which it originally appeared. This certainly adds to the interest, and should be supplied to all. It was stated a short time ago in a correspondence in the medical journals that no mention had been made of the names of certain people who had acted as translators of several of the chapters. These defects will, no doubt, be rectified when a second edition is called for. R. H. STEEN.

Part III.—Epitome of Current Literature.

1. Psychology and Psychopathology.

The Biological Point of View in Psychology and Psychiatry. (*Psychological Review, vol. xxiii, March,* 1916, *pp.* 117–128.) *Abbott, E. Stanley.*

It is necessary to consider psychology and psychiatry from the biological point of view, because only in this way can they be rendered objective, and as free as possible from metaphysical bias and *à priori* theories. By the term biology he connotes the science of living things, and not merely the study of structures and physiological activities. The fundamental differences between non-living and living things are that the latter by internal activities make themselves out of the materials of their environment, and reproduce their kind. The power of adaptation to environment in non-living things is very limited, and there are no self-directive activities. The life of the individual biological unit consists in the continuous adaptation of itself to its environment as well as it can. If it stops reacting by internal activities, it dies. If it does not react as well as it can, it succumbs to external agencies, or does less well than its neighbour. Man may be looked upon as such a biological unit. Many of his internal activities are physiological, but most of those which result in his external behaviour or conduct are psychological. All of his activities are directed to the great end of his best self-adjustment to his whole environment, though lesser or nearer and more concrete ends are usually more immediately prominent to the individual. Reaction is to a large extent unconscious. Psychical activities are links in the chain of internal reactions. Each link is a reaction, effect of preceding links, cause of succeeding ones. Study of causes leads back to factors of the environment, and to anatomical structure and physiological process. Study of effects leads forward to behaviour and to bodily changes and processes. Every psychic event is a reaction. The nervous system is the structure specially adapted for the performance of psychic functions or processes. Mind is the abstract name given to the capacity to react in certain ways, to the organised whole of any individual's psychic reactions, or to the content of any individual's psychic reactions, especially ideational ones. It is a function or set of functions, but through misconception it is often used to indicate some mysterious thing which can act of itself or is opposed to or

contrasted with body, and it is often referred to as having structure. "From a strictly biological point of view it bears the same relation to brain and to the individual that respiration does to lungs and to the individual, or that running does to legs and to the individual. It is the *individual*, not the brain, that thinks or exercises the other psychic activities we call mind, just as it is the individual, not the lungs, that breathes, or the individual that runs, not the legs. But by means of the brain, the lungs, and the legs, the individual thinks, breathes, runs."

We do not think of opposing or contrasting respiration or running with lungs, legs, or body. Neither should we do so with brain or body in the case of mind. Nor is it less absurd to say that mind is brain, and brain is mind.

Some structural knowledge is essential for the proper comprehension of function, whether it be respiration or mind. So intimately are structure and function related that it will doubtless be found eventually that racial, family, and even individual traits are partly dependent on more or less minute structural differences in brain architecture and nerve-cell distribution. Such knowledge is a pre-requisite in psychiatry. The effects of, for instance, toxæmias, fatigue, and brain lesions on mental processes are of recognised importance; while the effects, in particular, of the emotions on bodily activities have been emphasised by Crile, Cannon, and others. In the writer's opinion the bodily condition acts to some extent on the ideational processes and content through the affects, especially in the insane. From the biological point of view the relations between body and mind are in principle almost as simple as those between body and any other function.

Environment as a cause of psychic activity has been too much neglected: it acts upon the unit, which reacts to it. Any given unit will react to the extent of its capacity for reacting, and this is determined by its structure. The chief environmental factors are matter and modes of energy (light, sound, heat, etc.); other living creatures; *relations* of various kinds—genetic, social, business; law or necessity; obligations and rights. Psychology cannot adequately study the mechanism without a knowledge of the nature of the stimulus any more than physiology can adequately study the mechanism of digestion without a knowledge of the composition of foodstuffs.

Every biological unit is not only in an environment, consisting of these factors, but each one is at the centre of its own environment, and is itself part of it. It may be regarded as consisting of a set of concentric circles or spheres, each representing a limited situation, the factors of which act with greater or less force upon the unit at the centre, and to which the unit responds with more or less activity, physical and psychical. The inner circles—the immediate surroundings—are constantly changing, and require constant adjustment on the part of the individual: the remoter ones, as a rule, change less and require, therefore, less adaptation. In psychiatry, for example, it is necessary to study the patient's total reaction to his total environment.

"The biological point of view—that every psychic event is a reaction of an individual—if consistently followed and applied will correct a tendency, prevalent to some extent in most if not all psychologies, very common in James's psychology, and fairly running riot in the writings

of the Freudian school, to personify, as it were, or to make independently acting entities of the psychical functions. Making all due allowance for a proper use of analogies and of abstractions to avoid descriptive phrases and periphrases, and for literary leavening of an otherwise perhaps heavy dough, there yet remains enough of such usage to indicate a haziness of conception on the part of the writers, and to becloud for the reader a subject not too clear at best—not to mention its scientific inexactitude."

The unity of the "ego" is determined by the facts that it is the same organism which reacts at successive times, that each experience is recorded in the same individual (not in any other), and that the organism can recall the content of most of these experiences by subsequent psychical activities. Partial or split personalities may be explained on the hypothesis that the individual cannot recall or make use of large groups or sets of experiences, and can react in more than one way at a time.

In answer to the objection that his view may be considered purely mechanical or fatalistic, the author says that, though the individual *must* react to the environment, there are yet many possibilities of reaction: and he can, even must, choose which of the possibilities to carry out. There is a compromise between free-will and determinism. "The individual *must* react, but has a measure of choice—freedom of will—as to *how* it shall react, *i.e.*, as to *what* reaction it shall make."

HUBERT J. NORMAN.

The Religious Problem and Psychical Research (*Le Problème Religieux et les Sciences Psychiques.*) (*Revue Philosophique, April*, 1916.) *Boriac, E.*

The psychic sciences constitute an attempt to organise the study of various mysterious mental and moral phenomena which occur in human life. In so far as the religious life offers numerous examples of these phenomena, it is natural to ask if those sciences, which have taken such phenomena for their special study, might not be called upon to furnish useful or even indispensable elements for the solution of the religious problem. The whole of these sciences may be resumed under three headings, often confused though actually quite distinct, *viz.*, hypnotism, animal magnetism (including telepathy), and spiritualism. Hypnotism —including suggestion, states of torpor and unconsciousness, and dissociations of consciousness (Janet)—deals with phenomena which are reducible to laws and which do not oblige us to assume the existence of causes or faculties other than those which are already known to exist. Animal magnetism also, a condition uncertain and contested, does not imply conceptions which compel us to depart from the sphere of nature, though it assumes the intervention of a force as yet unknown, more or less analogous to the physical forces, light, heat, and electricity. Spiritualism, on the other hand, deals with phenomena—or claims to do so —outside the sphere of nature altogether, and passing into a plane of activity habitually separated from normal life and activity.

Having defined and described the phenomena in question under these three categories, the writer proceeds to the discussion of their