was no empirical psychology in India yet in the next paragraph he says that Indian psychology is based on introspection and observation. There is no doubt that the ancient Hindu mind showed a special introspective ability. The materials obtained by introspection had to be treated from the epistemological standpoint for the purposes of metaphysics and philosophy. Indian psychology and metaphysics are mainly based on psychology hence psychological problems have been discussed by all the different schools of philosophy founded in India. The author has translated the Sanskrit term 'Indriya' as 'sense organ' and has consequently divided the 'sense organs' into two groups, namely, five organs of knowledge (Buddhindriya) and five organs of action (Karmendriya). The term 'sense organ' has now been borrowed from the modern physiologist and it is an unjustifiable liberty to include organs of action within the term 'sense organ'. This, however, is a minor point. There are many interesting discussions in the chapter on time which seems to be the best in the book. The theories of perception of movement and of 'the universal' propounded by ancient Hindu psychologists will no doubt be read with very great interest by the modern *gestalt* school. In the chapter on dreams we do not find any mention of the Upanishadic and the Puranic theories on the subject. No western scholar who deals with the problem of perception could afford to neglect this book. The main defect of the book lies in the fact that no synthetic presentation of Hindu psychology has been attempted. The different chapters of the book read like so many pages of disconnected lecture notes. The book could have been written in a more interesting way, but all the same we have no hesitation in saying that the book removes a long-felt want and will be of immense help to those who want to do research work in Indian psychology.

G. B.

A NEW PHYSIOLOGICAL PSYCHOLOGY.—By W. Burridge, D.M., M.A. (Oxon.). 1933. Edward Arnold and Company, London. Pp. vii plus 158. Illustrated. Price, 7s. 6d.

PROFESSOR BURRIDGE differs from the neurological doctrine concerning the nature of the fundamental processes, which had its foundation in the conception of synoptic resistance. He has developed a new system of physiological psychology on the basis of his intimate physiological studies of different organs, especially the heart and the eye, and proceeds to state that the central neurones and end-organs are rhythmically active structures whose energy exchanges are mediated by two kinesiophores, the interaction between the two providing the dynamic energy for evoking response.

The new doctrine is well summarized in this brief treatise and the hypothesis of balance is assumed. Suggestion has been made that Freud's psychological principles regarding the relationship between kinesiophores should be looked upon as synergist and not as antagonist.

Professor Burridge next proceeds to make a scholarly and interesting examination of the memory and dream, from the point of view of central neurone-rhythm outlined by him, and develops a picture 'of an organ of mind consisting of a vast complex of discrete groupings of neurone, each group dancing to its own rhythm with its own strength'. All the problems of mental functions and disorders, as well as his concept of shock, fits and spasms, are well embraced within the scope of his theory.

This thoughtful volume should be studied by all interested in the relationship between the body and the mind. It is an admirable attempt on the part of the author to correlate the mental phenomena and the processes taking place in the nerve cells and will interest psychologists and neurologists.

R. N. C.

AN INTRODUCTION TO THE BIOCHEMISTRY OF NITROGEN CONSERVATION.—By Gilbert J. Fowler, D.Sc., F.I.C. 1934. Edward Arnold and Co., London. Pp. viii plus 280. Illustrated. Price, 12s. 6d.

THE subject of nitrogen conservation was discussed in the February number of the *Gazette*. The economic importance of the subject to an agricultural country like India was pointed out and two papers were published showing how town refuse and nightsoil could be treated in such a manner as to fix the organic nitrogen by biochemical processes, the result being a compost containing nitrates and phosphates of high agricultural manurial value. Dr. Fowler has devoted the whole of his life practically to the study of nitrogen conservation and the present book is a summary of modern work and knowledge on the subject, much of which has been done by Dr. Fowler himself or at his instigation and under his guidance. The activated-sludge process initiated by Dr. Fowler is so far the most successful method of treating sewage and conserving nitrogen. The original source of organic nitrogen was probably and is still largely atmospheric nitrogen. This can be fixed from air in organic combination by some species of free living organisms (*Azotobacter*, *B. lactis aerogenes* and clostridium), and by various micro-organisms symbiotic on leguminous plants. Nowadays, such fixation of atmospheric nitrogen is being done by electrical, thermo-electrical and thermo-chemical methods. In the nitrogen cycle of nature, fixed nitrogen may be lost as atmospheric nitrogen and ammonia. This loss is due to the action of certain micro-organisms. In sewage disposal, by dilution in water, fixed nitrogen is lost by dissipation in the sea. The main problem is to prevent the loss of fixed nitrogen which occurs by biochemical action. The obvious thing is to counteract this by other biochemical agencies. The question therefore includes study and knowledge of the chemical structure of nitrogenous organic materials, the changes these may undergo by enzyme and other action, and also a knowledge of the living agencies in soil and water and excretal matter that act in any way in nitrogenous matter. Experimentation has been ahead of precise knowledge and it is hardly realized yet what a big field of work still remains untouched.

The book deals in detail with the various chemical changes that take place in the building up and breaking down of nitrogenous matter, with nitrogen fixation and the chemistry of sewage purification. The book will be of great value to sanitarians and public-health chemists, and, despite the unavoidably large number of chemical equations, the book makes intensely interesting reading. We are indebted to Dr. Fowler not only for his original work, but for bringing together in a comprehensive and logical manner a very complete résumé of one of the most important biochemical problems in nature. Physiologists, biochemists, sanitary engineers, and public-health workers will find the book invaluable.

A. D. S.

LA GANGOSA ET LES RHINO-PHARYNGITES MUTI-LANTES DES TROPIQUES.—By Dr. Georges Galinier. Paris Jouve & Cie, Éditeurs, 15, Rue Racine, 15, 1934. Page 76. Bibliography—127.

THE literature on this disease is carefully reviewed in the light of the geographical distribution and pathology. Diagnosis and differential diagnosis are considered carefully. Dr. Galinier considers that the importance of the yaws factor is less than is usually estimated, and that, though the disease may be caused by or connected with yaws, it is also connected with many other diseases, such as syphilis, leishmaniasis and blastomycosis. He considers it to be a disease the history of which is unable to offer a proof of aetiological connection with any of these diseases. He considers that the term 'gangosa' or 'mutilating rhino-pharyngites' should be applied to secondary affections which accompany or follow leishmaniasis, tertiary yaws