from the outside into the healthy flesh. Their penetrative power varies in proportion to their spirituality and subtility. It is lowest in the heavy passive Galenic materia peccans, i.e. the humoral residues. These outside objects have each also their own Archeus or organizing principle. The Archeus of the object represents the object in its "middle life", a Paracelsian term denoting a state of reduced vitality. In this state the Archeus of the object cannot be assimilated and thus neutralized by the Archeus of the host who is forced to conceive the morbid seed containing the idea or image of the disease. As seeds elsewhere in nature, the morbid seed soon gains independence of its begetter. It is externalized and becomes parasitic and forces its own life schedule on the autosite Archeus of the patient or host and thus destroys his organism unless the host's Archeus wins in the dialogue between the two Archei in which case the patient recovers. The disease-plan of action becomes reality ("flesh") from being first an idea. This is a Platonic view indicating the conversion of the spiritual into material effects. There are, then, as many diseases as there are morbid ideas, Entia morborum. This is Van Helmont's ontological parasitist concept of disease. Diseases vary with the specific images conceived and the plans of action thus imposed. They do not vary with individual reactivity as such; what varies is not the subject, the patient but the object, the disease. In content as well as terminology this ontological concept closely follows Paracelsus, for instance with regard to the view of disease as being basically spiritual, the seeds and Entia morborum, seminal analogies, foreignness of the Ens, the Magnum Oportet or inability to absorb completely what comes from the outside, the Spinae infixae, the Middle Life and Corpus, Tartar, Imago and Idea, the relationship of passion, fury and disease, the conversion of imagination and passion into corporeal effects, and much else.

We understand that this ontological concept of disease will be the subject of a comprehensive paper by one of the editors of the book under review, Walter Pagel, in the Bulletin of the History of Medicine, (in press). In this article at the back of volume two, which deals with Van Helmont's position in the history of science, medicine and philosophy the emphasis is laid not so much on the history of diseases, but on Van Helmont's discovery of gas acid gastric digestion. In both these points the same principle of conversion of spirit into body is recognizable. The extensive bibliography of the works of J. B. Van Helmont by Walter Pagel and those of Knorr von Rosenroth by Friedhelm Kemp will be found useful.

Book Notices

Bibliography of the history of medicine 1964–1969, Bethesda, Md., National Library of Medicine, 1972, pp. vi, 1475, \$12.00.

This volume is the first of the proposed five-yearly cumulations of the annual bibliographies on the history of medicine produced by the National Library of Medicine. It includes several thousand additional articles and monographs covering the year 1968–1969. The arrangement is by person, subject and author, as previously, and the work should prove a quick and useful key to recent references in this field.

An illustrated history of brain function, by EDWIN CLARKE and KENNETH DEWHURST, Oxford, Sandford Publications, 1972, pp. 154, illus., £5.50.

Once again neurologists and neuroscientists are indebted to Edwin Clarke for an illuminating exposition of the historical background to their working knowledge. Whereas Clarke-O'Malley took classic writings in brain research as its starting point, Clarke-Dewhurst presents the conceptual development of brain anatomy and physiology through 158 historical illustrations, spanning two millennia, and a related commentary. The illustrations, some well known and others obscure (but all fascinating), range from products of Hellenic Alexandrian thought to a contemporary psychologist's sketches and a brain scan. They emphasize, if nothing else, the recurrence of errors based on prejudice rather than observation, and, conversely, the role of careful observation in adumbrating advances. In illustrating the common stem-knowledge of what are today several distinct clinical and scientific disciplines, this book is of great value: for today different groups of workers—all in the broad field of neurosciences—no longer share a common language, and there is a real need to integrate disciplines which not so long ago were being enthusiastically separated.

Changing perspectives in the history of science. Essays in honour of Joseph Needham, ed. by Mikuláš Teich and Robert Young, London, Heinemann, 1973, pp. xxi, 490, illus., £6.50.

Dr. Joseph Needham's contributions to the history of science, medicine and technology have been multitudinous and outstanding. Fortunately, they continue to appear, and in addition they have inspired this *Festschrift* to commemorate his seventieth birthday. Another of its purposes is to present examples of new approaches to scientific historiography, thus further honouring Dr. Needham, who himself has been a leader in extending the scope and depth of historical studies.

