The Mechanism of the Brain and the Function of the Frontal Lobes. By Professor Leonardo Bianchi, Professor of Psychiatry and Neuropathology in the Royal University of Naples. Translated by James H. Macdonald, M.B., Ch.B., F.R.F.P.S.G. Edinburgh: E. & S. Livingstone. 1922. (21s. net.)

"How are vibrations of ethereal matter transformed into psychic products?" Thus Professor Bianchi states the main problem to which he addresses himself in his deeply interesting book. He begins with a survey of the evolution of the nervous system, from the lowest beginnings upwards, and goes on to discuss the various theories of cerebral localisation and of the functions of the frontal lobes, following with full descriptions of experimental work on animals by destruction or electrical stimulation of various regions of the brain, and a few accounts of clinical cases with post-mortem findings. These chapters, as also that dealing with the anatomical and physiological relations between the frontal lobes and other parts of the brain, represent an immense amount of valuable research work, carried out and recorded in the most careful and painstaking manner over a long period of years. The book is largely concerned with the author's personal investigations, but he shows a wide knowledge of the literature of the subject, and his criticisms of the work of others are always lucid, if sometimes a trifle dogmatic. It is in the last three chapters, dealing respectively with intelligence and language, emotions and sentiments, and consciousness, that the author's views are most open to attack. To the present reviewer, at least, these chapters seem quite extraordinarily inadequate, though undeniably interesting. A writer on the human mind who has no place in his scheme for "the sentiment of the beautiful," and some uncertainty about "the moral sentiment," and who confesses that his "positivistic conception of consciousness" will not allow him to enter "the realm of subjectivism . . . reserved
for philosophical speculation," has surely failed to grasp the significance of the very qualities which are characteristic and distinctive of the human mind in its highest manifestations. At all events, he cannot claim to have given a satisfactory and complete answer to the problem from which he started. But he is doubtless too wise to claim any such thing. The style of the book is somewhat heavy and involved, and this, in addition to the nature of the subject, must have made the task of translation no easy one. Dr. MacDonald is to be congratulated on the success with which he has accomplished it, and on having made this important work available for English readers.

La question des Vitamines. By Dr. G. Houlbert, Arnette. Paris, 1921. (4·50 fr.)

It is very questionable if this small book will be of any value to workers here, as it neither gives a good review of the literature of the subject (indeed, one might gather that the contributions to our knowledge of the subject by British and American writers were of but secondary importance) nor is it a record of original work. The best chapter in the volume is the discussion of the hypothesis offered in explanation of the nature of vitamins. The author draws particular attention to the comparison of vitamins with enzymes—how there seems to be some relation between cellular activity and vitamin content, exemplified by the apparent development of the anti-scorbutic vitamin during the germination of peas and beans, and the development of proteolytic ferments in lupin seeds during germination. The same condition also holds true for diastases and other enzymes. He, indeed, asks the question if the greater part of the activity ascribed to ferment cannot be attributed to the vitamins. The relation between the endocrines and vitamins is also discussed at some length, but the experimental evidence offered in support of the view that the relation is very close is quite inadequate to prove this connection. It is also suggested that the so-called growth factor acts by direct stimulation of the cells, and that when it is absent from a diet growth ceases, because cellular division is completely arrested. The discussion of the pathology of conditions like infantile
scurvy, rickets, &c., supposed to be related to the absence of vitamins, is very inconclusive. The closing chapter is one on the rôle of vitamins in the diet of the adult, in which some personal experiences with patients at Vichy are given. The general conclusion reached is that vitamins are not merely "accessory" factors, but are absolutely indispensable in a diet for the maintenance of health.

Protein Therapy and Non-specific Resistance. By William F. Petersen, M.D. New York: The Macmillan Company. 1922. (21s. net.)

