not say excuse, but palliate Doctor Sheppard when, in his work on lunacy, he advises physicians to define insanity as a "disease of the neurine batteries of the brain," with the express intent to "puzzle the lawyers!" I know of an instance where this definition was used by the leading alienist of St. Louis, with precisely this object, and the cross-examiner "failed to come up to time" in consequence. But it is much more dignified, I think, and runs more in the direction of enlightenment, for the medical witness to admit that he cannot pretend to give an exact definition, and then to offer an approximate one. The brief and easily remembered one which I employ is that "it is a term applied to certain results of brain-disease and brain-defect which invalidate mental integrity." I once had the ambition to frame an exhaustive definition, but you will appreciate my not inflicting it on you when I add that, in order to shut off every source of ambiguity, I had to insert as many clauses as there are links in a tapeworm, that it contains one hundred and twenty-four words, and that it is only in particularly favourable moods that I can remember even half of them myself. I heartily subscribe the *dictum*, which I think originated among the legal fraternity, *omne definitivum periculosum est.*

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3. *German Retrospect.*

By William W. Ireland, M.D.

Aphasia with loss of an ear for Music.

Dr. A. Kast ("Aerztl. Intelligenzblatt," No. 44, 1885, quoted in the "Centralblatt für Nervenheilkunde," No. 2, 1886) has given a curious case of loss of the power of speech, and injury to the musical faculty.

A country lad, 15 years of age, was thrown from a waggon, and in falling struck his head against the wheel. He lost consciousness, and awakened several hours afterwards paralysed on the right side, and unable to speak a word, but he could understand what was said to him. The power of the right leg returned partially after two weeks, and after three weeks he was able to speak some words. On being taken into the hospital at Freiburg, two months after, there were still some remains of the hemiplegia, and motor aphasia, though he could already repeat some words said to him. He could only partially understand writing. Before the accident the patient had been a prominent member of a choral society; but now he found that though the melody was always rightly given, the tone was incorrect, and there were false intervals. Dr. Kast found that he could not even correctly follow another person in singing. After two years' interval Dr. Kast found that the lad could pronounce very few more words, and the

musical deficiency had become greater, for though he could keep up the tone of songs pretty correctly when they had previously been sung to him, when left alone he sang false. The musical ear was pretty good, as he could distinguish the smallest deviation from a true chord. Dr. Kast wishes to distinguish between the motor and sensory faculty in music as in speech, and their connection with particular parts of the brain. One of these capacities may be lost without the other. He recommends that a careful inquiry should be made into the musical capacity of aphasics in order to clear up many questions in the psychology of music and the relation of this faculty to the brain. In neither of the reports of his paper are we told whether there was any injury to the mental capacity of the patient.

Sensory Aphasia.

We take from the "Neurologisches Centralblatt" (No. 12, 1885) a report extracted from the "Berlin Klin. Wochenschrift" (Nos. 17 and 18) of two cases observed in the Klinik of Professor Kussmaul. A woman of 63, admitted with furunculus in the right auditory meatus, and erysipelas of the face, died of bleeding into the intestines. On examination there was found wanting about one half of the left temporal lobe. This deficiency included the top and under portion of the anterior part of the first temporal gyrus, and almost the whole of the anterior part of the second, and the whole of the third temporal, and the end of the second occipital convolution. On microscopic examination Dr. Stilling found that the posterior half of the first temporal gyrus was intact. In front some of the cortex remained, but the nerve fibres below showed undoubted marks of degeneration. The second temporal gyrus, which remained, showed no microscopic change. The patient could hear quite well, especially through the left ear, for the right one had been completely shut by the furunculus. She read letters and newspapers, and spoke German and French fluently. Nothing was remarked of her mental condition, save that for the last two years her character had changed. She was selfish and quarrelsome. It was thought that the deficiency must have been of old date, perhaps going back to a severe illness which she had in her 20th year. Thus the greater part of the left temporo-sphenoidal lobe, including the half of the Wernicke's sensory speech-centre, was lost in a right-handed person, without either the comprehension or the utterance of words or the power of hearing in either ear, being injured.

Kussmaul gives another case, a man of sixty years of age, who died of empyema after being for a fortnight in the hospital at Strasburg. The patient appeared of feeble intellect, but could understand what was said to him within the bounds of his capacity. On examination there was found an old standing deficiency

implicating almost the whole of the lower surfaces of the right occipital and temporal lobes, the whole third and a small piece in the middle of the second temporal convolution, the whole of the gyrus occipito-temporalis lateralis, and the posterior part of the gyrus uncinatus. The grey matter of the gyrus occipito-temporalis medius was thrown out of function by the atrophy of the underlying white fibres. On the left side of the outer part of the ganglion lenticularis and of the posterior cornu of the ventricle there was a softened spot. It appeared that in 1854 he had meningitis, and ten years after violent headaches, when the limbs were partially paralysed, especially on the left. The left hand was quite useless, and he could not write with the right hand. He recovered in some months, but was always stiff in the left leg, and never regained the power of writing well. From 1872 to 1878 he filled a situation in an insurance office. The only permanent deficiency seems the power of blowing the flute, which he lost after 1862. Thus after a destructive lesion to a wide area of the brain, which is put down as purely sensory, the only permanent functional injury was of a motor character, with a loss of intelligence!