There are twenty essays and, as would be expected, a number deal with oriental science and technology, and with the vital problems of communication between communities. Alchemy and chemistry of the Western Renaissance and Scientific Revolution are dealt with, including current reasons for studying them, together with other aspects of the 17th century and with the Industrial Revolution. The need for collaboration between historians, philosophers and sociologists of science, economic historians and other specialists in the vast field of the history of science and its many contacts with related or juxtaposed disciplines and problems, is seen as one of the important modern methods of looking at the science and technology of the past in all its complexities, both internal and external.

Each essay is a significant and original offering and together they convey, as the blurb states, "... a rich and complex set of interrelated perspectives which in a sense defy categorization and thus point the way toward a study of science and its history in the totality of their relations". Unlike most *Festschriften* this volume is, therefore, not just a collection of isolated and disparate tributes, but it also has a collective message for all those involved with the history of science and with its sister discipline, the history of medicine. Dr. Joseph Needham could not have been honoured in a more appropriate fashion.

American physicians in the nineteenth century. From sects to science, by WILLIAM G. ROTHSTEIN, Baltimore/London, The Johns Hopkins University Press, 1972, pp. xv, 362, £6.75.

The author is a sociologist and he surveys in particular the inter-action of orthodox practitioners and those purveying fringe medicine, such as the homeopaths, the Thomsonians and the eclectics. He also discusses the development of medical societies, licensing, education and ethics, and he shows that the emergence of medicine as a science dispelled most of the sects. A great deal of valuable material has been assembled and that from the sociological literature will be most useful.

Unfortunately the book is pervaded with Whig history. The retrospective judgments such as the castigation of nineteenth-century physicians on account of their shortcomings as assessed by present-day knowledge and standards are grave defects. To evaluate the past in the light of the present is a most unhistorical approach. Moreover, the author's preconceptions and his deficiencies in medicine and medical history are often apparent.

Nevertheless, if one is aware of these limitations, Rothstein's book is a useful source of information on the social history of medicine, and it throws light on important areas which are in need of further study.

All heal: medical and social miscellany, ed. by R. M. Shaw et al., London, Heinemann Medical Books, for the Royal Society of Medicine, 1971, pp. viii, 224, £2.10.

The subheading of this work is "a collection of lectures of general interest to the general reader given at the Royal Society of Medicine". Such a claim is daunting. Collections of lectures, addresses, reports of symposia and of working parties make up a kind of publishing which is becoming more and more fashionable; maybe it is profitable—To the publisher? Perhaps. To the reader? Sometimes. To the contributors? Yes, and satisfying. It is against the claims of this subheading and in the context of present publishing trends that this volume must be judged. In making their selection the editors were fortunate in having a mass of material from which to choose. They confined their choice to the last ten years, but even so the wealth of papers that have emanated from No. 1 Wimpole Street in that time has been great. There was no need and no place for make-weights here. They have succeeded, and most readers, whatever their interests, will profit from the perusal of nearly all of these addresses. Most of them reflect today's thinking—history in the making—some, by the doyens of the profession, retrospect on the last fifty years; one or two are of great interest to the historian. Sir Francis Walshe, looking back from 1961, studies the changes that have occurred in the vocation of the hospital teaching physician, reminding us of the new entities of disease that have been described, and the new paths trod by the modern teacher. He doubts the value of many of the symposia that have to be attended and coins the term "wandering symposiast" for the devotee of this discipline.

Lord Snow in comparing the status of doctors with that of engineers goes on record as having, when he was a tutor at Cambridge, "loved the medical students for whom he was responsible". A delightful address on the "fruits of error and false assumption" by Lord Cohen of Birkenhead is introduced with a beautifully clear account of the inductive philosophy of Francis Bacon. He does not mention Roger

Bacon and his "Errors of physicians" but gives descriptions of those discoveries which were the result of chance observation or "serendipidity". Papers of historical interest deal with Moorfields and British ophthalmology (Sir Stewart Duke-Elder), Frank Buckland (William E. Snell), Charcot, Dejerine and Babinski (Henry Miller), the illness of Toulouse-Lautrec (Terence Cawthorne), and Florence Nightingale (G. E. W. Wolstenholme). Thoughtful papers on ethical problems, so much under discussion at the present time, are the "Sancity of life" (Prof. David Daube), the "British penal system" (Baroness Wooton of Abinger), the "Control of drugs and therapeutic freedom" (Sir Derrick Dunlop), and Lord Justice Edmond Davies takes a legal look at transplants. Sir John Wolfenden and Lord James of Rusholme discuss aspects of education.

The republication of these papers in one volume is entirely justified by the importance of the material.

Orthopaedic surgery in the Zone of Interior, Frederick, Md., Department of the Army, 1973, pp. xl, 1099, illus., [no price stated].

