

thetical results are compared to the actual results revealed by the tables it is found that there is a fair degree of concordance. There is, especially, no clear case of a nomadic daughter whose father is known to be non-nomadic.

It has been argued that nomadism may be regarded as an essentially male secondary sexual character, like the beard. The author seems justified in putting aside this hypothesis since nomadism is by no means confined to males. In certain matings daughters as well as sons are nomadic, so that the distribution of nomadic traits among the offspring may be regarded as a function of the particular mating.

Nomadism is frequently associated in the same family, and even the same individual, with abnormal mental and nervous states. Davenport finds "extraordinarily common" periodic psychoses with depression and frequently suicide, fits of temper, migraine, epilepsy, hysteria, sprees, and sexual outbreaks. All these states are marked by periodicity, and lead to the conclusion that nomadism is a trait that belongs especially to families subject to periodic emotional disturbances. Nomadism is not therefore to be regarded as a "symptom" or "equivalent" of epilepsy, hysteria, etc.; the relation is one of concomitancy. "The nomadic impulse is, in all the cases, one and the same unit character." Nomadism is associated with other sorts of periodic behaviour because we are concerned with an individual who belongs to a "race of periodics" whose inhibitions are from time to time paralysed. Nomads showing feeble-mindedness and dementia belong to a special class. They lack the inhibitory mechanism, so that their nomadism is no longer explosive but chronic, like that of the child or the chimpanzee.

HAVELOCK ELLIS.

2. Clinical Neurology and Psychiatry.

Inheritance of Temperament. (Publication 236 of the Carnegie Institution of Washington, 1915.) Davenport, C. B.

The author here seeks to analyse the distribution in families of temperament, as expressed in mood, and to test the hypothesis that it is dependent on heredity. Mood is divided into two main classes (as seen in manic depressive states): the hyperkinetic or exalted, and the hypokinetic or depressed. The hyperkinetic temperament is divided into two grades: a less developed called nervous (and sometimes sanguine), and a more developed called choleric. The hypokinetic temperament is likewise divided into two grades: a less developed called phlegmatic, and a more developed called melancholic. In some families there is a prevailing tendency to the first class of conditions, and in other families for the second class, while yet other families show a mixed state. How can we bring under one general scheme the inheritance of these various types of mood? After several trials the following hypothesis was selected to test. There is in the germplasm a factor E , which induces the more or less periodic occurrence of an excited condition (or an exceptionally strong reactivity to exciting conditions), and its absence e , which results in an absence of extreme excitability. There are also the factor C , which makes for normal

cheerfulness of mood, and its absence c , which permits a more or less periodic depression. Moreover, these factors behave as though in different chromosomes, so that they are inherited independently of each other and may occur in any combination.

To test the hypothesis 89 family histories (with 146 sufficiently described matings and 629 offspring) were available, and the pedigree charts of all these families are reproduced. They were obtained independently of any hypothesis, and none were rejected as opposed to the hypothesis. The various kinds of matings and their inheritance are elaborately tabulated and discussed. It was found that the proportion of non-conformable cases is only 0.95 *per cent.* Of 135 offspring of a manic parent all were excitable but six. With neither parent excitable none of the children are excitable. With neither parent depressed the children rarely are. The children of one depressed and one not depressed parent are not depressed. Davenport holds that his tables strongly support the conclusion that there is a marriage selection against similar temperament, and a preference in mating for a dissimilar temperament.

