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priests in the case of the conjoined twins of Española\* in 1553 did not arise in this case, as one of the Narborough twins was regarded as a still-birth which had no legal or religious status.

I am not aware that this Norfolk case has been recorded in the literature of teratology. Though of little value as a medical record, the case is interesting historically.†

WARREN R. DAWSON

\* Pena Chavarvia, A., and Shipley, P. G. (1924), Ann. med. Hist., 6, 297.

† The entry in the Narborough register was printed inaccurately in Francis Blomefield's History of Norfolk, 2nd ed., 1807, 6, 167.

### THE HISTORY OF RAUWOLFIA

DR. F. W. Rieppel of Basle has forwarded the following comments on Dr. K. Somers' 'Notes on Rauwolfia and Ancient Medical Writings of India' (*Medical History*, April 1958, p. 87).

Dr. Somers' findings seem to confirm the opinion of the eminent sinologist and historian Professor Reinhold F. G. Müller, who stressed the almost unsurmountable difficulties arising from the unclarified nomenclature of the ancient Indian Materia Medica. Some of the points raised by Dr. Somers, however, had been cleared up long before he published his paper.

Rather than quoting Professor Filliozat as 'Chief witness' (p. 88), Dr. Somers should have mentioned the fact that Garcia da Orta was the first European to publish a book on Indian Materia Medica. His Coloquios dos simples, e drogas he cousas medicinaes da India appeared in 1563 at Goa, and not only does it contain a chapter on Rauwolfia and its use in India, but also an acceptable explanation for the origin of the name Sarpagandha (Somers, p. 89).

It was not Linnaeus who renamed the genus Rauwolfia as the author believes (p. 90). This name was introduced some 95 years earlier by the French botanist Charles Plumier in his Nova Plantarum Americanarum Genera, Paris, 1703.

Both Plumier and Linnaeus spelled the generic name Rauwolfia with a 'v', the reason being that both published their works in Latin which does not have the letter 'w'. Since we are dealing with a family name, and since his own handwriting proves that the German doctor and explorer wrote his name with a 'w', most authors today have agreed that this spelling should be preferred.

For further information, see Dr. Rieppel's recent papers:

'Leonhard Rauwolf. Ein Beitrag zu seiner Biographie', Dtsch. med. Wschr., 1955, 80, 653-5. 'Zur Frühgeschichte der Rauwolfia', Sudhoffs Arch. Gesch. Med., 1956, 40, 231-9.

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Paracelsus—An Introduction to Philosophical Medicine in the Era of the Renaissance. Walter Pagel. Basle/New York: S. Karger, 1958; pp. xii +368. Illustrated. Swiss francs 70. Paracelsus is one of the most controversial figures of the sixteenth century. There are societies which were founded specifically to encourage the study of his writings, special journals to report the work of scholars engaged in interpreting and illuminating his ideas, and a host of monographs in which an attempt is made to define and discuss his contribution to some particular branch of science or philosophy. Most of this published work is in German, although biographies and translations of a small

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selection of his works have appeared in English. English historians of science or medicine have, understandably, been content to follow well in the rear in this march of Paracelsian scholarship. There can be few, if any, who have attempted to read the fourteen volumes of Sudhoff's edition of the collected works in their entirety, but the mere spectacle of that impressive series, as of the ever-growing literature of exposition, has undoubtedly made them more cautious than their predecessors who were content to dismiss Paracelsus as a mere charlatan. That he was very much more, the devoted labour of hundreds of scholars makes quite clear. But does he belong in the ranks of genius where some have placed him? This is a question which is often posed by those who like the character and achievements of their heroes to be precise and categorical. To ask whether he was a charlatan or genius begs the question, for there are many half-way houses. It has become fashionable to say that he was something of both.

To the many who accept this judgement without knowing exactly how or why it was arrived at, this important new study by Dr. Walter Pagel should be especially welcome. The sub-title of his work is 'An Introduction to Philosophical Medicine in the Era of the Renaissance', and familiarity with the author's many studies on this theme over a period of thirty years will give sufficient assurance that here we have a profound and mature discussion of the range of ideas expounded by Paracelsus, of their influence on his contemporaries and his seventeenth-century followers, and of their place in the history of science and philosophy.

