

## Book Reviews

JUAN A. DEL REGATO, *Radiological physicists*, New York, American Institute of Physics for the American Association of Physicists in Medicine, 1985, 4to, pp. v, 188, illus., \$25.00.

Radiology provided perhaps the main route by which physicists entered medicine in the period leading up to the Second World War. Among other things, they were needed to develop and service X-ray and radium equipment; to develop means of protecting operators and patients from the deleterious effects of radiation; and to standardize and measure the physical conditions associated with irradiation (intensity, dose, wavelength, and so on). In addition, under the heading of "medical" research, they also carried out work in radiobiology, and undertook fundamental studies into the nature of radiations and of matter. In recognition of this there exist biographies of many of the major physicists associated with radiation studies.

Del Regato has brought together summary biographies of ten of the best-known radiation physicists—Röntgen, Curie, Planck, Rutherford, W.H. Bragg, Duane, Bohr, Joliot, Compton, and Fermi. Each biography was previously published separately in the *International Journal of Radiation Oncology, Biology, Physics*. In addition, the book also includes some biographical notes on some of their associates and families. There is little in these biographies that will not already be known to historians interested in the area. However, the book itself is well produced, and will probably find an audience among professional physicists with an interest in the history of their field.

David Cantor  
Wellcome Institute

A. Z. ISKANDAR, *A descriptive list of Arabic manuscripts on medicine and science at the University of California, Los Angeles*, Leiden, Brill, 1984, 8vo, pp. xiv, 119 illus., DF1.48.00.

The University of California at Los Angeles possesses an important collection of more than 5,000 Islamic manuscripts in Arabic, Persian, and Turkish. As part of the University's continuing effort to catalogue these materials, Dr Albert Zaki Iskandar has selected 122 MSS, representing 262 works and fragments, and has organized them into a new and separate corpus entitled the Arabic Medical/Scientific Collection. His handlist for this collection consists of an alphabetical listing (by book title) of the MSS, each entry specifying title and author (if known) and giving a detailed description of the MS. In addition to the alphabetical list, Iskandar provides a long introduction in which he discusses the most important works in detail. He also includes indexes of manuscripts, authors, copyists, former owners, and places, a special index to the introduction, thirty plates illustrating the most significant MSS, and an important list (pp. 31–33) of medical figures, many of them otherwise unknown, whose names appear in the UCLA medical MSS.

This collection is without doubt one of considerable importance. MS. Ar. 90 is a practically complete early Ottoman exemplar of the rare Arabic translation of Galen's *On anatomical procedures*. Ḥunayn ibn Ishāq's *Fī awjā' al-ma'ida*, previously known only from a single MS in the Escorial, is preserved in MS. 98.i. This MS, Iskander notes, fills in gaps in the Escorial text; and the work itself, on stomach ailments, provides unexpected and important insights into Ḥunayn's scholarship, his medical knowledge, and his attitude toward Galen and his use of works attributed to him. The oldest MS, Ar. 107, dated 436/1044–45, represents a large part of Book II of al-Majūsī's *Kāmil al-ṣinā' a al-ṭibbīya*. Ar. 80, dated 640/1242, is the earliest known copy of the *Sharḥ tashrīḥ al-qānūn* of Ibn al-Nafīs, who died forty-six years after this exemplar was written. A new work on syphilis, the *Al-Ḥabb al-afranjī* by an unknown Ottoman author, is preserved in Ar. 122.v. In the sciences, there are important texts of al-Marwazī's *Ṭabā'i' al-ḥayawān* (Ar. 52), al-Qazwīnī's *'Ajā'ib al-makhlūqāt* (Ar. 28), and al-Damīrī's *Ḥayāt al-ḥayawān* (Ar. 25.i). To these examples many others could be added.