A special investigation of suicide was made in this connection. Suicides mostly fall into the hyperkinetic or the hypokinetic group, to the former at least as often as to the latter. In the hyperkinetic cases a vivid idea appears, often of hallucinatory nature, and in the absence of inhibitions is reacted to. Most threats of suicide belong to this class; the strong emotion is present, there is violent action and violent language, but the inhibitions remain too strong. The hypokinetic are over-inhibited, but in them also suicide occurs, the mental anguish of insufficiency and unworthiness seeking relief in death. Many arterio-sclerotic cases ending in suicide belong here. The examination of forty mainly hyperkinetic families showed that the hyperkinetic disposition rarely skips a generation; it could frequently be traced through three generations, which is about as far as human memory extends. Out of the forty families, in eighteen parent and child both committed suicide. In hypokinetic cases the inheritance of the suicidal tendency is less clear because less easy to trace, and it is probable that arterio-sclerotic suicide, like arterio-sclerosis itself, tends to run in families. While hyperkinetics tend to use any method near at hand and often inadequate, like jumping out of a window or choking with string, hypokinetics adopt more deliberate and more effectual methods like shooting and hanging.

The author has some remarks on the bearing of his investigation on psychiatric doctrines. He is opposed to the tendency to regard mental troubles, whether organic or more especially functional, as "disease," and he deprecates the importance attached to diagnosis. Records show that a large proportion of cases do not fit into any main functional types, and it is not uncommon for a patient to be admitted three times in succession with a different diagnosis every time. "Now, where there is so much doubt as to how the 'diseases' are to be differentiated, it is fair to doubt if they are entities. The conclusion is forced upon one that we are dealing with complexes of behaviour, with syndromes." These so-called "diseases" may indicate an incompatibility with the highest requirements of society. "But these

requirements are, after all, rather narrow and rigid, and it would be strange if, amid the vast range of human characteristics, many combinations did not occur that are far from ideal." The classical dementia præcox shows a complex of traits that are separably not unknown in some degree among persons who pass for normal. Studies of inheritance point to the conclusion that "the functionally insane are mosaics of chance, accidental associations of socially undesirable hereditary traits. As a corollary it seems probable that the Kraepelinian or any other classification of the functionally insane is rather harmful than otherwise, since it distracts attention from the principal points, such as periodicity, temperament, inhibition, the destruction of neurones in the cerebrum, and the specific control of behaviour by internal secretions."

HAVELOCK ELLIS.

The Neurasthenic Element in Disease. (*Glasgow Med. Journ.*, February, 1916.) *Craig, James.*

The author's object in this paper is to emphasise afresh the fact that neurasthenic symptoms are in some cases the result of underlying disease, organic or other. Half a dozen cases are narrated in illustration of the thesis. The author summarises his conclusions under four heads: (1) Since the early symptoms of disease are often remote from the organ really affected, it is necessary always to make observations away from the point to which the patient calls attention; (2) it is even yet more important to enter sympathetically into the patient's emotional attitude, in order to gain the knowledge that can only be acquired by tracing its multiform ramifications; (3) the acuteness of the neurasthenic symptoms is parallel to the gravity of the disease and on a different level from, for instance, the *spes phthisica*; (4) a very wide and broad view must be taken of the treatment.

HAVELOCK ELLIS.

The Pathogeny of Essential and Cerebral Epilepsy [*Pathogénie de quelques formes d'Epilepsie dites Epilepsie Essentielle et Epilepsie Cérébrale*]. (*Nouvelle Iconographie de la Salpêtrière*, December, 1915) *G. C. Bollen.*

After an extensive series of observations, of which he gives particulars, the author concludes that essential epilepsy is neither caused by intestinal putrefactions (abnormal fermentations, etc.) nor by intoxication by purins, nor by retention of, hypersensibility to, or intoxication from chloride of sodium.

His experiments with the extracts of the ductless glands in the treatment of epilepsy give the following results. Extracts of the thymus, adrenals, pituitary body, liver, pancreas, testicles, and ovaries, separate or combined, have no effect, or very little, on the course of the disease. On the other hand, magnificent results were obtained by the administration of the combined extracts of the thyroid and parathyroid glands.

Seeing the probability that in the action of the secretions of the ductless glands the ferments play an important rôle, and that in the dry state these ferments may lose the whole or part of their activity, the author always employed fresh extracts in his experiments with the whole

series of glands mentioned above. Presuming also that the hydrochloric acid of the stomach exercised a similarly deleterious action on the ferments, he administered the extracts by the rectum.

