
From the authors' experiments, they conclude that in general the injection of adrenalin is not sufficient to produce an emotion. A 'cold' emotion may be aroused, but the lack of any object or reason for the emotion usually deprives it of its genuineness. In a few cases, however, the injection with its subsequent bodily symptoms is adequate to produce a genuine emotion; the mere bodily concomitants are sufficient for an emotional state without the presence of any object or reason.

A few theoretical implications are ventured upon. An analysis of the conscious emotional state reveals its dependence upon the following possible factors: (1) A primary autonomic reaction centred in the autonomic nervous system and involving changes in the vasomotor system, the respiratory system, the viscera, and certain peripheral changes such as sweating and muscular tremor. (2) Secondary behavioural reaction patterns, both instinctive and acquired, dependent upon the cerebrospinal nervous system. This includes such reactions as flight, attack, facial expression, and vocalization. (3) An intellectual content. By this is meant the presence in consciousness of some object or situation to which the emotion is directed and round which the emotion is intellectually organized. This involves the active participation of the higher logical processes, probably centred in the cerebral cortex. The usual emotional state seems to involve a combination of the first and third of these. However, as the only criterion we have of a conscious emotional state is the subject's acceptance of it as such, the writers believe, on the basis of their results, that the first is the only sine qua non for an emotion, for it may in some cases suffice to produce the emotional state. Such cases, nevertheless, are rare.

C. S. R.

PSYCHOSES.


A statistical study in 1,099 cases of manic-depressive psychoses, with 1,408 cases of schizophrenia and 496 cases of general paresis as controls leads to the following conclusions.

Delusions are absent in 43 per cent. of the males and 41 per cent. of the females in the manic-depressive group as compared with 10 per cent. of the males and 7 per cent. of the females in schizophrenia, and 39 per cent. of the males and 42 per cent. of the females in general paresis. The most common type of delusion in the manic-depressive is the persecutory type,
which was present in 20 per cent. This was likewise the commonest in schizophrenia, there being 54 per cent. of the males and 58 per cent. of the females with them. Persecutory delusions in general paralysis were of much the same ratio as in the manic-depressives, but males showed 27 per cent. and females 12 per cent. of grandiose delusions indicating that these are the most common type in this psychosis. The schizophrenic group showed a consistently higher percentage of religious and erotic delusions than did the manic-depressives, whereas the grandiose and hypochondriacal showed no such significant differences. Marital condition apparently had little to do with the type of delusion; and as to age, schizophrenic delusions were less frequent in the younger cases. In the manic-depressives there were more cases of superior intelligence with no delusions than would be expected. There was little correlation between delusions and somatic data but much between delusions and hallucinations.

C. S. R.


From röntgenological observations in 96 cases the following conclusions were reached.

Definite changes in visceral function occur in manic-depressive psychoses. In the manic phase the position of the viscera is from one to two inches higher than in the depressive phases. Hypomanic patients present a marked increase in visceral tension and motility. In manics visceral function has already passed the limit of acceleration and begins to be retarded. Depressed patients present a marked decrease in visceral tension and motility. Gastrointestinal hypotonicity and hypomotility are most exaggerated in those depressed patients who are described as being retarded, hypochondriacal, confused or perplexed. The average time for a hypomanic to evacuate a bariumized meal is 47 hours. The average time required for a depressed case to do so cannot be determined, since 68 per cent. of these retain barium or food residue over a longer period than five days. Without medical aid some depressed patients retain food residue for a period longer than two weeks.

C. S. R.


From his study the author concludes that schizophrenics exhibit prepsychotically an inferior learning when compared with a like number of manic-depressive patients. Before the onset of the psychosis they do not go as high in grade status in school as the manic-depressives. Special
abilities in art and music are more in evidence among latent schizophrenics than among those students who later become manic-depressives.

C. S. R.


The conclusion of the authors is that there is no characteristic histopathology of the brain in dementia praecox. The most constant feature was a condition of fibrosis affecting the solid viscera, demonstrable both macroscopically and microscopically. The kidney first and the spleen second bore the brunt of this fibrosis and these two organs invariably showed the effects of this process microscopically. The other organs were affected to a lesser extent and tended to exhibit individual variation. In the experience of the writers the usual order of involvement is: liver, adrenal, testis or ovary, thyroid, pancreas, pituitary, pineal gland.

C. S. R.


A study of these results show that, although there are in general a number of small deviations from the normal, it is impossible to formulate a definite picture of the somatic changes in any one type of psychosis as opposed to another. Very little parallelism was found between mental and bodily changes and the slight abnormalities found were probably to some extent to be correlated with the ill-health due to neglect of the bodily functions associated with the mental state of the patient.

