Sciences, Médecine, Pharmacie de la Révolution à l'Empire (1789-1815), by PIERRE HUARD, with the collaboration of M. D. Grmek, Paris, Roger Dacosta, 1970, pp. 379, 154 plates (17 coloured), 130 NF.

The French Revolution and the Napoleonic period that immediately followed it is the great watershed of modern history. To it may be traced not only many of the sweeping political and social changes of modern times but also many important developments in science and medicine. As Professor Shryock has said, Paris at that time was the scientific capital of the world, with regard to both ideas and technique. For decades philosophers and reformers had been investigating and reporting on the long-standing social evils of the old régime and formulating schemes of reform of scientific and medical education and of medical care. The revolutionaries brought these idealistic and often romantic plans from the pigeon holes where they were gathering dust and applied all their enthusiasm to their implementation. There were to be no more poor, no more charity, no more hospitals. Health was man's birthright and as the new society was developing under the serene light of the revolution man would regain his pristine health and the need for doctors would gradually wither away.

By 1797 the utopian character of this ideology was apparent to all by its failure and in that year began the enforcement of new laws which gradually re-established the main structure of the old régime, purged of many of its evils. Embodied in the Code Napoléon it remained the basis of the outstanding achievements of French science and medicine in the first half of the nineteenth century. In his history of this critical period, Professor Huard has a vast field to cover, for he cannot omit the veritable galaxy of stars who appeared in these decades, from Lavoisier at the beginning, including Bichat, Larrey and Corvisart, to Laënnec at the end. His decision to refer only briefly to the biographies of these well-known men in order to give adequate space to a crowd of secondary but significant figures whose careers are little known, even in France, was a wise one, for it has restored the balance which is inevitably distorted when only the leaders are given the whole stage to themselves. The text is well planned to cover systematically the general and special subject fields, but inevitably, for no work of this kind can be exhaustive, it provokes many ideas which are not developed and leaves many questions unanswered. But this is the chief value of such a history, for it maps out paths for future research and leads to new associations of ideas. A bibliography extending to twenty-four pages enhances the usefulness of the work, but the incomparable illustrations, carefully selected from original sources and most of them little known, make this volume a thing of beauty. The publishers-Roger Dacosta of Paris -have made the series in which the book appears remarkable for this special feature. The same author's Mille Ans de Chirurgie and La Chirurgie Moderne, which are companion volumes in the series, show the same very high level of production, notable for the superb quality of the colour plates. These are all books which many will decide they must have and keep on their own shelves.

F. N. L. POYNTER

The Pentagram as a Medical Symbol, by J. SCHOUTEN, Nieuwkoop, De Graaf, 1968, pp. 96, illus., £2.10.

The origin of Schouten's study stems from the use by the seventeenth- to eighteenth-

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century Gouda Guild of Surgeons of the pentagram as a motif on their possessions (e.g., on a seal, furniture and glassware) which can still be seen in the *Het Catharina-Gasthuis* municipal museum, Gouda.

Though now generally forgotten as a symbol, Schouten demonstrates that the pentagram was fairly well known in the seventeenth-century world of learning. He traces the pentagram as a Pythagorean emblem of health, and its later use as a talisman to ward off misfortune (evidenced by its appearance on cradles and bedsteads). In more recent times the pentagram has become fairly widely used in arms and such ephemera as inn signs.

More germane to his theme is Schouten's information on the pentagram as a medical symbol, indicating that in the Renaissance the Pythagorean symbol of health reappeared, sometimes depicted in association with the urinal and the serpentwreathed staff.

This is a stimulating book with a valuable collection of forty-one illustrations. Schouten, however, is handicapped by the lack of literary information, and one is left wondering whether interpretations of the use of the pentagram on certain objects requires more caution. (There also seems to be some confusion between hexagrams and pentagrams.) A reading of the book might bias one to believe that all pentagrams on medical objects reflect a medical or pharmaceutical usage, but on one seventeenthcentury English bell-metal mortar known to the reviewer, the pentagram is undoubtedly a merchant's mark.

J. K. CRELLIN

The Rays: A History of Radiology in the United States and Canada, by RUTH and EDWARD BRECHER, Baltimore, Williams & Wilkins; Edinburgh and London, E. & S. Livingstone, 1969, pp. xix, 484, illus., £8.

The origins of radiology, unlike those of many branches of medicine are not lost in the mists of antiquity but copiously recorded in a wide range of journals. The authors have searched these diligently, and accomplished, within the limits imposed, the declared aim of producing 'a readable as well as authoritative . . . history of radiology in North America'.

The actual writers worked with the advice of a committee appointed by the American College of Radiology. Their final fling with the title and such chapter headings as 'With Death in Their Fingertips' should not put off the serious reader. The amazingly rapid developments in the early years of radiology are described in considerable detail, and later advances in outline. The geographical limitation does not prevent brief descriptions of European discoveries whenever these triggered off American work. Failure to mention the rotating anode, however, is a notable omission.

The writers deal with radiation technology and its diagnostic and therapeutic applications, explaining medical terms whenever understanding of these is essential to the narrative, but make no attempt to elucidate the physics of the gas tube or later equipment: such unfortunate phrases as 'a current of 30,000 volts' and 'a [X-ray] tube of higher capacity' make clear their wisdom in not venturing further. They have reversed the roles of retinal rods and cones in night vision.

Americanisms such as 'through' for 'to' are perhaps inevitable, but no one should