A considerable number both of recent and chronic cases of epilepsy were cured by the administration by the rectum of the freshly prepared, combined extracts of the thyroid and parathyroid glands. In every case the bromide of potassium, which had been given previously, sometimes in large doses, was immediately stopped.

Among the epileptic patients subjected to this treatment a certain number were not benefited. These fell into two groups.

(1) Those suffering from primitive cerebral disease—internal hydrocephalus, tumour of brain, infantile cerebral paralysis, tumour of the pituitary gland, solitary tubercle, etc.—which was accompanied by epileptiform attacks.

(2) Those which presented no characteristics of primitive cerebral disease, and in which the clinical symptoms did not allow one to diagnose any other malady than epilepsy.

In this latter group it was possible almost always to prove that the patients had in their childhood suffered from convulsions, either spontaneous and accompanied by fever, or following upon infectious diseases such as typhus, pneumonia, scarlet fever, or even whooping cough or measles. The author considers that the epilepsy in these cases is consecutive to a diffuse inflammation of the brain (cortex), or of the dura mater, or both (chronic infantile meningo-encephalitis). To this form of epilepsy he applies the term cerebral epilepsy, confining the term, essential epilepsy, to cases in which there is no history of any past brain mischief, nor any *post-mortem* evidence of disease.

After reviewing at considerable length the various symptoms and physical signs, which *à priori* seem likely to aid in the differential diagnosis between cerebral and essential epilepsy as thus defined, the author comes to the conclusion that the two forms of the disease clinically resemble each other so closely that (excepting the action of the combined extracts of the thyroid and parathyroid glands) the only thing that during life can distinguish them is the past history.

The author then proceeds to review the evidence, which has been accumulated on the action of the interior secretion of the thyroid and parathyroid glands on the toxic products of metabolism, and he argues that when from any cause the influence of these glands is defective, the toxic products accumulate, and that epileptic attacks or explosions are efforts of the system to free itself from them. This is essential epilepsy.

In the case of cerebral epilepsy the thyroid and parathyroid glands may functionate normally, but the chronic meningitis or encephalitis so interferes with the circulation in the affected portions of the brain that the waste products accumulate locally and cause the epileptic attack, in the same way as in the essential form, in order to obtain relief from the toxic products.

The author sums up as follows :

(1) In the present state of science, essential epilepsy and cerebral epilepsy cannot, in the majority of cases, be clinically distinguished the one from the other.

(2) Cerebral epilepsy is produced by any disease of the meninges or of the cortex or deeper parts of the brain which, either by a general increase of the intra-cranial pressure, or by local processes of sclerosis, provokes troubles of the circulation in the cerebral cortex (venous hyperæmia).

(3) Essential epilepsy is a chronic auto-intoxication caused by the toxic products of alimentary decomposition and by the toxins proceeding from cellular metabolism, which, in consequence of the hypo-function of the thyroid and parathyroid glands, are insufficiently neutralised. As a consequence of hypo-thyroidism and hypo-parathyroidism, the secretion of the ferments of the intestinal tract and of the intermediary metabolism is very much diminished.

(4) In both cerebral and essential epilepsy the cerebral cortex, with its great affinity for numberless poisons of different origins, is slowly saturated with toxins. In essential epilepsy these toxins proceed from the metabolism of the whole organism and from the alimentation; in the cerebral form of the disease they come from the cerebral cortex itself, in which, consequent to the troubles of the (local) circulation, a lymphatic and venous back-wash is produced with an accumulation of the products of defective metabolism in the affected region.

(5) In all forms of epilepsy one must regard the attack as a reaction of the organism with the object of relieving itself of the toxins. The blood relieves itself of these toxins through the kidneys, lungs, and skin; later the cerebral cortex evacuates its share into the blood, which at that moment is deprived of toxins.