Motor Disturbances in Insanity.

Dr. Roller confines his attention to those movements which, if not under the control of the will, are at least accompanied by consciousness. This separates them from the involuntary motions of hysteria, epilepsy, and chorea. The character of the motions in insanity has, he observes, seldom been carefully examined. Dr. Roller's own paper occupies 60 pages of the "Zeitschrift" (xxxii. Band, erstes Heft), and after mentioning the disturbances of the voice in insanity, purposeless talking, and repetition of words, he considers these paroxysms of restlessness which form such a striking symptom in mania. Some of these motions may be owing to an irritated condition of the motor centres. Meynert regards the inclination to movement in mania as often owing to hallucinations of the muscular sense.

Dr. Roller quotes a remark of Baillarger: "The more I see of these things, the more I am convinced that one must seek the point of departure of all mental derangement in an involuntary exercise of the faculties. Often the insane have the consciousness of this domination which subdues their will. They are caught by a series of ideas which one by one possess the mind for a moment." Roller gives the following as an example. A woman suffering under maniacal excitement and hallucinations of hearing possesses in a high degree the susceptibility to sensory impressions and the desire to seize upon what attracts her notice. She grasps the things which she sees, especially clutching at shining objects. Some one pulls out his watch in her presence;

she immediately snatches at it, crying out: "That is my husband's watch." Dr. Roller asks: "What is the origin of this sudden delusion and abrupt action? Which idea came first? Was the notion that the watch belonged to her husband the cause of her clutching at it? or was she attracted by the simple childlike desire to seize the watch, and the idea that it was her husband's watch came after her action to possess herself of it?"

In accordance with Darwin's axiom that the repression of the emotions tends to diminish their power, Dr. Roller holds that in acute cases motor action in no way quiets the excitement. On the contrary, he remarks that with many excited patients yielding to their motor impulses only heightens the excitement. Violent muscular activity may cause exhaustion, but not a healthy weariness. In physiological life exhaustion does not tranquillize, but rather conduces to nervous irritability. This may be owing in some measure to the products of exhaustion in the blood.

It seems to me that the actions to which the excited patient gives way do often augment the irritation, but not always, and where weariness does good it acts by causing somnolence. It is the sleep which quiets. Dr. Roller observes that isolation often brings rest. He tries to keep his excited patients in bed, inducing them again and again to lie down after they have started up.

Traumatic Insanity.

Dr. Hartmann has collected ("Archiv," xv. Band, 1 Heft)—from his own observations and the description of others—138 cases of insanity following injuries to the head. Such a result is not so common as one might have expected. Schlager found that among 500 patients scarcely 10 per cent. were affected with traumatic insanity; and Krafft-Ebing, amongst 462 cases, found little more than 1 per cent. Then, again, there are generally concurrent causes. In fact, injuries to the head rarely cause insanity, save when there is a predisposition, or the condition of the patient is unfavourable for quick recovery. The injuries to the head, which were stated to be the causes of insanity, were generally of a severe character, inducing in half the cases analysed complete loss of consciousness. Between the insanity and the injury there was, in most cases, a period of greater or lesser duration, in which the patient suffered from irritability of the brain. Where the insanity followed it generally came on within three years. One of the most constant symptoms following the injury to the brain is a disposition to be easily affected by spirituous liquors. There was also increased sensibility to painful emotions. Among other affections were hyperæsthesia of the retina, amblyopia, amaurosis, scotoma, sounds in the ears, difficulty of hearing, strabismus, double vision, inequality of vision, headaches, weakness of

the extremities, sometimes loss of speech, and giddiness. The character is often changed: the patient is irritable, unsteady, and fond of wandering about. There is no characteristic type of traumatic insanity, but mania is more common than melancholia. Sometimes it appears in the form of primary dementia; sometimes in the different forms of melancholia; sometimes the injury entails a condition of mental weakness or fatuity. Delusions and hallucinations are not uncommon. Schüle and Bergmann noticed that injuries to the head were not unfrequently assigned as causes of general paralysis. The following case is from the author's own experience. A gunner got a kick from a horse in the left occiput. There was a severe concussion with exposure of the skull and wound of the brain. The man was carried away insensible, but soon raised himself, and began to rage and shriek and to strike himself, so that he could scarcely be overpowered by four men. Vomiting took place several times, and epileptic convulsions twice, with gyration of the head to the left. The attack lasted for several hours, during which he gradually got weaker. Next day there was still some disturbance, later on there was complete forgetfulness of what had happened to him. He recovered after extraction of a splinter of bone.

Dr. Hartmann gives a *résumé* of his inquiries, which embraces 14 conclusions, out of which we give three. The primary traumatic psychosis follows immediately upon the commotion caused by the injury. It forms either the weakened continuation of the disturbance to the functions of the brain or the reaction against the injury. It appears in the form of primary mania, either periodic or continuous, and is often accompanied by convulsions. At the same time there are frequently motor and sensory disturbances especially affecting the organs of sense.

