also powerful factors in the production of arteriospasm. The rôle which glandular disturbance may play is shown by the cases where fits disappear at puberty and re-appear at the menopause. In some cases of epilepsy the intoxication appears to be of the same nature as anaphylactic shock. The marked fall in the leucocyte count and the sudden drop in the blood-pressure before an attack suggest this. The substance to which the patient is sensitive may be exogenous (food) or endogenous (auto-intoxication). Tinel and Santenoiise have shown the existence in their patients of alternating periods of sensitiveness and immunity (or insensitiveness). The sensitive period is one of sympatheticotonia. The beneficial action of luminal is probably due to the modification of the vagotonic state and to a tendency to production of the sympatheticotonic state.

Some light is thrown on the treatment in epilepsy by these conceptions of cortical inhibition, arteriospasm, and anaphylaxis. Efforts to prevent or minimize vasoconstriction of the cerebral vessels (such as by extirpation of the cervical sympathetic or the suprarenal gland) have produced no definite results. The fact that the fits disappear during acute infectious illnesses, and after injection with such sera as antituberculin and antirabbits, indicates that the more hopeful method may be by protein therapy. Some results have already been reported after injections of peptone and milk, but they have been inconstant and unreliable.

As regards drugs, gardenal acts by suppressing the vagotonic state, whilst the bromides and potassio-borico-tartrate act by lowering the excitability of nerve-cells. Hartenberg used large doses of strychnine in the hope of overcoming the state of cortical inhibition, but his results were only temporary. Doses of two to five minims of liquor strychnina, however, are said to be often beneficial in petit mal, and its use may be alternated with that of caffeine, which has a similar pharmacological action.

W. JOHNSON.

Psychopathology.

PSYCHOLOGY.


This is an analysis of a summary of last words of distinguished people. The author points out that three kinds of psychologic deaths should be differentiated: (1) Where there is little or no delirium, and intelligence perseveres, to the end becoming very acute; (2) When the mind is in a mixed state between reason and delirium; (3) Where there is loss of consciousness with delirium.

The general consensus of opinion appears to be that the dreadfulness of death and its physical pain are for the most part imaginative. The
analysis is given in tabular form, showing the profession and number of persons, average age, manner of deaths (subdivided into death by violence and by disease), painful and painless deaths, and so forth.

The second part of the table deals with the mental states of the dying persons, and shows the respective numbers who have spoken words indicating various moods. The general results may be quoted as follows: Persons of religious profession show the largest number. The great majority of men who become eminent must live at least fifty years. Royal and military personages show the lowest average age, owing to the large number of deaths by violence, which partly affects also the religious people, statesmen, and women. Apart from the factor of death by violence, it is seen that poets and artists die the youngest. Pain at death appears of relative unimportance. About 17 per cent were sarcastic or jocose—indicating a high degree of mental control. More than twice as many were contented than were discontented, according with the figures showing absence of pain. Statesmen and women used many more words than the other classes.

R. DANSIE.

[54] The nature and development of the sentiments.—CHARLES S. MYERS. Psyche, 1922, ii, 196.

Having pointed out that A. F. Shand was the first to apply the term ‘sentiment’ to certain large mental systems, particularly love and hate, Dr. Myers proceeds to show how McDougall has amplified this work more particularly in regard to the psychical origin and physiological concomitants of the sentiments. McDougall regards the sentiments as tendencies to experience emotions, but Myers is unable to accept this view. He regards ‘love’ and ‘hate’ as indicating definite feelings. In considering the origin of the sentiments, he cannot accept McDougall’s contention that the ‘rudiment’ of a sentiment may be “formed by the association of a single emotional disposition with the idea of some object”.

Sentiments may unquestionably be innate. The rudiment of the sentiment feeling of love is compared with the innate feeling of positive interest which an animal has for its young. The special interest becoming attached to a specific object when a single emotion is repeatedly attached to it, is a ‘rudimentary sentiment’. The author believes that any particular sentiment is fundamentally the same, though modified profoundly in different individuals. A rudimentary sentiment involves a specific feeling and has an affective origin; it is not a mere psycho-physiological structure or disposition to any single emotional feeling. The complete evolution of a sentiment requires the full development of free ideas; the rudimentary sentiment may be compared with the dislike of an animal or young child for any object. All grades of sentiment feeling are recognizable. Sentiment feeling develops to maturity in connection with the emotions belonging to its system, but cannot be identified with its emotional systems.

Drever is mistaken in calling a phobia a ‘simple sentiment’. The relatively uncontrolled characteristics of the phobia are the distinguishing marks of the complex. The author agrees with Rivers’ view, that
the complex differs from the sentiment in being a 'suppressed body of experience'.

The foundation of the sentiment is found in the affective appeal made by the object to the subject's attention. It may, as Shand has illustrated, develop new feelings within its system, and is modified by the emotion coming within its sphere. The function of the sentiment is to prevent disorderly action of the emotions, just as the emotions prevent disorderly appearance of instinctive activities.

Robert M. Riggall.


The author discusses the inadequacies of all the theories, and illustrates his remarks by quoting from those of Spencer and Bergson. Spencer stated that laughter affords an outlet for surplus nervous energy, escaping by the motor nerves in most frequent use, those supplying the muscles of speech and respiration. This theory is inadequate, because laughter occurs independently of this escape of energy. Bergson states that the essential function of laughter is disciplinary. Professor McDougall points out that this theory no more covers the essential facts of laughter than Herbert Spencer's. They both fail to answer the question, For what end did the human species acquire this capacity for laughter? Laughter is a highly complex co-ordinated series of movements, maintained by an impulse so strong and definite that it often defies the control of the will. The author proceeds to consider the conditions which excite laughter and the condition of laughter itself. Laughter interrupts the train of mental activity; it diverts or rather relaxes the attention, and so prevents the further play of the mind upon the ludicrous object. So powerful is laughter to interrupt conative process, that its more intense degrees arrest well-practised and habitual bodily actions; and the hearty laughter collapses, temporarily incapacitated for all mental or bodily activity. Secondly, the bodily movements of laughter hasten the circulation and respiration, and raise the blood-pressure; and so bring about a condition of euphoria which gives a pleasurable tone to consciousness.

