many of these simple and compound remedies were drawn from past and present medical authorities, going back to the time of Galen and Dioscorides. Others represented established folk practices, plants from the “kitchen medicine” familiar to patients. Arranged in numerous tables, they furnish a glimpse of institutional drug practices based on Galenic humoralism. However, they do not reveal much about dietary practices and physical approaches to treatment such as the ubiquitous bloodletting. Indeed, the entire subject of patients’ diseases, their symptoms, and medical decision-making remains cast in its original ambiguities.

In sum, Henderson has written an exceptionally detailed account of Florentine hospitals mostly centred on data available from the famed Santa Maria Nuova, an institution that served as a model for others long into the modern era. His command of primary sources is impressive, the text fluid and generously illustrated. Numerous tables allow the reader to appreciate and understand the information. An appendix lists all hospitals founded in Florence from the year 1000 to 1550. Sixty-three dense pages of notes and a bibliography of primary and secondary sources complete this extensive work. Scholars will now be forced to include hospitals among the salient components of the medical marketplace during the Renaissance.

Guenter B Risse,

University of California, San Francisco

Jonathan Simon, *Chemistry, pharmacy and revolution in France, 1777–1809*, Science, Technology and Culture, 1700–1945, Series, Aldershot, Ashgate, 2005, pp. vi, 189, £45.00 (hardback 0-7546-5044-8).

Jonathan Simon here has two objectives. He intends to show, first, how the history of pharmacy in this period improves our understanding of the history of chemistry and, second, what the relations were between the French and chemical revolutions. A curious passage at the end of the first chapter develops his determination to find a causal link between the two revolutions. Chronology forces him to give up on the chemical as a causative factor of the political revolution. Instead he considers that the French Revolution was a cause of the chemical revolution in that the institutional and educational innovations of the post-Thermidorean Convention and the Directory (1794–99) served to inculcate the new chemistry stemming from Antoine-Laurent Lavoisier.

As to his principal theme, in the seventeenth and early eighteenth centuries chemistry and pharmacy were so intermingled in practice as to be barely distinguishable. It would be impossible to say whether the likes of Nicolas Lémery (1645–1715) were apothecaries or chemists. The very question is meaningless. An excellent chapter traces the evolution of pharmacy from the guild of *apothicaires-épiciers* to the profession of pharmacist. Foundation of the Collège de Pharmacie in 1777 was an important way station in a process completed by creation of the École de Pharmacie in 1796.

Simon traces the gradual distancing of chemistry as science from pharmacy as practice in the successive instances of the courses of Guillaume-François Rouelle (1703–70), the articles on chemistry in the *Encyclopédie* by Gabriel-François Venel (1723–75), and the textbook and *Dictionnaire de chimie* by Pierre-Joseph Macquer (1718–84). The separation culminates in the absence of pharmacy in Lavoisier’s path-breaking *Traité élémentaire de chimie* (1789).

In Simon's view, the crux of Lavoisier's revolutionary transformation of the science consisted in the new chemical nomenclature and the exclusion of pharmacy from what he calls "philosophical chemistry" and others would call an experimental and theoretical science. Thereafter chemistry dignified pharmacy as the basis of its preparations but at the cost of its accepting inferior status.

Leaders of the profession willingly paid the price, if indeed they felt it to be one. The protagonist, if not quite the hero, of Simon's account of the inculcation of the new chemistry among pharmacists is Antoine-François de Fourcroy (1755–1809), a Lavoisier disciple whom some historians consider to have been a second-rate chemist, political turncoat, wily *piston* or climber, and able educator. Having won Bonaparte's confidence, he it was who as director-general of public instruction drafted the legislation that brought both medical and pharmacological education and practice under state control. For a time thereafter the French professions of medicine and pharmacy were two-tiered systems in which the élite consisted of graduates of the Schools of Medicine and Pharmacy respectively in major cities, while practitioners throughout the countryside learned on the job to treat patients or dispense medicines. The Director of the *École de Pharmacie* in Paris, and its greatest teacher, was Nicolas Vauquelin (1763–1829), a first-rate chemist and person of impeccable integrity. His and Fourcroy's researches into vegetable chemistry, as well as the latter's textbook, carried Lavoisier's approach into the beginnings of organic chemistry. The constant emphasis was that pharmacy was an art firmly based on chemistry.

