

Lamarckism (1899) and *Index fauna Novæ Zealandæ* (1904), *Lassons of Evolution* (1902) and *Animals of New Zealand* (1904).

HIS HONOURS.

As early as 1861, he was elected a Fellow of the Geological Society and in 1892 his strenuous work on the Natural History of New Zealand got him the Fellowship of the Royal Society. He became President of the Australasian Association for the Advancement of Science, in 1901 and was the first President of the New Zealand Institute. His review (1861) of the *Origin of Species* gained from Charles Darwin an appreciative letter, of which Hutton was justifiably proud. His contributions to the origin of New Zealand fauna and flora made him known

throughout the world as a recognised authority on all matters connected with the geographical distribution of animals and plants.

AS A TEACHER.

As a teacher, he was singularly clear and original in his methods of exposition and possessed valuable faculty of arousing enthusiasm in his pupils, several of whom became contributors to various departments of natural science. Being thoroughly sincere, open and straightforward in all his actions, he was a keen and inspiring critic of anything that bordered on pretence and humbug. After forty years' absence in New Zealand, he came to England in 1905 for a short stay. While on his way back to New Zealand, Hutton died at sea on October 27, 1905.

Twentieth Century Psychiatry.*

THIS book is a compilation of three lectures delivered by Dr. William White of Washington, under the auspices of the Salmon Memorial Trust, at the New York Academy of Medicine in 1935. Dr. Thomas W. Salmon in whose memory the Trust is founded, was the Medical Director of the National Committee of Mental Hygiene, and piloted it successfully through many difficult years. A relevant extract from *The American Journal of Psychiatry* (1931, page 725) regarding the Trust reads as follows:—

"A meeting in memory of Dr. Thomas W. Salmon was held at the New York Academy of Medicine on Saturday evening, January 10, 1931. At this meeting the completion of the fund of a hundred thousand dollars which was raised by friends and admirers of Dr. Salmon was announced. The custody of this fund has been vested in the New York Academy of Medicine, and the lectures will be delivered under its auspices and the lecturer selected annually by the Academy, and a special Advisory Committee. Under the terms governing the Trust, a scientific worker who has made outstanding contribution to Psychiatry, Mental Hygiene, or a related field must be chosen to deliver the lectures."

Dr. White is the third lecturer of the series, the two previous lecturers being

Dr. Adolf Meyer of Johns Hopkins, and Dr. McFie Campbell of Harvard. These three are the senior accredited representatives of American Psychiatry. Their scientific contributions have embraced the whole field of psychiatric thought. Their students are to be found in every Clinic or University of any importance. The writer of this article had the good fortune to be a student of one of them.

Dr. Meyer lecturing on 'Psychobiology' stressed a point of view, of which he is the chief exponent. Dr. Campbell lecturing on 'Destiny and Disease in Mental Disorder' confined himself more or less to the reaction type usually termed Schizophrenic; he interpreted the life experiences of such nervous and mental patients, and showed how from such studies, valuable insight could be gained into forces of human nature, the complex texture of personality, and the varied problems of human adaptation. He also warned of the danger of too much emphasis on the experimental method and the neglect of the broader aspects of human individuality.

Dr. White has continued the tradition, but has been more elaborate and comprehensive in choosing for his subject a review in perspective of the whole progress in psychiatric thought during the twentieth century. His three lectures, "Psychiatry as a Medical Speciality," "The Social Significance of Psychiatry," and the concluding one "The General Implications of Psychiatric Thought," deal with a variety

* *Twentieth Century Psychiatry*. By Dr. William White. (Chapman & Hall, London.) 1936. Pp. 198, Price 10s. 6d.

of subjects, Medical, Psychological, Sociological and Philosophic.

It is neither possible nor profitable in a review like this to discuss the various problems raised in the book. It is perhaps more preferable to discuss how far the author's expectations and hopes in presenting these lectures in a book form can be expected to be realised. Dr. White hopes to help the reader in these lectures "to discover gradually unfolding to his vision not only a concept of psychiatry in its more limited sense as a medical speciality, but in that broader sense which relates to it all the other departments of thought and experience," and thus of necessity "he will also discover that there is at the foundation of this presentation a philosophy in accordance with which its details are developed and differentiated." This philosophy, the author hopes, will be found to be helpful not only in the restricted area of the practice of psychiatry but in the whole field of medicine not to say the still broader field of human relations.

At the outset, it cannot be sufficiently emphasised that medicine has a destiny to fulfil as a science, and its function does not end with measures to combat suffering and pain. Therapeutics is certainly a very important aspect of medicine, but it is not all. Viewed from this broader aspect of medicine as a science, it becomes intelligible why the numerous publications and research papers published in recent years deal not with mere therapeutics but with formulations regarding the nature of disease and abnormality in general. In this connection the work of Sir Thomas Lewis is of considerable interest. It is only when considered from this point of view, the value, meaning and purpose of Dr. White's book become evident. Dr. White in his lectures emphasises changing orientations and concepts in psychiatric thought, and does not concern himself with mere evanescent details.

