JOURNAL OF PSYCHO-ASTHENICS.

The only periodical in the English language of general circulation devoted exclusively to the interests of the Feeble-Minded and of Epileptics. Published under the auspices of the Association of American Institutions for Feeble-Minded. OFFICERS: President, W. H. C. Smith, M. D., Godfrey, Ill.; Vice President, Chas. Bernstein, M. D., Rome, N. Y.; Secretary and Treasurer, A. C. Rogers, M. D., Faribault, Minn.; Official Stenographer, Mrs. Isabel C. Barrows, Boston, Mass.

Subscription, $1.00 per annum; single copies, 30c. Special rates for reprints and quantities of any one issue for distribution. Address communications to the JOURNAL OF PSYCHO-ASTHENICS, or to Dr. A. C. Rogers, Faribault, Minnesota.

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How Does an Egg Develop into an Animal?
KAHLBAUM in the year 1863 first made use of the term hebephrenia to
designate the mental disease which appears at puberty depending up­
on the developmental processes then taking place. His term paraphrenia
included the mental diseases which arise both at the rise and the involution
of the sexual life. In his characterization of the disease he seems to have
been somewhat indefinite so that one is left in doubt as to the cases to be
classified under the term.

The first accurate description of hebephrenia was made by
Hecker, (1) a pupil of Kahlbaum, in 1871. He defined it as a disease which
differs from other mental diseases in its clinical history and symtom-com­
plex which appears during adolescence but sometimes later in life. It is
quite rare being observed in only 14 out of 50 cases. Hebephrenia appears
usually at the completion of the changes of puberty from 18 to 22 years.
The clinical history is characterized by a stage of more or less developed
melancholy which is followed by a stage of more or less maniacal excitement;
following these is developed a peculiar dementia which is foreshadowed in
the first stage. The melancholic stage is superficial lacking the inten­
sity of true melancholy; mingled with sadness is a silly, excited mood.
The maniacal stage is characterized by silly actions and the dementia stage
appears to the laity as recovery, for no low degree of dementia is reached.
The patient appears to consciously will his silly talk and actions and is sometimes supposed to be simulating, and he not infrequently comes into conflict with the criminal law. The moral abnormalities give a picture often of moral insanity. Delusion is seldom found. The patient appears not to be in earnest in his strange actions but simply giving expression to his disordered phantasy. Elements of ideas of persecution and delusions of injury remain from the melancholic stage. In writing, the patient shows well the disturbance of expression; he repeats forms and terms of speech; wanders from the subject giving his present outer expressions and strange thoughts; runs on at great length; forgets connection; changes ordinary manner of speech which becomes distorted and twisted; shows predilection for strange, uncommon words; uses jargon, local dialects and mixtures of dialects; uses obscene words; lisps and produces hard sounds; wanders away from customary expressions showing a superabundance of words; has a tendency to sentimental and quasi-poetical diction mingled with scientific sentences and analyses, giving forth a stream of hollow and twisted phrases. In chronic stage there are many attacks of intercurrent mania and melancholy showing the morbid weakness and irritability of patient. While seeming to be normal in ordinary matters he yet shows mental weakness in more complex thought operations. Low grade imbecility and amnesia are not found but a medium stage of mental weakness is characteristic. Hecker thinks the disease as well marked in its course and symptoms as general paralysis.

On the nature and cause of the disease he has no hypothesis to offer; for him it is sufficient that such a clinical history and symptoms exist. The changes of puberty are not of etiological consequence but form the ground on which hebephrenia develops. So Hecker refers the symptoms back to normal processes observed at puberty. Why puberty should take the abnormal course is not shown. It is developed in those cases which have shown some earlier arrests of development which, however, may have been so small as to be scarcely noticed. Its distinction from idiocy offers no difficulty.

Schule(2) finds only two cases among 600 patients. The prognosis is bad. As etiological factors he finds the hereditary of most importance. As accompanying causes are found body diseases, as head lesions and masturbation. Change of character and bad raising also noticed. He thinks that the symptoms depend on the peculiarities of the period of puberty. He classifies hebephrenia under confusional insanity, and katatonia as hebephrenia with tension neuroses.

