This compact and lucid biography tells the story of the man subsequently known as the "Humboldt of the seventeenth century", on account of his extensive travels and contribution to the study of geography. If anyone deserves this accolade then it was certainly Engelbert Kaempfer (1651-1716), who made extensive notes and sketches of the topography, arts and manufactures of the countries of Asia, and particularly of Russia, Persia and Japan. But this label serves merely to highlight one facet of Kaempfer's remarkable, peripatetic career. Besides being a geographer, Kaempfer wrote extensively on the political and natural history of the countries he visited, as well as on the practice of medicine, in which he earned his living.

Kaempfer was born in the Westphalian town of Lemgo, the son of a Lutheran pastor, who encouraged him in the study of the humanities and natural history. After studying a range of subjects (including medicine) at the universities of Krakow, Königsberg and Uppsala, Kaempfer left the latter to find employment with a Swedish commercial legation bound for Russia and Persia. In Persia, Kaempfer left the legation and joined the Dutch East India Company, working for several years as a surgeon in the port of Hormuz. Brief sojourns in India and Batavia were followed by residence in Japan (1690-92), where Kaempfer was physician at the Dutch factory at Deshima. During this time, he collected notes for a political and natural history of Japan which was published posthumously from among his manuscript collection, purchased by Sir Hans Sloane. This work-translated into several languagesattracted a wide audience and established Kaempfer's place in the pantheon of travellers and natural historians.

By contrast, the works published during Kaempfer's lifetime seem to have made little impact. Yet it is perhaps these very works—his Leiden doctoral dissertation (published 1694) and his *Amoenitatum exoticarum politicophysico-medicarum fasiculi* (1712)—which are likely to interest modern scholars, in that they contain Kaempfer's sympathetic descriptions of Japanese medicine, particularly the practices of acupuncture and moxibustion. The Japanese were just as eager to learn of the latest developments in European medicine. Indeed, the experiences of Kaempfer, and of contemporaries such as François Bernier in India, show that medicine provided one of the most important cultural bridges between the cultures of Asia and Europe—the significance of which we are only just beginning to realize.

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Francis Maddison and Emilie Savage-Smith, Science, tools and magic, Part One. Body and spirit, mapping the universe; Emilie Savage-Smith with contributions from Ralph Pinder-Wilson and Tim Stanley, Part Two. Mundane worlds, The Nasser D Khalili Collection of Islamic Art, vol. 12, London, The Nour Foundation in association with Azimuth Editions and Oxford University Press, 1997, pp. 439, illus., £185.00 (0-19-7276105).

This volume both illustrates splendidly items in a magnificent collection of Islamic art and provides the highest level of scholarly commentary on these items. The Nasser D Khalili Collection of Islamic Art "documents", as its owner states in the Foreword, "the artistic achievements of the Islamic world". This two-part volume stands apart in being devoted to items which, though often incidentally beautiful and well-crafted, are primarily functional, and documents the high achievements in science and technology of that world. The aim is not to indicate (as is often done) how the Islamic world contributed to Western European culture, but rather to place the objects within a specifically Islamic society-a society in which (in common with contemporary European culture) magic and science commingled. The subjects covered include anatomy, medicine (materia medica, general medicine, surgery and prophetic medicine), cupping glasses, alchemical equipment, magic-medicinal bowls (including porcelain examples made in China with Arabic

inscriptions, apparently for Muslim communities in South-East Asia and India), magic squares, talismanic charts, shirts and mirrors, geomancy, celestial globes, astrolabes, quadrants, qibla indicators, maps, mortars and pestles, beekeeping equipment, and locks. For each subject a potted history, with the latest bibliography, is given, and the reader may, incidentally, learn how to calculate the time by using either a celestial globe or an astrolabe.

Of the principal authors, Francis Maddison has written on the astrolabes, and Emilie Savage-Smith has dealt with most of the other material, while important contributions have been made by Ralph Pinder-Wilson (on stone press-moulds and leatherworking in Khurasan) and Tim Stanley (on locks, padlocks and tools). Several topics impinge directly or indirectly on medical history. The collection includes examples of the "five picture" series of illustrations of human anatomy, depictions of Caesarean sections, an illustrated herbal, and medical encyclopedias on the one hand, and mortars and the little cups with curving spouts whose use is uncertain but most likely medical, on the other. However, the alchemical equipment and the various kinds of talismanic objects also have medical uses. The most intriguing of these are the magic-medicinal bowls which are represented in the Khalili Collection by specimens dating from the late eighth to the early nineteenth century. These are predominantly metal bowls (the Chinese porcelain examples excepted) with inscriptions, magical symbols and sometimes figures written on the inside and outside. An early specimen in the collection was made for the famous opponent of the Christian crusaders, Nur al-Din ibn Zangi (who ruled Damascus from 1146 to 1174). The purpose of this cup is stated in an inscription on the outside: "This blessed cup is for every poison. In it have been gathered proven uses, and these are for the sting of serpent, scorpion and fever, for a woman in labour, the abdominal pain of a horse caused by eating earth, the bite of a rabid dog, for abdominal pain and colic, for migraine and throbbing pain, for hepatic and splenic fever, for increasing strength, for stopping

haemorrhage, for chest pain, for the evil eye, for ophthalmia and catarrh, for driving out spirits and releasing the bewitched, and for all diseases and afflictions. If one drinks water or oil or milk from it, then one will be cured, by the help of God Almighty" (p. 82).

One thing the authors (and the examples) bring out is the mismatch between objects and the surviving theoretical works. There are almost no references to magical bowls in the medical and magical literature of the time. The inscriptions on the talismanic objects are almost entirely from the Koran (a useful list of the verses quoted is given on pp. 61-2), and there is virtually no trace of the demons and spirits whose harnassing for magical ends is described in contemporary Hermetic literature (see p. 133). The common denominator between Hermetic demonic magic (the contents of which were virtually the same in medieval Greek, Arabic, Hebrew and Latin texts) and the artefacts described here is the magic squares, featuring numbers or letters of the alphabet set out in either mathematical or mysterious orders, of which there are abundant examples here.

It would seem ungracious to point out the deficiencies in a publication on which such care has been lavished. I should only like to mention an error of fact: that the Planisphere of Ptolemy does survive in Arabic manuscripts (and not only in a Latin translation, see p. 208), and has been edited by C Anagnostakis in a doctoral dissertation (Yale University, 1984). Also, it is misleading for Arabic names beginning with the definite article "al-" to be indexed under "A" rather than the first letter of the proper name following the definite article, which is the usual practice, and it seems slightly odd that, while Arabic words (e.g., as technical terms or in book titles) are transcribed precisely, with dots under consonants and macrons on vowels where required, Arabic proper names are not given this attention.

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