cerning the differences between an 'organism' and a 'mechanism'. They inspired such men as William Cullen, John Hunter, and Charles Bell in their vitalistic ideas, notably on the antiseptic power of the living and developing organism. How far Stahl influenced the Vitalist School of Montpellier, however, is a debatable point. Bordeu, its founder, voiced grave objections to Stahl's doctrines-however much he recognized his genius. He wished that Stahl 'se fût moins avancé au sujet de l'âme, ou qu'il eût trouvé des disciples moins dociles à cet égard'. His ideas are bound to lead into 'un labyrinthe de recherches et d'idées purement metaphysiques'. The School of Montpellier might have been seduced by these, but for the foresight of the true physicians by whom it was inspired (Recherches sur les Crises, vol. XLVIII, Oeuvres, Paris, 1818, vol. I, p. 224). Indeed, Bordeu's vital force is closely bound up with the organs and thus seems to be conceived on biological (Helmontian) rather than animistic (Stahlian) lines (Bull. Hist. Med., 1945, 18, 22-5). In Bordeu's own words: 'Medicine would have been lost without Van Helmont' (Recherches sur l'Histoire de la Médecine, vol. III, Oeuvres, vol. II, p. 558). In his own time Stahl had to face the adverse criticism of Leibniz and the latter's follower Frederic Hoffman. Again it had been Van Helmont who had foreshadowed Leibnizian ideas and Leibniz was in many ways favourably inclined towards Van Helmont, father and son (Archiv f. Gesch. d. Med., 1931, 24, 19-59).

However, some of Stahl's theses have a modern ring and are reminiscent of principles observed by modern psychiatry and psychosomatic medicine. This is well brought out in the short 'dissertations' here offered by a long-standing student of Stahl in German translation. The subjects are: the influence of the passions of the human body (1695) and the significance of the synergy principle in medicine (1695)—by this Stahl understands the healing power of Nature as operated by the reactive 'tonic' motions that depend upon the soul-directed circulation of the blood. A further dissertation is on the difference between organism and mechanism (1714) and on medical ethics in connexion with house visits to the patient (1703). A learned introduction and well-documented footnotes contain new information on Stahl's life and his family—the latter in a genealogical appendix from the pen of R. Zaunick —and his relations with Frederic Hoffmann, which do not seem to have been as strained as commonly believed. The handsomely produced and illustrated little volume is well suited to introduce the reader to the medical debate of the eighteenth century.

WALTER PAGEL

Sir John Tomes, by SIR ZACHARY COPE, London, Wm. Dawson, 1961, 108 pp., illus., 25s.

This short monograph is an elaboration of the same author's Charles Tomes Lecture given at the Royal College of Surgeons of England on 18 July 1952, and describes with accuracy and clarity the life of the most considerable figure in British dentistry. Tomes was largely responsible for persuading the Royal College of Surgeons to grant dental diplomas in 1859—the first dental qualification in this country—for the framing of the first Dental Act in 1878, and for the founding of the British Dental Association, incorporated 28 May 1880.

If Tomes had achieved nothing more, he is worthy to be remembered and honoured for his work in dental education and politics, but he also made a large number of original investigations in dental histology, his name being commemorated in the eponyms 'Granular layer of Tomes', 'Tomes' process' and 'Tomes' fibrils'.

Book Reviews

The section of the book dealing with the scientific work of Tomes might well have been extended, and a bibliography of his numerous papers would have been helpful. Probably the most important of his scientific papers is 'On the presence of fibrils of soft tissue in dental tissues', *Philosophical Transactions*, vol. CLVI, 1856, and this paper is reprinted in its entirety with the original illustrations.

Besides his important histological investigations, Tomes studied the shapes of forceps used for extracting teeth, and laid down principles for their construction. In this country at any rate, the modern conception of forceps made to fit accurately to the cervical part of the tooth dates from his work. He was not the first to suggest this, but his ideas became widely known through his lectures at the Middlesex Hospital and his book *A System of Dental Surgery*, London, 1859, which justly continued to be the standard textbook for many years.

In addition to all his scientific work, he had a large dental practice and was an excellent craftsman, contributing numerous papers on dental techniques to the dental journals.

The story of this tremendous corpus is well told by the author, and this work should be in the hands of all who are interested in the history of dentistry and the dental profession.

R. A. COHEN

A Dictionary of Speech Pathology and Therapy, by SAMUEL D. ROBBINS, London, Peter Owen, 1962, 112 pp. 30s.

This English edition of an American work which first appeared in 1951 is a useful supplement to the standard medical dictionaries for it contains definitions of all the specialist terms used in speech pathology and therapy and generally occurring in the literature of the subject. Each term has a guide to pronunciation, derivation, definition, and synonyms. A random sampling had revealed many terms not found at all in the standard dictionaries or, if found, only with a more generalized meaning. F.N.L.P.

Claude Bernard, Einfuhrung in das Studium der experimentellen Medizin (Paris 1865), translated by DR. PAUL SZENDRÖ, with introduction and notes by PROFESSOR KARL E. ROTHSCHUH, Sudhoff's Klassiker der Medizin, vol. XXXV, Leipzig, J. A. Barth, 1960, 350 pp., port., DM12.80.

In this country today, medical 'research' is fashionable. In fact, it has become a medical status symbol. Both the recent government reports on hospital medical staffing and planning have stressed that special provision should be made for research and that time should be specifically allotted for it. It has even been suggested in some quarters that every consultant should have one session of his contract set aside for 'thinking'. What Claude Bernard would feel about all this, I shudder to contemplate. Research is not an administrative concept, it is a habit of mind. As Bernard put it in his introduction—'to be worthy of the name, an experimenter must be at once theorist and practitioner'. It requires insatiable curiosity and a spirit of adventure. Just as Mallory was driven to climb Everest because 'it was there', so the researcher must possess the urge to accept the challenge of the unknown.

According to Professor Karl E. Rothschuh of Münster, who contributes a wellwritten and erudite introduction, this is, surprisingly, the first time that Claude