Sterz (3) found only 12 cases among 1000 patients (8W, 4M.). He regards hebephrenia as a symptom of psychic degeneration. Degeneracy is of the greatest importance both etiologically and symptomatically. Puberty is only an accompanying cause and is a critical time for individuals with a bad heredity. Psychoneuroses are found in all the life periods but they
have special characteristics in individuals with a bad heredity and the seriousness of the disease depends on the degree of degeneracy. First, degeneracy may be latent in childhood and the psychoneuroses of puberty first bring it to light. Second, a stronger degree of degeneracy will not be fully latent in childhood, psychoneuroses show this, and a degenerate condition will persist after the acute symptoms have subsided. Third, the degeneration may be deep-rooted. The psychoneurosis here is not a definite disease but simply this condition stirred up which remains as the basis of remission.

In the 12 cases there were 9 recoveries and 7 remissions. In 11, heredity bad in 7 cases on both sides. Somatic degeneracy apparent in 9 cases. Early life abnormal in 11 cases; weak-mindedness, 4; epileptic dementia, 2; psychoneurosis, 1; emotional excitability, 4. Hecker's symptom-complex not found neither any evidence for hebephrenic dementia. Disease characterized by its degenerate character. There are no typical processes; it is, in fact, a "symptomless symptom-complex." Symptoms are mixed up and confused but are characterized by impulsions, obsessions and convulsions.

Kraft-Ebing (3a) found hebephrenia simply a degenerate psychosis. It is rare, found 5 times in 2000 cases. Heredity bad in all. Stigmata of degeneracy found. Prognosis bad.

Tuke (4) finds puberty is often subject to psychic disturbances but not of sufficient consequence to bring the patients into an asylum. Is characterized by moral perversion and impulsiveness. It is rare.

Fink (5) considers hebephrenia a disease peculiar in its bad prognosis which progresses to apparent recovery but is followed after a longer or shorter time by remission. It is a degenerate psychosis developed upon a degenerate basis from the arrest of development. The heredity is bad in all cases. He gives twelve histories and found 16 cases among 1900 patients. The clinical symptoms bear the stamp of degeneracy while puberty, symptomatically, can be regarded as of second importance. The delusions are unaccountable and show many changes. The conduct of the patient arises from the delusions but is confused and impulsive. Degeneracy is indicated also by the periodic remissions, intermissions, the alternating exalted and depressed conditions and the sudden beginning and stopping of these phases. Puberty is the accompanying cause. The latent degeneration is called forth by the increase of psychic activity arising from the revolution of puberty, hence we get the peculiar sort of psychiatric disturbance, hebephrenia. For degenerate individuals hebephrenia is the most common sort of mental disease as he seeks to show by statistics. Hebephrenia arises as an idiopathic form of degeneracy but other causes, as acute somatic disease and severe mental shock, give rise to other forms. Intelligence comes to full development while the moral faculties are a tabula rasa, hence arise forms of disturbance which are difficult to differentiate from moral insanity. However, when hebephrenia progresses three
years it comes to psychic dementia and it does not have the intellectual cunning and sharp judgments of moral insanity. Hebephrenia differs from confusional insanity in the absence of sequence in the delusions, in the weakened thought and in the rapid approach of imbecility. Circular and periodic forms of insanity arise from the same degenerate basis as hebephrenia which is like them in that the dementia begins in exaltation and depression and differs in that it has a period of apparent recovery which, however, is not without defect. Hebephrenia differs from katatonia in the good prognosis of the latter, the symptoms are often alike but the spasm symptoms are of a different character. Hecker, in opposition to all later observations, finds it in 28 per cent of cases but his observations did not include the lower social classes. We find a greater per cent when we do not insist on the classical type of Hecker. For, following him, one must classify all cases as hebephrenia which show outbreak at puberty, the different forms of melancholia, mania, confusional insanity, and a rapid decline to dementia. Fink goes beyond Hecker and adds a peculiar condition of dementia to the characteristics of the disease, hence it includes a larger per cent of cases. Fink observed his cases a shorter time than Hecker.