(6) In essential epilepsy the administration by the rectum of the fresh extracts of the thyroid and parathyroid glands, they being the organs with defective function, is sufficient to make the morbid phenomena of the disease disappear for ever.

This paper touches upon several points of great interest, but its principal value appears to be in the explanation that it offers of the disappointment which has been experienced in the administration of the dry thyroid extract by the mouth in cases of epilepsy.

J. BARFIELD ADAMS.

Nervous Debility (Débilité Nerveuse). (Nouvelle Iconographie de la Salpêtrière, December, 1915.) A. Austregesilo.

The author defines Nervous Debility as a diathesis, a constitutional state, or congenital predisposition, which is characterised by

- (1) The early onset of fatigue.
- (2) Irritability and instability.
- (3) Exaggerated emotionalism.
- (4) Suggestibility.
- (5) Rhythm and periodicity.
- (6) Prompt reaction to toxic agents.
- (7) Hereditary susceptibility to the action of toxic agents.
- (8) Vaso-motor and secretory reactions.
- (9) Debility of the gastro-intestinal apparatus.

The precocious onset of fatigue is the symptom most commonly met with among sufferers from nervous debility. It reveals itself in all spheres of work—mental, bodily, or visceral.

If the nerve cell be fatigued, two reactions manifest themselves, instability and irritability. The instability may be psychic, motor, or visceral, the first being the most common. As illustrating the psychic instability, the author points out that such patients have difficulty in fixing their attention, and can only do so for a short time. Motor instability shows itself in the muscles of the face—tendency to tics and other co-ordinated movements—and in the constant movements of the limbs and of the positions of the body.

Irritability is the constant result of the intoxication and fatigue of the nerve cells of the cerebral cortex, of the spinal cord, and of the sympathetic system. It manifests itself in outbursts of passion, ideas or emotions, in paræsthesias, neuralgias, or in frequent secretory troubles.

Exaggerated emotionalism is so constant a symptom among these patients that many authors regard it as the basis of neurasthenia. The phobias are a proof of this emotionalism. They generally appear to be a deviation of the natural instinct of self-preservation.

Having touched upon the vaso-motor reactions, and having dwelt at some length on the importance of the exaggerated sensibility of the digestive apparatus among these patients, the author passes on to the susceptibility which they manifest to the action of toxic agents.

Germs and poisons, he says, of no matter what origin, always seek the nervous system as the place where they can the most easily effect bio-chemical changes. The nerve cells of the sufferers from nervous debility have a hereditary susceptibility to the action of these agents. The son of an alcoholic is easily made drunk, delirious, or is thrown into convulsions, by a comparatively small dose of alcohol. The son of a syphilitic, who has escaped hereditary syphilis, has an accentuated tendency to nervous maladies, if he chances to contract the disease in question.

This remark of the author suggests a possible explanation of the fact that syphilis is not always followed by general paralysis. The son of parents untainted with syphilis may contract the disease, and yet escape general paralysis. The son of syphilitic parents, who becomes inoculated with the disease, will probably develop general paralysis, because, although he has never manifested the symptoms of hereditary syphilis, his tainted heredity has endowed him with "an accentuated tendency to nervous maladies."

In conclusion the author groups together three functional syndromes in his picture of nervous debility.

- (1) Neurasthenic reactions. (Neurasthenia.)
- (2) Hysterical or hysteroid reactions. (Hysteria.)
- (3) Convulsive or various motor reactions. (Epilepsy.)

In the first group the intoxicated nerve cell works lazily or abnormally, and the result is seen in irritability and precocious fatigue, and possibly in various anæsthesias, headaches, insomnia, etc.

In the second group the nervous disturbance is greater. Its essential character is suggestibility, and consequently the easy disintegration of the psychic personality of the sensitive, sensorial, motor, or visceral elements of the organism.