The concept of the organism as a whole opposed to the body-mind division claims his first attention. The terms bodily activities and mental processes are purely different aspects of the activities of the organism, the so-called mental processes being total reaction patterns, while the bodily activities are part-reaction patterns. The mind-body relationship is a unity, but the persistence of these words, body and mind, however, as Dr. White points out, leads to some confusion, because our ways of thinking are

imprisoned by the forms of our language. These two words have long meant different entities, and unless we think of a better way of expressing this unity, even hyphenated expressions like emotion-intellect, heredity-environment and of course body-mind, may only serve to emphasise the difference and not the unity as we desire they should.

The studies on personality by Dr. Adolf Meyer, from what he terms the psychobiologic angle, Coghill's biological researches on the behaviour patterns of amblyostoma are concrete verifications of the implications of this concept of organism-as-a-whole. It might be quoted as an example that no type of reaction, however highly specific it might have been thought to be, can ever separate itself from its background, the total behaviour pattern. Secondly, events and responses must be explained by their significance, purpose and ideals; meanings and values are far more important than mere descriptions and classifications.

The psycho-analytic movement is perhaps the most significant single factor which brought about this altered orientation in psychiatric thought—from mere description and classification to meanings and values. The achievements of bacteriology and the progress in microscopic anatomy and pathology on the one hand, and static academical discussions on Psychology on the other, had completely obscured the issues in Psychological medicine. The Physicians and Pathologists were busy on one side groping for a bacterium or a demonstrable pathological structural defect in conditions like mania, melancholia, hysteria, dementia, præcox, etc., which however could not be found, while on the other, the academic psychologists were busy with sterile controversies over non-existent faculties and watertight compartments of a mythical mind and soul. It was in this big, buzzing, booming confusion that the genius of FREUD BLAZED THE TRAIL.

Dr. White rightly considers that most of the heated opposition roused by Freud's publications was due to their contents, which were sexual, and which were revealed by his analyses. This, Freud could not help, because of the essentially pathological nature of the cases he had for his material. But the methodology he introduced was revolutionary. He contended that the aim of psycho-pathology was to explain the symptoms of abnormal states of mind in psychological terms and not merely to

describe and classify them. Rickmann has observed that up to the time of Freud the tendency of psychiatry has been to turn for help to the physical sciences, which resolve themselves to number, measure and scales. In contrast to this psycho-analysis has another method to offer, which does not enumerate, measure, or weigh; it only deals with presentations in the mind and tries to find by its technique how they are arranged, how they interact, and how they take effect in behaviour. A proper combination of the two methods, Rickmann adds, is the inevitable destiny of psychiatry; at present, there seems no way of fusing the two, so that the Clinician is obliged to use the two alternately, viewing now the Psychical, now the chemical, regarding the patient at one moment ontogenetically, at the next moment as the subject of statistical research. Dr. White, although an ardent believer in psycho-analysis, has, however, no illusions about the same. He recognises that it is only one of the approaches to the problems of the mind, and to its therapeutics. And that the impossible claims made for it by some of its advocates, only hinder its usefulness.

Side by side with the psycho-analytic movement, and as some people seem to think as a corollary of or supplementing the same, arose the Mental Hygiene movement, with its offspring, the Child Guidance Clinic. It is a matter of common knowledge that Clifford Beers (author of *A Mind that Found Itself*) the driving power behind the movement was himself a mental patient, and that his sympathy with the sufferers, and the deplorable manner in which the patients were treated, was responsible for the foundation of this movement which is now a huge international organisation. The Mental Hygiene movement is essentially a public health movement which has as its major objective the prevention of the disabilities and wastage of mental disease. That mental disorder can, to some extent at least, be looked upon as preventable, is a startling innovation. Its sociological and educational implications are obvious. Moreover, it gives a new orientation to the inert notion of the inevitableness of heredity. Both heredity and environment are not any more separate and distinct facts unrelated to each other, but they are just like body and mind, only two aspects of an organism which grows out of and into an ever-changing environment. If we accept

that everything abnormal is based upon a hereditary background which determines in its very inception and for all time what its consequences shall be, then there is nothing to be done about mental disease at all. But it is only because, we believe that to some extent at least, we could modify human beings, and that we can remove some of their difficulties and disabilities, we are able to understand the extraordinary, sometimes almost miraculous, therapeutic successes.