Drosnes (6) in 1883 reviewed the literature and added two cases from the clinic of Prof. Merzejewski at St. Petersburg. He considers the peculiar form and course of the disease as due to degeneracy for he finds hereditary predisposition and degeneration in all cases. The mental disturbance appears as either psychoneurosis or degenerative disease according as the brain has developed normally or has been blasted by heredity and functions abnormally. And one must keep in mind whether the mental disturbance occurs when the brain has reached full development or is in the stage of childhood or youth. For the undeveloped condition of youth is equal to the degenerate brain as a cause for the mental disturbances of a degenerative character, for the liability to loss of the psychic balance is the same. Youth brings with it a condition which without hereditary blasting would show mental disturbances of a degenerative character. Hence Drosnes concludes that the chief role in the peculiar symptomology of the disease is played by sex and not by degeneracy.

Kahlbaum (7) in a paper on a peculiar form of moral insanity describes a case which led him to form a new symptom group. It is similar to hebephrenia since the disturbance is not so severe. It showed signs of degeneracy mostly due to hereditary blasting or alcoholism. The disease began in puberty with a change in character. The patient was suddenly given to stealing of which he could not be broken; relatives tried to get rid of him and to apprentice him to some trade, but to no use. The moral depravity was so great that the patient was not amenable to the ordinary relations and customs of life. This peculiar form of moral insanity leads him to form a new symptom group. It is similar to hebephrenia but differs in that
it has no acute stage at the beginning and that the weakness is not intellectual but moral. Hebephrenia is due to a weakness of the organ of perception. But both symptom groups show a peculiar purposeless conduct and perversity. He calls it "heboid." In a later paper (8) he reports two new cases and considers the disease curable. The patients were treated by proper disciplinary measures and the moral perversity was suppressed. The intellect was not damaged. The disease is characterized by insufficient, indifferent and irrelevant thinking; there is ability to learn well and to discuss well but there is shown also peculiar, inexact observation. However, progress in school-work is difficult. Bad heredity was clearly shown and when not observed there was brain disease in childhood. The patients showed many signs of arrested development or other nerve disturbances.

Schule (9) in 1886 described the medium and higher grades of feeble-mindedness one of the groups being named hebephrenic imbecility. It included cases in which the feeble-mindedness either followed or complicated the insanity. The children here, as a rule, showed a very marked bad heredity and after an early moral development, without apparent cause fell into mental decay and after recovery manifested a primary apathetic imbecility. In these individuals hallucinatory excited conditions followed slight somatic disturbances, as indigestion. At puberty appear periodic and cyclic excitments or periodic, irascible states and signs of moral insanity. The cycle regularly returns and leaves a feeble-minded, eccentric being or an irascible irritability. Masturbation is common. Attacks of the insanity of doubt are found. The peculiar hebephrenia, the insanity of puberty as described by Hecker and Kahlbaum, does not always arise on a feeble-minded basis. Etiologically, heredity plays the chief role, then come masturbation and head lesions and after these the extreme formalism and pendantry of the bringing up. The disease processes the author considers as a disturbance in the appropriation of the mental material presented during development. The disease processes limit further development producing a particular sort of imbecility. Schule characterizes this condition as well as the acute disease according to Hecker, showing as a basis a peculiar imbecility alternating with periods of apparent recovery and periods of excitement and continued mental decline. The outcome is bad in most cases. He notes suicide in one case. He mentions hebeprenia under hereditary neuroses and primary confusional insanity. In both he finds abnormal individuals who show from childhood various abnormal symptoms and inharmonious arrest of development. He differentiates two varieties, hebephrenia and dementia praecox. The hebephrenia is described according to Hecker. Dementia praecox issues in early mental death. In predisposed individuals it is characterized by loss of interest, the patient given to professional nothings; to idling around and smoking; forgetfulness, stubborness, to silly laughter; also to heterogeneous studies, to reading books on obsteterics, mental diseases, criminal law, politics and philosophy. They show a silly self-culture, ideas of grandeur
and persecution and given to scenes of violence. The ability declines until the patient is hardly able to act as a copyist.