No gross renal abnormality was present but cases showing slight abnormalities were somewhat high. The determination of the basal metabolic rate gave results which were not satisfactory on account of the fallacies due to difficulties with the patient. The blood-sugar and sugar tolerance tests agreed in their results with the findings of other workers in showing a tendency to hyperglycaemia. The acid-base equilibrium was tested by means of the estimation of the hydrogen-ion concentration of the blood and urine, the carbon dioxide combining power of blood and the carbon dioxide tension of alveolar air. As regards the pH of the urine, no urinary acidity was noted except in two cases associated with acetonuria and glycosuria. This fact is of interest from the point of view of the acidosis
ABSfRACTS

considered by some people to be common in psychotic patients. Mild ketonuria was present in 20 per cent. The hydrogen-ion concentration of the blood gave similar results to that of the urine. The investigations into the carbon dioxide tension of the blood and in alveolar air yielded negative results. Examination of the digestive functions gave many interesting findings. The barium meal showed a preponderance of mild stasis but no evidence of any need for surgical interference. The results of the fractional test-meal could not be correlated with any particular type of psychosis. A striking feature was the absence of any gross abnormality when compared with the prevalence of complaints referred to the digestive functions. It was evident that a study of these necessitates the combination of clinical with physical and chemical methods. The blood showed various abnormalities which singly were trivial but significant when regarded as a whole; 58 per cent. showed secondary anemia and absolute leucocytosis was low. The examination of the Schilling index proved disappointing in its results, as was perhaps to be expected in the absence of any gross sign of infection. The investigation of the autonomic nervous system gave anomalous results and no definite grouping could be made in this direction. The pharmacological tests showed that the depressed cases tended to show a vagotonic reaction and the manic group a sympatheticallytonic one.

It is relatively futile in the present state of our knowledge to add to the already too abundant hypotheses explanatory of mental disorders. It may be suggested that the obvious deviations from the normal found in this study may have as their basis some changes in one or more of the fundamental biochemical reactions of the body, and especially of the central nervous system itself, changes, for example, in tissue respiration and metabolism.

C. S. R.


This reflex, being an inevitable response and outside voluntary control, can be used to supply objective evidence of affectivity. A parallelism was shown to exist in psychotics between the affective state, as determined by the galvanometer, and the hyperglycaemic index. States of increased emotional tension and consequent increased galvanic reactivity were associated with a sufficient increase of functional activity to cause a rise in the index. Conditions in which clinical signs of increased emotional tension were accompanied by any rise in the index were found to give normal or decreased galvanic reactions. Like the index, the affectivity as shown by the galvanometer was found to depend, not upon the type of psychosis, but upon the degree of emotional tension present at the time of the test. The percentage
number of the deflections obtained during the word-association test varied
approximately with the affectivity of the subject and can fairly be used as
a means of comparison between different patients, provided the sensitivity of
the galvanometer be kept constant.

C. S. R.

PSYCHOPATHOLOGY

[33] Alzheimer's disease: Its occurrence on the basis of a variety of
etiological factors.—K. Lowenberg and D. Rothschild. Amer.

Two cases of Alzheimer’s disease are reported. Although atypical in some
respects, clinically and pathologically there were adequate grounds for
classifying them under this heading. In the first case the Alzheimer disease
picture was superimposed upon a chronic syphilitic meningitis in a
feebleminded person. In addition, the brain showed cerebral hemiatrophy.
This was thought to represent the anatomical substratum of the feebleminded-
ness. In the second case there were certain clinical features which seemed
entirely inconsistent with a presenile disorder. Here the etiological factor
was regarded as toxic. These observations, taken in conjunction with others
in the literature, lead to the conclusion that Alzheimer’s disease is really a
syndrome with a multiplicity of etiological factors. The majority of the cases
must still be brought into relation with atypical senile processes. However,
there is a smaller group in which the causative agents appear to be toxic or
organic diseases that are clearly independent of senility or allied conditions.

C. S. R.

[34] Pick's disease (circumscribed senile atrophy) and Alzheimer’s disease.

A married woman, whose family history was negative, began to show
definite signs of failing memory at the age of 56. She had previously been
healthy, capable and efficient, but had always been a little absent-minded.
Forgetfulness and periods of confusion gradually increased, necessitating
certification at the age of 59. Later she showed agitation, extreme confusion,
complete disorientation and incoherent chattering. Profound dementia was
established and death ensued at the age of 62. The terminal state
was characterized by epileptiform convulsions. The brain showed gross
atrophy without regional emphasis. Arteriosclerosis was absent. Histol-
ogically, numerous senile plaques were found scattered throughout the
cortex. There was marked diminution in the number of nerve-cells.
Alzheimer's fibrillary changes were also present.

C. S. R.