Pagel realized long ago that words are not what they seem and his endeavour to penetrate the reality behind appearances has led him into many strange byways of human thought and imagination. That his semantic investigation has opened the doors and let in the light to many hitherto dark chambers is an achievement of considerable magnitude. For the first time we are presented with a lucid and balanced account of Paracelsus, his philosophy, his medicine, and his sources, but we are given also a clearer insight into the mind of the Renaissance. Clouded still by all kinds of speculative nonsense it yet possessed the creative imagination to shape new ideas and the dynamic of an insatiable curiosity which brought together old and new material into a mixture which proved explosive. The age-old patterns were shattered and from the pieces the realm of ideas we know today has been constructed. For any modern to attempt to re-create and demonstrate the old pattern of thought when it was as complex and obscure as that of Paracelsus is a hazardous undertaking—we have only to consider the work of some theologians through the centuries to realize what integrity and judgement may be required for such an interpretation. Aware of all the possible pitfalls, Pagel has avoided them skilfully. He presents no dogma, but an exposition of the utmost clarity and objectivity, with every judgement backed by internal or external (antecedent or contemporary) evidence brought together by long and exhaustive research. How wide-ranging this has been is testified by the skilfully contrived parentheses and footnotes, which are not only erudite and informative but often have that exploratory character of the true scholar's afterthoughts and asides, signposting new paths for others to follow. For the English-speaking student Pagel has done for Paracelsus what the late Denis Saurat did for Blake's prophetic writings in making accessible to objective study texts which have been forbidding in their obscurity.

Although the book is definitely not one for the casual or general reader the material is so well organized and so clearly presented that it deserves to become the standard English work on Paracelsus. It falls into three parts: in the first Paracelsus is discussed as a figure of the Renaissance; the biographical account is authoritative and makes

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use of the most recent researches; his general ideas, such as that of the position of man in the cosmos and the access which he has to truth and nature, are interpreted. The second part deals with his innovations in medicine and the third discusses the ancient, medieval, and contemporary sources, concluding with an account of the arguments of his adversaries. It would be difficult for any reviewer to improve on the brevity and balanced judgement of Pagel's final assessment:

Was he a scientist? Paracelsus worked in the *chemical* laboratory with experience, skill and ingenuity. He devised new methods, prepared new mineral compounds and greatly enriched the store of medicinal chemicals—chiefly by his care and success in detoxicating heavy metals. He finally drew up what may be called a skeleton outline of inorganic chemistry, a system from which he endeavoured to provide a chemical interpretation—however crude—of the processes of life and disease. . . .

Viewing him as a whole, however, his chemistry forms but one aspect of a cosmology and philosophy which are symbolistic, 'mythical' and decidedly unscientific. However much inspiration and actual addition to chemical knowledge may be due to him, Paracelsus was neither a scientist nor a chemist in the modern sense.

His position in *medicine* is similar. He left shrewd observations and descriptions of diseases and pathological conditions. As a notable example we recall the 'Miner's Lung' and his first attempts at establishing 'Occupational Medicine'. There is also his modern-sounding insight into the role of drinking water and minerals in the aetiology of goitre and cretinism. There are the recommendations of mercury as a diuretic and the demonstration of albumen in urine. There are above all his unceasing struggle against the traditional system of Pathology and his attempts at replacing it by a new system . . . [but] it is not scientific—taken as a whole.

Replying to the question, 'Was Paracelsus original?', Pagel concludes that he

should be found original in his thinking in analogies, which in his case afforded a strange synthesis of medicine, alchemy, chemistry, religion, and cosmology—a synthesis that is entirely his own. There may yet come a time when his analogist teaching will sound less fantastic even to the scientist than it does today.

He goes on to tell us that the scientific insight of Paracelsus was part of a personal revelation which relates to the cosmos as a whole and to the Creator. Its aim was the knowledge that enables the philosopher to transcend his limitations and commune with the universe outside himself. It was a personal wisdom rather than scientific or even intellectual knowledge.

Quotation, unless it be more extensive than is usually permitted in a review, carries the risk of upsetting the fine balance of Pagel's judgements. The interested reader is urged to go to the book itself. It is expensive, but not dear, for it has been beautifully printed and illustrated by S. Karger of Basle, the publisher who, sixty years ago, was responsible for the publication of the text-book of medical history by Julius Pagel, the present author's father. The work is dedicated to Charles Singer and it was completed under the auspices of the Wellcome Trust.

F. N. L. POYNTER

The Circulation of the Blood. Two Anatomical Essays by William Harvey, together with nine letters written by him. The whole translated from the Latin and slightly annotated by Kenneth J. Franklin. Oxford: Blackwell Scientific Publications, 1958; pp. xxiii, 184. 225. 6d.