This large volume, subdivided into eight sections, is a goldmine of surgical orthopaedic history. On account of its weight it is in danger of being left unread. The index of eighty pages along with the thirty pages of contents makes it possible to find the surgical gold, obscured by masses of figures, surgeons' names and records. It would be twice as valuable if reduced to half its size.

The illustrations and X-rays are clear and instructive. The tables are helpful. It is a very comprehensive and honest record of what actually took place in the management of orthopaedic casualties in war from all theatres. Errors in judgment and mistakes in practice have been truly recorded as lessons not to be repeated. Historical material is provided as a sound basis for orthopaedic planning in future hostilities.

Many experienced civilian surgeons have little idea of the crucial basic differences in surgical pathology and surgical management between everyday injuries and wounds inflicted by civilian traffic accidents and those sustained in war from high velocity missiles and complicated by blast. This is an excellent reference book of reliable information for the preparation of a concise memorandum of instruction to prepare all trained and experienced civilian surgeons for duties in war.

The final state of certain casualties showed clearly what treatment should be avoided during initial treatment at the time of injury with the likelihood of delay and prolonged evacuation in adverse conditions. The need to reject potential soldiers with apparently remedial disabilities of the lower limbs is wisely stressed once again.

The Medical Society of Copenhagen 1772-1972, by J. Genner (Acta Historica Scientiarum Naturalium et Medicinalium, Vol. 27), Odense University Press, 1972, pp. 345, illus., Dan. kr.60.

The Medical Society of London 1773-1973, ed. by Thomas Hunt, London, The Medical Society of London (Heinemann Medical Books), 1973, pp. xviii, 141, illus., £2.50.

In the last thirty years of the eighteenth century communication between members of the medical profession was facilitated by the foundation of about fifty medical

societies throughout the world. Among them was the Københavnske Mediciniske Selskab in 1772 and the Medical Society of London in 1773. Each has preserved more or less its original form and purposes and now they each celebrate their bicentenary with a commemorative volume. The differences between the two books are considerable.

J. Genner, a young Danish historian of medicine, has compiled a history of the Copenhagen Society and provides not only an excellent survey of its evolution, but in addition an important addition to the historiography of Danish medicine. He provides information on comparable and contemporary events in other countries and so avoids the tiresome parochialism so characteristic of exercises of this nature. His data is almost exclusively from the records of the society, many of which previously have been only in manuscript. Dr. Genner wisely avoids detailed biographical accounts of the more outstanding members of the society, there being other readily available sources for these. Documentation is good and name and subject indexes are adequate. The translation is, on the whole, commendable, although there are a few errors here and there. This book can be recommended as a praiseworthy contribution to the history of medical communication and one that authors accepting a similar challenge would do well to peruse.

The Medical Society of London 1773-1973 is in a different vein. For, on the whole, it is more biographical and parochial. Chapters deal with the society's founder, John Coakley Lettsom (1744-1815), and its medical background, its influence on medicine and the community, some of its presidents and orators, its Library, Transactions, finances, and future. The chapters are uneven in quality and when we read that "There is no doubt that the French Revolution brought the pre-eminence of French medicine to an end . . ." when, in fact, the reverse was the case, our confidence in the essayist as an historian falters. There are only a few references and a lot of the material is very well known. However, it is a pleasant little book well printed and nicely illustrated, which commemorates a distinguished and renowned society, whose first law was ". . . the Advancement of the Science of Medicine and Surgery Exclusively". Two hundred years later this is still its praiseworthy, primary objective.

BOOKS ALSO RECEIVED

(The inclusion of a title in this list does not preclude the possibility of subsequent review.)

Bibliography of the history of medicine, no. 7, 1971, Bethesda, Md., National Library of Medicine, 1974, pp. 263, [no price stated].

COMENGE Y FERRER, L., La medicina en el reino de Aragón (siglo XIV), Universidad de Vallodolid, Seminario de Historia de la Medicina (Acta Historico-Medica Vallisoletana, no. 3), 1974, pp. 91, illus., [no price stated].

GERSTNER, P. A., The care and exhibition of medical history museum objects, Cleveland, Ohio, Howard Dittrick Museum of Historical Medicine (Health Sciences Information Series, vol. 1, no. 6), 1974, pp. ix, 47, \$1.75.

Köhl, M., The morality of killing. Sanctity of life, abortion, and euthanasia, London, Peter Owen, 1974, pp. xiv, 112, £3.25.