This excellent monograph gives a comprehensive account of protein therapy in all its phases. By protein therapy is here meant a form of non-specific treatment, usually an injection, by which a reaction is produced, and as a result of which improvement in the patient's condition is often brought about. In 1893 E. Fränkel reported on the treatment of some 57 cases of typhoid fever by subcutaneous injections of typhoid bacilli. The results were encouraging. In an address delivered about the same time Rumpf presented a similar series of typhoid patients, but treated by subcutaneous injections of a pyocyaneus vaccine. In 30 cases 2 deaths occurred. This paper was practically ignored. Then Horbaczewski introduced nucleins, and found that lupus vulgaris reacted with a typical focal reaction to the nuclein. Other forms of injection were tried—turpentine (producing artificial abscesses), colloidal metals, tumour autolysates, leucocytic extracts, horse serum, and many others. Then a group of Argentine physicians obtained very good results in enteric by injecting a typhoid bacillus vaccine intravenously. It was soon found that this reaction was unspecific, and that other organisms and also non-bacterial substances, such as milk or proteoses, could be used to produce similar results. The number of non-specific agents which the author describes is very large, and includes not only such injectable substances as have been mentioned, together with water, sugar solutions, and salt solutions, but also the processes of counter-irritation by cautery, blister, or rubefacient, and the various forms of irradiation. These last procedures are
considered to have as their basis a focus either of necrosis or suppuration, or the production of an area of inflammatory exudation. The phenomena of the reaction are then considered, there occurring, commonly, shivering, pyrexia, focal reactions, some fall in blood-pressure, and leucopenia, followed by leukocytosis, together with other less constant changes. The theories concerning the reaction and its probable mechanism are then discussed. Dr. Petersen considers that in lobar pneumonia the intoxication is of dual origin—from the invading organisms and also from the autolytic products of the involved tissue and exudate; and he agrees with the view that recovery is associated with the inauguration of active proteolysis of the pneumonic exudate. Consideration is then given to the diseases in which protein therapy has been used. Probably the best results have been attained in arthritis, usually by intravenous injections of typhoid vaccine, sometimes with proteoses, or milk, or colloidal metals. Very good results have been obtained also in enteric fever and in gonorrhoea and its complications. In many other infectious and non-infectious diseases the results have been encouraging, but probably in most of them the treatment has not had a sufficiently extensive trial. It will be seen that the subject of non-specific therapy opens a wide outlook, not only on the treatment of disease, but also on the mechanism of its symptoms; and Dr. Petersen's account presents it with no extravagant claims. We have noticed a few unimportant misprints, and in the translations from French journals the word "gelose" has not been changed to its English form "agar."

_Influenza._ Essays by Several Authors. Edited by F. G. Crookshank, M.D., F.R.C.P. London: William Heinemann (Medical Books), Limited. 1922. (30s. net.)

The essays are seventeen in number, and seven of them are written by the editor, Dr. Crookshank. The main theme of these is that influenza is to be regarded, not as a simple disease running in epidemics and caused by an organism which may or may not be known, but as something more widespread, elusive, and sinister. "The name 'influenza' stands not for an entity;
not for something with objective existence in nature; but for the triple conception of a disease, an epidemic prevalence, and an epidemic constitution or period.” Epidemics of influenza are preceded and followed by outbreaks of disease which are not commonly recognised as influenzal, such as unusual forms of pneumonia, poliomyelitis, lethargic encephalitis, cerebro-spinal fever; and even by portents. And Dr. Hamer, in his essay on “The phases of influenza,” suggests a close relationship of Malta fever with influenza, though it is difficult to see how the epidemiological facts favour this last view. “In 1918 we hear of reindeer and baboons dying mysteriously and in great numbers.” And again, “there is indisputable evidence that, during the great influenzal periods, there are widespread changes in the world of insect, vegetable, and fungoid life.” A well-known theory attributes epidemics to variations in the infectivity of a causal organism. Dr. Crookshank would seem rather to regard them as brought about by constitutional changes of some kind in the subjects of the disease. In an interesting chapter on “Some historical conceptions of influenza,” Dr. Crookshank describes and analyses the great influenza epidemics which have occurred in Europe during the last four hundred years, in particular identifying it with the outbreaks of “sweating sickness” in the fifteenth and sixteenth centuries. The bacteriology of influenza, with special reference to Pfeiffer's bacillus, is fully considered by Dr. Donaldson, and the clinical aspects of the disease in seven chapters by different writers. The volume is calculated to stimulate criticism and thought.

The Spleen and some of its Diseases. By Sir Berkeley Moynihan, Leeds. Bristol: John Wright & Sons, Limited. 1921. (21s. net.)