Kowilewsky (10) describes hebephrenia as a degenerate psychosis, as the highest grade of neurasthenia. Its psychic peculiarities depend upon the life-epoch in which it occurs. The prognosis is bad. Results from a young and tender nervous system or irregular nutrition of it. He calls attention to its close connection with simulation.

Von Tschisch (11) in 1886 reported 14 cases among 680 patients. The disease manifests itself in the variety and abundance of the psychic life and by the striking inco-ordination and superficiality of all psychic acts. The latent germ of the disease is carried from birth or early youth and is here shown forth by change in the individual. Then develop a whole series of disparate and disconnected symptoms. The will gives no connection and control to the mental life. Sadness, joy, tears, and laughter follow quickly without cause. The psychic conditions are continually changing and attention is absent—the cardinal symptom of hebephrenia, which explains the clinical picture. It is stamped by mental weakness and by the characteristic, rapid advance to dementia. This differs from acute secondary dementia in that there is no great defect in the mental powers which the patient, however, is unable to use. There is an absence of all logic and sequence in the expressed delusions thus differing from paranoia, melancholy and mania. By proper discipline, can be made to disappear the peculiar habits and senseless delusions, the peculiar mimicry and childish tricks, but not always the twisted and impulsive speech. The so-called characteristic symptoms can be made to disappear, the patient being quiet in a hospital but giving much trouble at home. The disease differs from feeble-mindedness and idiocy by richness of mental life. The will is undeveloped and cannot regulate conduct, hence the patient is at the mercy of every motive. As to prognosis, it is possible by proper means to hold back for a long time the passage to deep dementia. He observed the rapid advance to dementia in three Jews but offers no explanation.

Mariet (12) divides the psychoses peculiar to youth into two groups: psychoses with the arrest of development and the simple psychoses of puberty. The perversion of intelligence delirium, without arrest of development when recovery does not follow, advances to dementia. Of the simple psychoses of puberty there are four groups: lypemania-stupor, katatonia, melancholia with stupor, chorea, impulsive and hysterical mania. Of lypemania-stupor he has observed eight cases. The course of the disease is as follows: A young person not fully developed in body begins to lose appetite, becomes weak and chlorotic, complains of headache, loss of sleep and different nerves difficulties. After such a prodromal period which may last a month, the mental disease suddenly appears generally on account of a small mental shock. Patient has terrifying hallucinations, sees armed men and different misshapen animals, has great anxiety, seeks protection, tries
to throw himself out of the window, is agitated, sings and speechifies. Body examination shows defective nutrition, vaso-motor disturbances, irregular temperature, quick pulse, anxious mood alternating with depression, hallucinations of all senses; he is restless and contrary. After a longer or shorter period, generally some weeks, the stupor is broken by excitement; he laughs, jumps around, talks. Flexibilitas cerea is noted but no tension as in katatonia. Recovery gradual after the stupor has lasted from a week to a month. Physical development is completed and the menses become regular. Prognosis, good. Mariet thinks that this disease is identical with the katatonia of the Germans. In respect to cause, puberty plays the chief role. At other times it follows causes which produce great exhaustion as childbirth, phthisis, and mental strain. Puberty is the chief cause since it is accompanied by symptoms of delayed puberty, as chlorosis; it is more common in women. As occasional causes are noted heredity, mental stress and mental shock. The disease is nearly acute dementia hence, the cause is the same but with the addition of disturbed nutrition. This is not the hebephrenia of Hecker and differs from the cases described by Sterz. It progresses to recovery without relapse. Hebephrenia is a mental disturbance, idiopathic and tending to dementia with many relapses.