The principal merit of Simon's book, and it is a great one, is to call attention to the importance and relative neglect of the history of pharmacy and to repair that neglect in considerable measure. I am not persuaded that his doing so has deepened my understanding of the history of chemistry. The close connection between pharmacy and chemistry

in the eighteenth century is scarcely news. Nor does it seem possible to accept the notion that the chemical revolution, and Lavoisier's principal part in it, consisted only of the new nomenclature and a divorce from pharmacy and that the oxygen theory of combustion and respiration, the postulate of conservation of matter, and the practice of strict gravimetric method played no fundamental roles. No one thought that at the time. Priestley and Kirwan did not. The old-line pharmacists such as Baumé did not feel excluded from chemistry. They just disagreed with the theory. Simon's own account of the teaching of Fourcroy and Vauquelin contradicts this aspect of his argument. They insisted on adoption of the oxygen theory as the basis of pharmacological chemistry and on gravimetric procedures. Nor is it clear that pharmacists felt themselves to be inferior. As will appear, Simon's exclusion of the oxygen theory from the chemical revolution is entailed by his considering that the development of scientific theories should be of little if any moment in the historiography of science.

As to the relation between the two revolutions, political and scientific, it seems a stretch beyond the breaking point to extend the French Revolution into the post-revolutionary period after 1794 in order to make it the political cause of institutionalizing the teaching and dissemination of a chemistry formulated fully by 1789. Be that as it may, our author's knowledge of the events affecting science and scientists is shaky. For example, the Faculty of Medicine was not suppressed in company with the *Académie des Sciences* and the other academies on 8 August 1793. Berthollet did not keep a low profile during the Terror. He was at the centre of weapons research attempting to develop a gunpowder more powerful than anything known by substituting potassium chlorate for potassium nitrate in its preparation. People are entitled to their opinions, but it seems to me absurd to say, even in passing, that Guyton de Morveau has "a legitimate claim" (p. 94) to be considered the first President of France—the proper title is President of the French

Republic—because he was the first head of the Committee of Public Safety, and this at a time when that body had assumed no governing, let alone sovereign, powers.

As to the history of pharmacy itself, its relation to chemistry is the principal subject. Still, I should have thought its relation to botany equally important in practice, and to mineralogy not without importance. It surprised me that Simon mentions these connections only in a sentence or two in his conclusion. I should also have thought the involvement with experimental physiology in the wake of Magendie's research programme to be as important as chemistry in the French practice of pharmacy in the nineteenth century. Simon mentions the names of Pelletier and Caventou once, but has nothing further to say along those lines. It may be consistent with his exclusion of theory and knowledge from the historiography of science that he also has nothing to say about what may have interested physicians and their patients most, and that is the efficacy of the medications dispensed in the eighteenth century.

For my taste the quality of Jonathan Simon's slim and interesting volume is marred by its occasionally polemical and dogmatic tone. Those who in the early years of the modern historiography of science did treat primarily the development of theories and growth of knowledge concerning the structure and forces of nature are charged with proceeding from preconceptions and writing with prejudice. Our author's approach is in the lineage stemming from Michel Foucault and the Edinburgh strong programme in sociology of science. He is among those who consider anthropology and sociology rather than philosophy and science as the disciplines with which to link arms in studying the history of science. To the charge of preconception and prejudice, the reply "*Tu quoque*" might occur to historians of science who consider that theory and knowledge of nature go hand in hand with the practice and context by and in which they are formulated and obtained. I shall resist that temptation and merely observe that it has occurred to me on several occasions

that one of the blessings of being a historian instead of a philosopher, a mathematician, or even a sociologist is that somehow our books tend to be better than our theories. The enduring value of a work of history may be what remains after the reader has discounted the author's argument.

In Jonathan Simon's case, a lot remains.

Charles C Gillispie,
Princeton University

Eric J Engstrom, *Clinical psychiatry in imperial Germany: a history of psychiatric practice*, Cornell Studies in the History of Psychiatry, Ithaca and London, Cornell University Press, 2004, pp. xii, 295, £29.95, \$49.95 (hardback 0-8014-4195-1).

Few topics have captured the scholarly imagination more than Germany's history in the modern era. Many historians marvel at how disparate regions in central Europe, known mostly for their ages-old distinctiveness, united in the course of the nineteenth century to become the continent's leading industrial, military, and diplomatic power. Germany's leadership in the arts, medicine, and science has also attracted considerable scholarly attention, and its achievements in the medical specialty of psychiatry were no less formidable. Seemingly out of nowhere German psychiatrists—notably the Munich clinician Emil Kraepelin—emerged by the end of the nineteenth century as the acknowledged experts on the diagnosis, treatment, and prevention of mental illness. Psychiatrists from around the industrializing world flocked to Heidelberg, Munich, Halle, Berlin and other locales to learn from German teachers how to interpret, cure, diagnose, and experiment on mental illness, and returned to their home countries bent on putting what they had learned into practice. By the beginning of the twentieth century Germany had replaced France as the unofficial headquarters of world psychiatry, having risen from backwater status to global leadership in the