This book, the author says in his preface, contains the material upon which was based the Bradshaw Lecture delivered at the Royal College of Surgeons of England in December, 1920. But it is by no means an exclusively or even principally surgical book, for it contains a full account of the modern ideas of the main diseases in which the spleen is affected. There has always
been doubt as to the functions of the organ, and it cannot be said that even now we are fully informed. The greatest modern discovery with regard to it one must consider to be the fact that its removal cures some diseases with which splenic enlargement is associated. In the chapter on "The surgery of the spleen" some of the old views are stated. One is that of C. Pliny (quoted in an old English translation), who wrote—"This member hath a proprietie by itself sometimes to hinder a man's running: whereupon professed runners in the race that be troubled with the spleen have a devise to burne and waste it with a hot yron . . . but if it be man or woman that is thus cut for the spleen, he or she looseth their laughter by the means." Among the diseases fully described are splenic anaemia, pernicious anaemia, leukæmia, Hodgkin's disease, and hämolytic jaundice. The value of splenectomy in splenic anaemia and in hämolytic jaundice is well known, but Sir Berkeley considers that it has a place also in the treatment of pernicious anaemia and of leukæmia. In the last condition it can be considered only after the use of radium to reduce the size of the spleen. In the Mayo clinic twenty-six such patients had splenectomy performed, and only one of them died as a result of the operation. One patient lived for five and a half years, and several others were alive three or four years after the operation. A feature of the book is the plates, each with a schema showing the changes in the various organs in the diseases described. It is an excellent monograph.

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Ten Post-Graduate Lectures delivered before the Fellowship of Medicine at the House of the Royal Society of Medicine, 1919-20. With a Preface by Sir Clifford Allbutt, P.C., K.C.B., M.D., F.R.S. London: John Bale, Sons & Danielsson, Limited. 1922. (10s. 6d net.)

Through the medium of this admirable volume, ten lectures to graduates by men of outstanding eminence in their particular subjects are made available to all practitioners. The subjects of lecture are very varied, but are all of the utmost importance, though naturally some will appeal to the individual reader more than others. The late Sir George H. Savage deals with the
relationship between syphilis and insanity, and emphasises his belief that though syphilis may have had a very potent weight in the production of mental disorders, yet it is rarely the only cause; in a second lecture he treats of morbid mental growths. Sir William Hale-White furnishes a most interesting study of the prognosis of exophthalmic goitre, with a careful assessment of the relative values of the various lines of treatment. Sir Humphry Rolleston deals with grave familial jaundice in the new-born, based on the tale of twenty-five family groups. Dr. F. Hernaman-Johnson emphasises the value of combining treatment by electricity, surgery, and x-rays in certain disabilities. Dr. J. D. Mortimer supplies an important pronouncement on the after-effects of anaesthæsia. Dr. Wilfred Harris gives a striking summary of his well-known methods of treatment of trigeminal neuralgia by alcohol injections. Dr. N. Mutch deals with pyorrhea alveolaris in its relationship to disease, with particular reference to the bacteria which are swallowed. Mr. W. H. Trethowan, in two striking lectures, deals with disabilities of the feet due to mechanical causes or to paralysis, and gives detailed advice on their prevention and treatment. The provision of these illuminating lectures in book form is a work on which the Fellowship of Medicine is to be congratulated, and this valuable volume can be recommended to practitioners seeking up-to-date information on these subjects.

Le Bactériophage—Son Rôle dans l'Immunité. Par F. D'Herelle, de l'Institut Pasteur. Paris: Masson et Cie. 1921. (12 fr. net.)

Great interest has been aroused within the last few years by the so-called "phenomenon of D'Herelle." This refers to the destruction of bacteria in culture by the action of some lytic substance originally obtained from the bowel contents, which D'Herelle holds to be an ultra-microscopic organism. This lytic substance can be passed on indefinitely from culture-tube to culture-tube, and so has in some way the power of growth. There is general agreement as to the main facts of the phenomenon, but D'Herelle's explanation of them is by no means generally accepted. In the first part of this
book the author gives a full account of his experiments with the bacteriophage, and of its culture and properties. In the second he puts forward his views on the part played by the bacteriophage in immunity. There is, he believes, but one bacteriophage which is a normal inhabitant of the intestine, where it lives on saprophytic bacteria. If a pathogenic organism is introduced into the bowel, the bacteriophage acquires a virulence for it—that is, acquires the power of attacking it. If the organism should cause disease, cure is brought about by increase in numbers of the bacteriophage adapted to meet it. The death of the human host may result either through "inertia" of the bacteriophage, or on account of the development of resistance to it on the part of the bacterium. Numerous experiments on animals are recorded in which active immunity to disease was successfully induced by a single injection of bacteriophage in culture. Whether or not D'Herelle's theories are correct, the facts on which they are based are of the greatest medical and biological importance.