Iskandar's handlist will prove to be a valuable aid to researchers wishing to familiarize themselves with this new collection. His work does, however, pose a number of problems, the most immediate relating to access and provenance. The Arabic Medical/Scientific Collection was assembled by him by withdrawing MSS from a number of distinct Islamic collections (there are fifteen at UCLA) already stored separately according to the accession number of the

particular collection in question. To gain access to a work in Iskandar's handlist, one must know that the accession number of this collection is 1062; without this, a requested MS number has no frame of reference, raising the possibility of confusion, error, and annoying delays in the retrieval or copying of desired MSS. Concerning a related question, Iskandar wonders (pp. vii, viii) at the recent provenance of the MSS from which he assembled the Arabic Medical/Scientific Collection. But if this question was problematic previously, it may now be beyond solution since he nowhere indicates the original collections from which he removed the various works he used. This raises the prospect of considerable confusion as these other collections are catalogued.

These are potential vexations, but minor problems. Others are more serious. First, it is difficult to perceive the criteria according to which Iskandar included certain texts in this medical/scientific collection. Ar. 5 (p. 83) is the disputed *'Umdat al-kuttāb*; this work is on penmanship and would seem out of place in this collection. Other works have some arguably medical and scientific content, but deal with their subjects from a perspective which is not that of medicine or the sciences. Al-Nawāji's *Ḥalbat al-kumayt* (Ar. 112, p. 44), for example, is a literary anthology consisting largely of verse about wine, with commentary, by such poets as Abū Nuwās, Ibn al-Mu'tazz, and Ibn Nubāta.

Second, although it is nowhere claimed that this new collection includes all of the Arabic medical and scientific MSS at UCLA, this is what one would expect from such an enterprise, especially since Nancy E. Gallagher's *Arabic manuscripts at the University of California, Los Angeles*\* had already provided a brief provisional guide to the University's Arabic medical holdings, and since an ambitious (772-page) guide to the UCLA manuscripts formerly in the possession of Caro Minasian was available in a recent volume of the University of Tehran catalogue series, edited by Muḥammad Taqī Dānishpazhūh and Ismā'īl Ḥākīmī (Tehran, 1983). However, Iskandar's descriptive list proves to be incomplete. A number of medical works, including several copies of Ibn Sīnā's *Al-Shifā'*, have been left out; and it might also be noted that this handlist omits from consideration all of the UCLA Arabic MSS on geomancy. The scientific interest of these texts has recently been exploited by Emilie Savage-Smith and Marion B. Smith in their *Islamic geomancy and a thirteenth-century divinatory device* (Malibu, 1983); and as UCLA holds a large number of such texts, their absence here is regrettable. It could, of course, be argued that geomancy is not "scientific"; but it is surely no less so than dream interpretation, ritual impurity, and the merits of the rooster, all subjects of MSS included in this handlist.

Third, it would seem reasonable to expect that any MS deemed suitable for transfer into the newly formed Arabic Medical/Scientific Collection should subsequently receive an appropriate entry in this handlist. But in numerous cases, Iskandar, having made such a transfer, has then ignored the work in his alphabetical list. In some instances, the uncatalogued texts are from composite volumes and are not medical or scientific, or are written in Persian or Turkish. But this is not always the case. In some instances, it is Arabic medical and scientific texts, often fragmentary or problematic items, that are neglected (see, for example, Ar. 4.ii, 7.ii, 9.ii, 22.i, 29.ii, 29.v, 45.ii, 60.ii, 73.i, 78.ii, 78.viii, 79.ii, 79.iii, 79.vi, 91.i, 96.iii, 98.viii, 98.ix, 98.x, 119.ii, 119.iii, 121.iii, 122.iv, 122.vi, 122.vi, 122.vii, in the Index of Manuscripts). Elsewhere, as for Ar. 115 (p. 102), we are given a general idea of what is in the middle of a composite volume, but not of what is at the beginning or end. And at least eight MSS (Ar. 21, 53, 56, 57, 89, 115, 116, 120) have been incorporated into the Arabic Medical/Scientific Collection, but then have been completely ignored in the alphabetical handlist. If there is nowhere in a MS anything medical or scientific worth cataloguing, why remove that MS from its original collection and include it in a medical-scientific corpus in the first place? This sort of treatment is a serious problem. Lack of an entry in the alphabetical entry section (pp. 35–85), where interested researchers will expect to find it, implies that the collection contains no copies, or fewer copies, of a work which in fact may be well represented. Such MSS may be condemned to indefinite obscurity. Ar. 57, for example, is dismissed in the Index of Manuscripts (p. 99) as neither used nor identified: though lacking a

