reasons for the rise and decline of the spas in the first place. Neither does he adequately explore why Carratraca became one of the most important spas of the country, or why another one—Tolox—followed a very different developmental pattern, in that it began to take off at the beginning of the present century when the others were in definite decline. Moreover, although the book makes it clear that Málaga followed the more general European developments in the “history of waters and spas”, it would also have been interesting to see the spa placed within a broader medical context in Spain and to hear a bit more about the particular Spanish relationship between religion and science in the constitution of the healing powers of water.

All the same, this richly documented and carefully researched work is in many respects a plentiful source of information, particularly with regard to the local history of Málaga, the relationship between the infrastructure of the spas and the economic situation of the province, and the spas’ institutional history.

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Joseph Shatzmiller, Jews, medicine, and medieval society, Berkeley and London, University of California Press, 1995, pp. xi, 241, $40.00 (0-520-08059-9).

One of the neglected areas of medical history has been the study of medieval Jewish medicine, particularly in its social aspects. Joseph Shatzmiller takes advantage of the abundant information in the archives of southern France, northern Spain, and Italy, to paint a vivid picture of the position of Jewish doctors within society from 1200 to 1500 AD. He draws attention to an abundant literature in Hebrew, mainly versions of the standard university texts, and to interactions between various communities of scholars. There were successes—many rulers, ecclesiastical as well as secular, had their private Jewish physicians, despite repeated attempts to prevent such heathens from treating Christians—but there were also failures, and these might prove disastrous in a community officially on the margins of society. Shatzmiller is good on the massive differences between the leading physicians, like Moses of Rieti, who were allowed dispensations from the outward signs of Jewishness, and more humble practitioners, both male and female, for whom doctoring was only one source of a very meagre income. The polylingual abilities of leading Jewish doctors also enabled them to act as ambassadors, or spies, as well as translators, especially from Arabic.

But the significance of this book does not lie only in its focus on an often forgotten group. It offers many valuable observations on the whole sphere of medieval medicine, arguing, for instance, that in the thirteenth century in Southern Europe the ratio of healers to patients may have been as high as 1:750. Jewish doctors offered financial advantages to hard-pressed councils: as public physicians they could be paid at only a fraction the rate of their Christian counterparts, and they dare not complain too much, for fear of stirring up ever more hostility. Yet they continued to attract patients, and there is ample evidence that, at least at a local level, the sick cared little about the religion of their doctor or surgeon: competence took precedence over creed. But, equally, the process of medicalization, and the increasing university bias of the medical profession, tended to push the Jewish healers more and more towards the margins of medical society. In their golden age, in the early thirteenth century, Jewish healers read the same books, carried on the same practices, and treated the same patients. A century later, medicine was becoming defined as a university subject only, and those, like the Jews and women, who were excluded from the university, were, unless they had a particular protector, also excluded from practice among the urban elites. Jewish access to new texts may also have been restricted: few modern works were available in Hebrew translation after the 1320s. Whether prejudice also increased against Jews and Jewish practitioners is a more difficult question to answer, but some
of Shatzmiller's evidence points in that direction also. One might also add that the claims made at the end of the century for a new Greek-based medicine would have helped to speed up this process, for few Jews had the opportunity to learn Greek, and their preference for practical medicine in the Arabic tradition was easily dismissed as old-fashioned. In short, this is a fascinating little book, that opens up many new perspectives on medieval medicine.

Vivian Nutton, Wellcome Institute

Volker Hess, *Von der semiotischen zur diagnostischen Medizin: Die Entstehung der klinischen Methode zwischen 1750 und 1850*, Abhandlungen zur Geschichte der Medizin und der Naturwissenschaften, vol. 66, Husum, Matthiesen Verlag, 1993, pp. 346, DM 98.00 (3-7868-4066-0).

Following Erwin Ackerknecht and Michel Foucault, the development of the modern concept of diagnosis in the first half of the nineteenth century is usually linked with the rise of the Paris Medical School. Hospital medicine, pathological anatomy, localistic "surgical thinking", percussion, and auscultation are believed to have shaped diagnosis as a process of identifying circumscribed disease entities. This new way of perceiving illness replaced the traditional doctrines of symptoms and signs (semiotics) and the eighteenth-century nosological classifications built on them.

Hess looks into this shift from semiotics to diagnosis, asking how and why it occurred, especially in German medicine. In the first third of his study, he guides the reader through concepts of disease classification and semiotics from Thomas Sydenham's *Observationes medicae* (1676, German 1786), via Ernst Anton Nicolai's edition of Samuel Schaarshmidt's *Semiotic* (1756) and Hieronymus David Gaub's *Institutiones pathologiae medicinalis* (1758, German 1784), to Johann Georg Zimmermann's *Erfahrung in der Arzneykunst* (1763–64) and Philippe Pinel's *Nosographie philosophique* (1789, German 1829). Several efforts to transform traditional, rather schematic and prognosis orientated symptomatology are highlighted: Nicolai's attempt to provide a physiological foundation with Friedrich Hoffmann's iatromechanics; Zimmermann's concept of the medical "genius" who draws almost instinctively the right conclusions from his clinical observations; Pinel's "method of analysis" (based on Étienne de Condillac and Pierre Cabanis), which abstracted nosographic categories from the most frequent symptoms or combinations of symptoms.

However, Hess sees modern diagnosis coming only after a "radical change" in German medicine and science around 1800, to which he devotes the second third of his book. Such change was brought about, as he describes it, by Immanuel Kant's concept of scientific knowledge, the fight over, and partial adoption of, Brunonianism, by *Naturphilosophie*, and by the new comparative method in German natural history. John Brown's doctrine, argues Hess, was welcomed by many German physicians as a theoretical foundation of medicine that seemed to fulfil the Kantian demand for a scientific system. Building on the relevant studies by Nelly Tsouyopoulos, he analyses the nosology of Andreas Röschlaub, who was influenced both by Brown's system and the natural philosophy of Friedrich Wilhelm Schelling. An understanding of disease as an autonomous organic process, unfolding within the patient's body, is observed here. Röschlaub's nosology seemed to move away from classification towards a pathogenesis of disease. A pull again in the opposite direction (i.e. towards classifying diseases), suggests Hess, came with comparative natural history, for which he takes Karl Friedrich Kielmeyer as an example. The aim was now to discover real, "natural systems", which had their foundations in the laws of nature, rather than to set up classifications as didactic and practical aids.

A synthesis of these two divergent tendencies, and thus a concept of modern