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*Therapeutic Immunization in Asylum and General Practice.*

By W. FORD ROBERTSON, M.D. Edinburgh: E. & S. Livingstone. 1921. (15s. net.)

The method of treatment by vaccines has undergone numerous changes in popularity since its introduction, and at the present time its value is probably underestimated. Those who profess never to have seen any good result proclaim a limited experience. But the classes of case in which vaccines are likely to prove useful are fairly well known, and in most of these—as, for instance, in chronic bronchitis—they provide an additional and not an alternative therapeutic measure. Dr. Robertson's book describes methods of culture, staining, and identification of organisms, and of the preparations of bacterial emulsions or vaccines. These sections are simple and thorough. Unfortunately, in the standardisation of his emulsions he uses the gravimetric method exclusively, and does not state its relation to the common methods of numbering the organisms. No doubt the latter are crude, but they are also simple, and the worker
who uses them comes to know his own standards. The second part of his book is devoted to the method of treating infective diseases by therapeutic immunization, and here the author daunts by his enthusiasm. We find a description of treatment of diseases in which vaccines are generally accepted as likely to do good, or at any rate, worth a trial, but in addition there are others, as to the vaccine treatment of which scepticism is general—for example, neurasthenia, exophthalmic goitre, and disseminated sclerosis. Perhaps, however, it is unjust to criticise a writer for stating his own experiences. The details of treatment in the various diseases in this section are carefully described. A full statement is made of the author’s reasons for regarding the diphtheroid bacillus group as one of the most important in human pathology. Vaccine therapy has suffered so much in the past from theories that one feels Dr. Robertson’s objections to “detoxicated” vaccines, on theoretical grounds, to be unsound. Vaccines should not be condemned except after failure in practice. The book is to be recommended as embodying the result of much experience.

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Dosage for Deep Therapy. By Professor F. Voltz. Edited by R. Morton, M.D. London: William Heinemann (Medical Books), Limited. 1922. (10s. 6d. net.)

The best thanks of radiologists are due to Dr. Reginald Morton for the work he has done in giving English-speaking people this translation of Professor Friedrich Voltz’s extensive tables and his (Dr. Morton’s) chapter on “The management of apparatus and tubes.” The book is entirely practical in nature. It begins by stating the general physical rules governing the radiation dose. Then follows a chapter on the special considerations to be taken into account in making applications—physical dose, biological dose, percentage of the depth dose, &c. The third chapter deals with the methods of dose measurement. It is followed by fifty pages of tables of the greatest value to the practitioner, saving him laborious calculations. The book closes with a short chapter by Dr. Morton. Referring in the preface to the Erlangen School, Dr. Morton says—“They have evolved order out of chaos, and brought a degree of almost mathematical precision, with vastly
improved results, into what has been one of the most empirical, haphazard, and uncertain of therapeutic procedures.” Dr. Morton closes with a word of warning, which is very opportune—“Probably the greatest danger to the future of the method lies in its being taken up by those who are unable or unwilling to give the time and skill necessary to its proper performance.”

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**NEW EDITIONS.**

*Internal Secretion and the Ductless Glands.* By Swale Vincent, LL.D., D.Sc., M.D., F.R.S.Edin., F.R.S.Can., F.Z.S. Second Edition. London: Edward Arnold & Co. 1922. (25s. net.)

The second edition of this valuable work gives a very satisfactory account of the subject, and the material changes in our knowledge of it since the first edition was published in 1912. The bibliography has been omitted. Much new matter is included, and the parts dealing with clinical subjects considerably expanded. The illustrations are good, and there are a number of photographs of patients suffering from diseases of the ductless glands. The author maintains throughout an attitude of wise scepticism, which is very necessary at this time. The book is of surpassing interest, and should be read by all practitioners.

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*Forensic Medicine and Toxicology.* By J. Dixon Mann, M.D., F.R.C.P., and William A. Brend, M.A., M.D., B.Sc. Sixth Edition. London: Charles Griffin & Co., Limited. 1922. (30s.)

The new matter in the present edition is to be found chiefly in the section devoted to toxicology. The volume has been brought up to date, and maintains the position of its predecessors as one of the standard text-books on the subject. Its value as a reference work for practitioners on this side of the Tweed would be increased if more space was devoted to legal procedure in Scotland, which is dismissed in the present volume in barely one and a half pages.