\*Nancy Elizabeth Gallagher, *Arabic manuscripts in the Research Library, University of California (Los Angeles)*, Malibu, Undena Publications, 1983, 8vo, pp. xiii, 24, illus., [no price stated] (paperback).

title-page and the opening passages of the text, it proves to be an exemplar of al-Samarqandī's *Al-Asbāb wa-l-'alāmāt* copied in 1099/1687. As other copies of this work and of al-Kirmānī's commentary upon it are described in the alphabetical list (Ar. 45, 46, 62, 67, 84, 106.i, 106.ii, 106.iii, 111; pp. 38, 71-72), this one too should have been included. Ar. 120, also marked as neither used nor identified, comprises eight different essays in different hands on different types of paper of different sizes from different periods, some in Arabic and some in Persian, on a variety of topics. All this is surely worth noting; and it is difficult to see why the last item, a fragment on medical plants (and in Arabic) has not received a proper entry.

Finally, the entries for MSS that are catalogued pose certain difficulties. The researcher is not provided with the *incipit* or *explicit* for the listed texts. Iskandar recognizes that this information is most useful and desirable, but explains that high printing costs prevented him from including it (p. vii; see also pp. 1-5 for samples of entries as the author originally hoped to prepare them). Be that as it may, earlier cataloguing efforts had already provided a provisional description of the UCLA Arabic medical MSS. Hence, further coverage of the same ground really should have been more complete.

In lieu of citations of *incipit* and *explicit*, the compiler states, he will provide detailed descriptions of the MSS. These are, of course different kinds of information, and one does not replace the other. In any case, spot checks here and there again reveal difficulties. In the detailed entry on the *Ḥalbat al-kumayt*, for example, one is advised that the text bears catchwords; but nothing is said about the far more important fact that these catchwords are sometimes wrong, or that the text as presently bound and foliated is in several places discontinuous. The marginalia are not "few", but numerous, and include (fol. 151r) an interesting multicoloured and labelled mechanical diagram. The owners' entries at the beginning of the text are noted and identified, while nothing is said of the mass of information at fols. 49r-50v, where two pages originally left blank have been filled with later owners' entries, diagrams, comments, and so forth. On a relatively minor but potentially confusing point of detail, the use of the term "receipt" in the sense of "recipe" (Ar. 73.ii, 79.ii, 115, in the Index of Manuscripts, and elsewhere) is an archaism that many even well-informed readers may fail to comprehend.

In sum, much scholarly work has undoubtedly been devoted to this handlist, the publication of which renders a major corpus of Arabic medical and scientific MSS more readily accessible. Nevertheless, it seems fairly clear that what has been published is an unfinished project in which much remained to be completed, reviewed, and rechecked. Given the importance of the UCLA collection, the problems occasioned by premature publication are all the more unfortunate.

Lawrence I. Conrad  
Wellcome Institute

BEAT RÜTTIMANN, *Wilhelm Schulthess (1855–1917) und die Schweizer Orthopädie seiner Zeit*, Zurich, Schulthess Polygraphischer Verlag, 1983, 8vo, pp. xv, 272, illus. SFr.88.00.

This beautifully produced volume, with its nearly two dozen plates, is a model of medical hagiography. Written by the Chief Doctor of the Balgrist branch of the Schulthess Orthopaedic Institute, published by the Schulthess press, and printed at the Schulthess printing works, it pays homage to a minor figure on the orthopaedic stage at the turn of this century. Indeed, one suspects that Wilhelm Schulthess would long since have been forgotten had it not been for the success of the private clinic that he and the surgeon August Lüning founded in Zurich in 1883. As it is, his name endures inside his homeland partly because he was a member of one of Switzerland's most wealthy and influential families, and because his younger brother was to become the President of the Federal Republic.

Schulthess was essentially a paediatrician at a time when some of the most exciting work in that field was being conducted in the area of orthopaedics. After training at the Children's Hospital in Zurich and conducting a study tour of the major German medical centres, he completed his dissertation in 1882, shortly before joining forces with Lüning (1852–1925) - described here as "the father" of orthopaedic operations. Schulthess's reputation was based