In the third group the reaction is stronger and affects the psychomotor sphere, manifesting itself by loss of consciousness and convulsions.

The nerve cell of the neurasthenic receives the toxin and works badly ; that of the hysteric is further disturbed in its function, but consciousness still commands psychic unity ; that of the epileptic receives the toxin, and its explosive reaction, with loss of consciousness, indicates the greater degree of the disturbance, and the easy disintegration of motor and psychic functions.

Alcohol, for example, according to the degree of its toxicity on the organism (I presume that the author means or includes the susceptibility of the nervous system to the action of the toxin), and according to the quantity, may cause alcoholic neurasthenia, alcoholic hysteria, or alcoholic epilepsy. *Mutatis mutandis* one may observe the same effects in the case of other exogenous or endogenous infections.

J. BARFIELD ADAMS.

On the Differential Diagnosis of Manic - Depressive Insanity and Dementia Præcox. (*Glasg. Med. Journ.*, vol. lxxx., Sept. 1913, pp. 185-192.) R. M. Marshall, M.D., Senior Assistant, Royal Asylum, Gartnavel, Glasgow.

"The terms manic-depressive insanity and dementia præcox were used by Kraepelin to designate two disease entities, which he considered were between them responsible for most of the states of mental disorder usually gathered together under the title, the psychoses." The psychoses are something more than states of mental disorder, and something less than disease entities ; they lie between them. Excitement, depression, delirium, and stupor are states of mental disorder which may arise during the course of many diseases, general paralysis, hysteria, epilepsy, the cerebropathies, constitutional and infectious diseases ; but acute mania, acute melancholia, anergic stupor, delirious mania, are psychoses. They differ from a state of mental disorder in so far as they are self-sufficient, and are not the expression of an underlying disease ; moreover, they run a fairly definite course, ending either in recovery or in dementia. The classifications of the psychoses have been unsatisfactory, and none of them has met with general acceptance. The most satisfactory method is that formulated by Kraepelin : and, in the opinion of Dr. Marshall, he "has done for the psychoses what Erb did for the amyotrophies." He emphasised the importance of dementia as a termination of the psychoses, and gathered those which ended in dementia into one disease category, dementia præcox, and those which did not so end into another category, manic-depressive insanity. The fact that dementia occurred predicated an organic change in the brain, so that dementia præcox was an organic and manic-depressive a functional disease of the brain. Certain states of mental disorder are common to both conditions : yet there are symptoms which render it possible to distinguish between them. In dementia præcox there is "inco-ordination of the individual psychical processes" : manic-depressive insanity depends on "a change in the mutability of the individual psychical processes." Normal mentality results from the co-ordinated action of the emotional, intellectual, and volitional processes, and is characterised by a certain congruity of thought and conduct. If there is inco-ordination of these fundamental processes,

incongruity of thought and conduct results. The nature of the incongruity depends on the mental process mainly responsible for the incoordination. The symptoms may be for a time emotional, intellectual, or volitional.

Emotionally the change may be manifested by disordered response to ordinary stimuli: the response may be absent or perverted. When absent there is a "general numbing of the emotions"—indifference, apathy. When perverted there is produced an emotion opposite to the one which should be aroused. The reaction may be paradoxical; or two conflicting emotions may be aroused. Transitory and evanescent emotional outbursts may occur which may pass off harmlessly or may lead to serious assaults.

Intellectually the disturbance is shown by disorganisation of thought. There is a general failure of the ideational responses, resulting in poverty of ideas. Patients lack initiative and spontaneity. Their conversational powers are limited. There may be incoherence. Those influenced by hallucinations or delusions "may manifest the disorganisation of their thought only when speaking about them."

Volition.—The numbing of thought and feeling renders conduct stolid and stereotyped. The failure of the succession of thought and the perversion of the emotions lead to anti-social conduct, to echo-speaking, and echo-acting. There may be fantastic, affected, or capricious behaviour, grotesque antics and grimaces, coining new words, or negativism. Negativism is defined as a state wherein the patient "persistently shows an opposite response to excitants from his environment."