Closely associated with this problem of heredity, is the consideration of the physical make up of the individual, which is largely, if not fully hereditary in origin, and which has within it certain corresponding types of thinking and feeling. Kretschmer's work on the close association between the thickset individual and affective disorder, and the asthenic individual with morbid introversion and schizophrenia is too well known to need comment. But both Kretschmer's work on physique and Jung's work on extroversion and introversion, however suggestive, should not be taken too literally. Because clear cut, concrete, and definite psychological or biological entities exist nowhere in the universe. A belief in such represents only the extreme of the wishful attitude of man towards reality.

Before leaving this part of the subject, it is wise to remind ourselves that all these problems of growth and development, psychological and physical, are merely functions of time. The new orientation from purely space thinking to time-space thinking is as significant in psychiatry, as the time-space continuum in fourth dimensional physics.

Dr. White deals also with the influence of psychiatry on criminology, delinquency and education, but what he has said is common knowledge and needs no comment. The contribution of psychiatry to medicine can hardly be too often repeated. A patient is not a more or less incidental container of an interesting biochemical, physiological, or bacteriological situation, but is something far more. A clinical picture is not a mere photograph of a man sick in bed. It is an impressionistic painting of a patient surrounded by his home, his work, his relations, his friends, his joys, sorrows, hopes and fears. A doctor is not treating a disease, is not treating a mere case, but a human being, in whom the importance of psychology is over ninety per cent., and of physiological pathology less than ten per cent.

While these paragraphs were being written two reviews of the same book have appeared, a lengthy one in *Mental Hygiene* of July 1936, and a very short note in the *Lancet* of August 22. While that in *Mental Hygiene* is very fulsome in its praise, the note in *Lancet* is very lukewarm; and hardly just to the author. "He has high hopes of what may be done for civilisation by the use of psychological knowledge; of those major threats, which make optimism difficult for Europeans, he scarcely speaks at all." One often feels that the problems of dictatorship, tyranny, aggression, and of mob hysteria agitating Europe have in spite of a common human background aspects which are purely individual to Europe, and a non-European cannot deal with these problems with the same authority as a European can. What constitutes progress is only a point of view, and Dr. White with his experience of forty years has lectured on what he feels he could speak with authority, on subjects which he thinks need comment, and in a field in which he has not been an idle spectator, in contrast to the many compilers of recent advances.

One cannot quarrel with Dr. White on this count.

Just as in other books, which are compilations of lectures, in this book also there seems to be a lack of coherence and sequence; a certain amount of repetition and disproportion. One notes also with regret a tendency to soar from facts to 'beyondness,' in a way out of keeping with past form,—a failing noticeable in many other great men, for example Jeans and McDougall, and latterly in Jung.

Every intellectual revolution which has ever stirred humanity to greatness has been a passionate protest against inert ideas. A great idea in the background of dim consciousness is like a phantom ocean beating up on the shores of human life in successive waves of specialisation. Wholes can no more be studied without reference to parts than parts without reference to wholes. *Twentieth Century Psychiatry* is in large part a contribution by man to a knowledge of himself.

M. V. GOVINDASWAMY.

Senescence and Death in Invertebrate Animals.

THE causes of death in mankind due to disease or old age have been the subjects of investigation by man ever since he began to show scientific curiosity in these phenomena. In his attempts to prolong his wonderfully interesting life, man has wandered into the pathless regions of speculation in regard to life, death and the soul of the individual, and stumbled on the sciences of Chemistry, Biology, Medicine and Hygiene. Man's interest in his domestic pets, chiefly of the mammalian and avian species, led him to investigate the problems of old age and death in Vertebrates other than man, and the phenomena of parasitism and of monstrosity in plants and Invertebrate animals of economic value. Not until recent years, however, was systematic attention focussed on the phenomena of senescence and death in various groups of Invertebrate animals. The great volume of literature on this subject, when critically examined, shows that it is essential to distinguish clearly between two types of data, (1) relating to changes in the organisation of Invertebrate animals due to normal physiological conditions, and (2) relating to changes due to pathological conditions.

What are the signs of senescence observed amongst the Invertebrates of the various phyla of the Animal Kingdom, does senescence actually lead to death in these animals, and what are the various views held in regard to the causes and significance of senescence? Illuminating answers to these questions are given by Dr. István Szabó of Budapest in an excellent summary of the literature on the subject in *Rivista di Biologia*, XIX, Fasc. III, 56 pp. (1935) to which is appended a fairly exhaustive list of references.

There are two fundamental views held in regard to the process of ageing. The earlier view held by Weismann and others was that ageing is a wearing out of the tissues, while the more recent one held by Minot, Baer and others is that it is a part of the developmental process of the animal, or as Raymond Pearl holds that senescence is not an indispensable peculiarity of life. Between these two extremes, and explanatory of the one or the other extreme is a variety of views in regard to the causes of senescence and consequent physiological death. One view is that senescence and death are caused by aggregation of living cells as in multicellular