Professor McDougall does not think that laughter always expresses pleasure; he thinks that laughter has been wrongly regarded as the normal expression of pleasure or the more intense degree of the feeling which is expressed by the smile. This he states is unquestionably the normal expression of pleasure. Although admitting that we are often pleased when we laugh, he contends that the things we laugh at are essentially displeasing, and that they would, in point of fact, displease us if we did not respond with laughter, inasmuch as they consist in the minor defects, mishaps, and misfortunes of our fellows. Laughter is primarily and fundamentally the antidote of sympathetic pain. The capacity of laughter has been acquired by the individual as a protective reaction against all the minor pains of his fellows.

In summing up, Professor McDougall states that laughter is an instinctive reaction of aberrant type. The objects which primarily excite
this instinct are such actions, situations, and aspects of human beings as would excite in us some sympathetic pain or distress, if we did not laugh. The biological function of laughter is defence of the organism against the many minor pains to which man is exposed by reason of the high sensitivity of his primitive sympathetic tendencies. This defence is achieved in two ways: first, the arrest of the train of thought; secondly, the bodily stimulation resulting from laughter.

Robert M. Riggall.


In this important paper the author devotes himself to a critical review of the modern theories of psychology and psychotherapy. He points out the difficulty obtaining in all psychological work as opposed to the investigations carried out in other fields of scientific research, that it is practically impossible to apply any strict standards of measurement to the processes of the mind, and that, consequently, the vital test of verification cannot be satisfied in regard to the various hypotheses and theories which underlie some of the modern conceptions of the mind.

In his opinion psychological knowledge must be brought into accord with the facts observed along the two broad avenues of natural investigation, in both of which the mind finds an integral place, and between which it forms the connecting link. On the one hand there is the field of biology, where the mind is to be considered as embodied and in relation to the physical organism; on the other, depending on the fact that the mind is fundamentally the instrument of all knowledge, there is the field of philosophy, and in regard to this latter the author insists that whatever system of ethics or of philosophy may be held, there must be assumed an insight into moral values which grows in the course of life. Any theory, therefore, which ignores the basic features of either biology or philosophy must be examined with scrupulous care before it may be used indiscriminately as a method of treatment.

Dr. Brown then deals at length with the theory and the method of psycho-analysis, his main criticism being directed towards the psycho-analytic hypothesis which sets out to explain both the method of free association and the results which are obtained by its aid. "Great as is the value of these theories for psychopathology, blind uncritical adherence to them on the part of inexperienced disciples is wholly detrimental to the science."

To his mind the problem of the relation of suggestion to psycho-analysis goes right to the heart of the difficulty, and he develops his argument showing how the factor of suggestion must inevitably enter both into the theory of the causation of the morbid states and into the method of free association used to elucidate and treat them. As regards the method, he contends that there are two desiderata aimed at for the successful prosecution of an analysis which are ultimately based upon the factor of suggestion, and whose raison d'être can only be found in the processes involved in the action of suggestion. In the first place suggestion as a form of treatment per se can be applied formally by the placing of the
patient in an attitude of relaxation combined with the assumption of a mental state involving the abeyance of the will in regard to the conscious determination of the thought processes, and this mental and physical attitude is that necessary to the course of the analysis. Secondly, suggestion may be applied informally by the establishment of a certain relationship between the physician and the patient, and the establishment of the so-called transference is again an integral part of the analysis. Bearing these considerations in mind, therefore, it is clear that the Freudian hypothesis which eliminates entirely the factor of suggestion in its explanations must be viewed with scepticism.

The author finishes with an appeal for the bringing to bear of a more general philosophic outlook in the treatment of cases, so that the patient may have a reliable and sound 'autognosis' upon which he may rebuild his personality.

NEUROSES AND PSYCHONEUROSES.


McDougall deplores the widespread and deeply-rooted prejudice existing against the more modern conception of functional disorder which has hindered the development of psychiatry, and especially so in England. He sees herein an aspect of the philosophical problem of structure versus function. The biological advances of the nineteenth century became dominant and popular, and seemed to settle the question in favour of structure. Other late discoveries seemed to confirm the point, so that research turned almost wholly to attempts to discover defects of brain structure in all mental disorder. Though some good results have accrued for psychiatry, it has been a period of stagnation. Thus organic neurologists and organic psychiatrists have existed, while the neuroses were neglected by all with a few distinguished exceptions. Through the influence of the war, which produced such an immense number of severe neuroses, and through the work of the psycho-analysts, such a state of affairs is being rapidly abolished. The claim of functional disorder to a place of equal importance with the organic disorders must be fully recognized. The human organism has to work under varying environmental conditions, and functional disorder arises when the environmental changes demand adjustments which exceed the organism's power of self-regulation. Purpose implies mind or mental activity, and such operations go on on very different planes of consciousness. Functional disorders are commonly the expression of subconscious purposes, or of the harmony of conflicting purposes which may be wholly or in part subconscious. It is therefore through mental influences that functional disorders are brought about; that is to say, they are psychogenie. In the emotional disturbances of the more chronic kind we tend to dwell on the bodily changes, losing sight of the essential fact that the mental change was the primary condition. It is in relation to the psychoses that psychogenesis is of greatest interest, and in dementia praecox the problem presents itself most definitely. Jung and