In manic-depressive insanity the cardinal symptoms depend on modification of the mutability of the individual psychical processes. In the maniacal state their mutability is increased; in the depressive state decreased. But "however greatly the mutability of the emotional, intellectual, and volitional processes is modified, they are perfectly coordinated, and the mental life as a whole shows a normal congruity."

There is greatly increased excitability, violent outbursts readily occur. Underlying all these is a constant emotion of self-appreciation, and this colours all the products of thought. There is flight of ideas. Volitional activity tends to be displaced by automatic freedom of action. The patient is constantly employed but never finishes any task he takes in hand.

In the depressed phase there is diminished response. Volition and cognition are impeded. Instead of self-appreciation there is self-abasement. Depression fades gradually into depressive stupor, in which the impediment of thought and volition is nearly absolute.

If hallucinations and delusions complicate the excitement and depression, states of confusion result, the maniacal origin of which may be revealed by the presence of impediment of will and cognition, or automatic freedom of action and the flight of ideas.

Dr. Marshall is of opinion that dementia præcox runs a fairly acute course, terminating in a permanent dementia, which may to a certain extent be made good by a process of compensation. There may be remissions during the course of the disease, the patient enjoying fairly normal mental life. Second attacks, although rare, undoubtedly occur

Manic-depressive insanity is characterised by recurrence, interchange, or intermingling of the essential features of the maniacal and the depressive states. The statement that dementia does not supervene must be qualified. Mental weakness is sometimes seen where the disease came on early in life, and where the periodic attacks were severe.

If there is unequivocal evidence of "intrapyschic ataxia" during a state of excitement, it denotes dementia præcox. Defect in the congruity of thought is pathognomonic of a dementing process. Conversely, the presence, in an unequivocal state, of automatic freedom of action and the flight of ideas, supported by the history of several previous attacks completely recovered from, are equally sure signs of the excitement being maniacal. But maniacal states may usher in dementia præcox and obscure the evidence of psychic ataxia; and only a presumptive diagnosis of manic-depressive can be made without a history of previous attacks. A further complication is that in dementia præcox there are also remissions. Negativism may also be simulated in certain cases of manic-depressive insanity.

Although extended observation is often requisite before a diagnosis can be made, Dr. Marshall is of opinion that by psycho-analysis the early dissociation in thought, premonitory of ultimate dementia, may be detected; and that another important diagnostic method is that which depends on a due appreciation of the somatic changes in dementia præcox.

HUBERT J. NORMAN.

3. Treatment of Insanity.

The Treatment of Cases of Mental Disorder in General Hospitals
(Reprinted from the *Boston Medical and Surgical Journal*, vol. clxxx,
No. 17, pp. 637-642, April 23rd, 1914.) Philip Coombs Knapp,
A.M., M.D.

The author maintains the thesis that acute and borderland cases of mental disease can be received and temporarily cared for in general hospitals. He admits that mental patients are not looked upon with favour by the nursing staff or by the other patients, on account of—in many cases—their restless, noisy conduct. Yet almost all general hospitals must include at times among their inmates some patients who, in the course of treatment for such conditions as acute infections, accidents, etc., become turbulent and violent.

He reviews his experience, extending over four years, in dealing with patients who manifested some mental disturbance during their stay in the Boston City Hospital. Twenty beds were allotted for these patients. There was not, however, a special ward, but the patients were distributed in several wards. Excited patients were put in an open ward of eight beds, or in double rooms opening on a corridor. The doors were not locked, and access was free. About four hundred patients were admitted annually, chiefly adults. Patients exhibiting a variety of mental symptoms were thus treated; there were cases of alcoholism, epilepsy, general paresis, dementia præcox, manic-depressive insanity, senile dementia, etc. A considerable proportion of the patients were certifiably insane, and a number of them were eventually