For Kahlbaum, puberty played the chief role in the etiology of the disease as we see by the name which he gave it. Most casual observation shows that there is not an insanity of adolescence but there are all imaginable varieties of it at this period. Attacks of melancholy and mania occur between the ages of 16 and 25 and are easily curable; others are cured only to relapse and in still others this period is the beginning of chronic mental disease.

With this agree Emminghaus, Guslain, Griesinger, Maudsley, and Kraft-Ebing. Thus Kahlbaum was led to recognize a less severe form of hebephrenia in heboid or heboidophrenia. Thus there is a well established distinction between hebephrenia and dementia praecox.

Scholz is one of the rare authors for whom heredity does not play the chief role in the etiology of the disease.

In an article on idiocy Esquirol (13) observes that, "sometimes the children are born normal and grow in body at the same time that their intelligence develops; they are very impressionable, lively, irritable, irascible, and are possessed of a brilliant imagination and a precocious, active mind. This mental activity, however, is out of proportion with their physical powers. They quickly become exhausted, their intelligence remains stationary, mental acquirement ceases, and the hopes that they have given rise to, vanish. This is acquired or accidental idiocy."
Pinel (14) held that the abuse of bleeding in the treatment of mania could produce idiocy.

Morel (15) however, taught that the dementia is not accidental but constitutional. It is a sign of degeneracy which is to be sought for in heredity. It is in the children of insane and alcoholics that the premature arrest of the mental powers is observed. It is the last term of a fatal development of which the adolescent bears the germ from birth.

This idea is adopted by Falbert; Legrand du Saulle, and by Magnan and his pupils.

Christian (16) in his study of dementia praecox finds that the disease occurs in both light and severe form, differing in no way from imbecility or idiocy. He divides the course of the disease into three periods. First, the period of incubation extending from birth to the outbreak of the disease. It is characterized by no peculiarity worthy of note. There are no anomalies except those that can be explained by environment. However, the patient in infancy may have been capricious, willful, irascible, and not amenable to discipline. Some show special aptitudes for music, painting, language and mathematics. As to the intelligence of his patients, he finds that 69 per cent are medium, 22 per cent good, and 8 per cent mediocre. Early intellectual abnormalities issue in other diseases than dementia praecox.

The second period is that of the acute onset of the disease.

The third period is the terminal dementia.

In respect to the etiological factors, he finds age of importance. All of his 104 cases occurred between the ages of 15 and 25. Of these, 56 occurred before 20; 12, between 15 and 16, and 48 after 20. In regard to sex he finds the disease more common among the boys. This, he thinks, is due to the more protected condition of the girls. However, he fears that "the richer the girls are in diplomas and honors the more frequent will dementia praecox occur among them." He finds heredity in 45 cases but thinks this is below what it should be. None of his cases could be classed in Morel's group of heredity insanity. He thinks that the term degeneracy is too loose and ill-defined to be used in an exact sense. If the so-called stigmata of degeneracy are abnormalities so great as to interfere with the function of the involved organ, then it is very rare in this disease. But from a study of the abnormalities found in his patients he reaches no general conclusion concerning them. It is only an accident that a degenerate becomes subject to dementia praecox. Predisposition to the disease is not shown by any external sign. However, he thinks that the temporary condition of the parents may have some influence, for 37 of his cases had normal brothers or sisters. Eight were born during the siege and the commune. In one case a twin was normal but in the other there was some abnormality. The predisposition can be acquired from diseases and ac-
incidents of infancy, as typhoid fever, brain fever (?), traumatism and infectious diseases, but is rare. He is not doubtful but that bad training can also, have its influence as 25 per cent of his cases had been spoiled and badly raised children. Of the occasional causes he considers the so-called moral causes to be effects. The physical causes of this class act by exhaustion in fact the disease should be classed under the psychoses of exhaustion. The effect of masturbation has been greatly exaggerated. It is rarely a cause but it is a symptom which increases the exhaustion. The chief cause he finds in intellectual and physical "foundering" (surmenage). This arises when they are forced to exceed their capacity, when the "activity is not proportional to the physical powers." The physical condition must be good in order that excessive work shall not be hurtful. So dementia praecox arises when the demands are greater than can be given. The insufficiency may arise either from hereditary, acquired or accidental causes; the result is the same. Menstruation is not always disturbed since this arises from physical ill health. The same cause acts in girls as in boys, surmenage. Thus, he does not think heredity is the principal factor in the etiology of dementia praecox. Cases with a bad heredity do not become dement. But in debilitating causes we find the real cause of dementia praecox.

The condition outwardly is very similar to idiocy and imbecility, but differs in its origin and in the presence of remnants of the former intellectual powers. He thinks that the reported cases of general paralysis in youth closely resemble hebephrenia.

As to prognosis, the disease is incurable. The disease progresses rapidly to dementia and then becomes stationary.

The patients not infrequently live to an old age but are peculiarly susceptible to acute diseases, as tuberculosis. Preventive treatment is all that can be of any value; this consists in keeping up the bodily condition and guarding against physical and mental strain.

Christian, after observing 100 cases, finds that dementia praecox appears regularly at the age of puberty; that the excited stage at the outbreak is not always present; that impulsiveness is always present and that it ends in a rapidly approaching more or less complete dementia which is progressive.

(2) Schule: Hand-buch 1886.
(3) H. Sterz: Jahrbucher f. Psychiatrie 1879, S. 94.
(4) Kraft-Bbing: Lehrbuch Psychiatrie 1879.
(6) M. Drosnes: In Daraszkiewicz, Die Hebephrenie.
(7) Kahlbaum: Erlenmeyer's Centralblatt 1884, p. 470.
(9) Schule: Hand-buch dritte Aufl. 1886.
(10) Kowilewsky: In Daraszkiewitz, Die Hebelehrenie.
(11) W. v. Tschiach: In Daraszkiewitz, Die Hebephrenie.
12) A. Mariet: Folie de la Puberté.
THE OPERATIVE TREATMENT OF SPASTIC DEFORMITIES IN FEEBLE-MINDED CHILDREN.

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The value of the operative treatment in infantile paralysis is now beyond doubt and experience has proved the benefit from the transplantation of tendons in correcting unequal muscular balance and restoring good mechanical positions. The need of establishing the best possible mechanical position of limbs which are already weakened by muscular defects is only too evident, for they need the best possible conditions in which to do their limited work. Although the conditions in the spastic cases are different from those in the infantile, yet they present a very close analogy. In both there is the position of very marked mechanical disadvantage, which, in the infantile, is due to the actual lack of muscle power, while in the spastic it is due to the unequal action in which the strength is many times not at all impaired but is combined with a defect of co-ordination. Many of these cases fail to make progress because of the lack of an opportunity for exercise. There is sufficient evidence at hand to prove that much can be done with these cases provided exercise be had either by the individual's voluntary use of the limb or by prescribed gymnastic exercise. The value of operative treatment in some of the spastic cases has been shown to be beyond question and very safely forms a starting point from which these same procedures may be applied to cases apparently less favorable and which present less opportunity for improvement. The cases which have been shown to present the greatest amount of gain are, first, those presenting slight mental impairment, moderate control of the limbs but with whom free walking is interfered with on account of the spastic contractions which prevent the limbs from being used in their proper position. The milder type of these shows a stronger contraction of adductors, hamstring and gastrocnemius so that the child walks with the adducted thigh, bent knee and the foot in equinus. At times of rest there is comparative relaxation and the limb may be held straight, but with any attempt at use the stronger muscles overcome their antagonists and bring about the position described. The severer type is that in which there is more decidedly the defect of incoordination and great spasticity and to such an extent that the patient is not able to make a successful attempt to walk or stand. These cases are more frequently diaplegic, the mental condition is usually more affected and they frequently get about on the floor either by creeping or by rolling with the thighs strongly flexed on the pelvis and adducted, the knees flexed to 90 degrees or more, and the feet in a position of marked equino varus although sometimes in valgus.

The objects of the operative procedures in these two cases are, in the first, to overcome the unequal action of the strong muscles which prevents