W. W. I.

We have briefly referred in our "Reviews" to a book written by Dr. Kraepelin, entitled a "Compendium der Psychiatrie," but reserved for this section a fuller abstract of its contents. Our object is to put the reader in possession of German classifications, employing, as we proceed, the most important definitions of the writer in his own words, or nearly so. It is a fact that English students of medical psychology frequently find it difficult to obtain readily the information which they seek in this matter.

The author gives seven great groups of mental disorder, namely —(1) Depression; (2) Semi-Consciousness or Stupor; (3) Excitement; (4) Periodical Psychoses; (5) Primary Verrücktheit; (6) Paralytic Dementia, or progressive paralysis of the insane; (7) Weak-Mindedness. Under the first heading we have simple melancholia, and melancholia with delusions; the second division, rather an unusual grouping, comprises morbid states of sleep, as hypnotism, somnambulism, and what the Germans call *Schlaf-*

trunkenheit, or that condition in which on awaking from deep sleep a person remains for a longer or shorter time in an intermediate stage of mental confusion and imperfect perception of the outer world. Intoxication often favours this occurrence, and in some instances the individual is epileptic. The next sub-class is that of genuinely epileptic and hysterical states of semi-consciousness, the most accentuated form being that of epileptic stupor. Then comes the sub-class of stupor and ecstasy, with the synonym, melancholia attonita or *cum stupore*. Under this head falls catalepsy (Starrsucht). The last, or fourth sub-division, is acute dementia, and involves the most complete depression of psychical function. Its pathological basis is exhaustion of the brain, and may be caused by loss of blood, the puerperal condition, severe bodily illness, especially typhus fever, insufficient nutrition, intellectual or emotional strain. Unstable inheritance and youth are powerful predisposing causes. This condition, while resembling stupor, differs from it in exhibiting a minimum amount of mental activity. The author points out that the distinguishing characteristic of this, as contrasted with melancholia *cum stupore*, lies in this: that in the former the whole psychical activity has sunk to a minimum, while in the latter it is only its expression which is inhibited. The perception of the outer world is almost suspended, the course of thought arrested; there is complete apathy, and no motive for action remains. As with the patient in melancholia with stupor, the patient does not react to external influences, never speaks, while his expression is dull and vacant, and he has no backbone; he offers no opposition to any manipulation; there are no spontaneous movements; he requires to be dressed like a child; he has to be led to the closet, washed, and put to bed; he is dirty if not attended to, and allows the saliva to trickle down from his mouth. The temperature is subnormal; the pupils are dilated, and react slowly; while sensibility and reflex action are strikingly diminished. Such a patient may display excitement of a confused character, in which he speaks some coherent words, not understood by himself, or dances about the room; but all is done without any deep feeling, which, the author points out, distinguishes the excitement of acute dementia from the impulsive violence of patients labouring under *melancholia cum stupore*. The differential diagnosis of acute dementia from secondary states of profound apathetic dementia depends entirely upon the previous history and the course of the affection; it is rendered certain by the occurrence of remissions. From stupor it is principally distinguished by the complete absence of indications of mental tension, such as the facial expression, passive resistance, and explosive violence (p. 232).

Nothing could more clearly show the difficulty of distinguishing so-called 'acute dementia and melancholy with stupor than part of the description of the ecstatic form of the latter. Here

the perception of the outer world is quite veiled by the intense and overpowering fancies which oppress the whole consciousness, but their character is not painful or depressing, but very agreeable; the patient sees the Almighty and the angels, and feels himself in heaven. During this condition the patient is regardless of his surroundings; with wide-open eyes and fanatical expression, looking heavenwards, he remains motionless on his knees without making any response to questions. The muscles are not strongly contracted. The patient allows himself sometimes to be led quite automatically; in other cases he answers every interruption by an angry attempt to withdraw himself from the external interference. Such conditions are generally only of short duration, rarely longer than a few days, but frequently return, especially in the night. They are analogous to those mental states which arise from poison, especially opium, prolonged fasting, as well as after excessive bleeding. No peculiar treatment is required on account of its rapid disappearance. More or less marked symptoms of stupor and ecstasy are met with in many forms of delirium from severe bodily illness. Especially are those forms of delirium very unfavourable in their prognosis which arise from great exhaustion of the brain. Still deeper is the condition in the so-called coma vigil, a condition of profound stupefaction from which the patient can only be aroused by powerful external stimuli. The course of thought is at a standstill, the consciousness is filled only with obscure indefinite mental images, under which imperfect common feelings may play the most prominent part. It cannot be said with absolute certainty whether there is a condition of life preserved in the patient in whom a transformation of brain function into mental processes no longer takes place—in other words, whether the consciousness is really fully lost. We have anyhow to do, in the symptoms of progressive paralysis and coma, &c., with those morbid conditions in which the signs of psychical activity are wanting, and therefore most probably consciousness no more exists.

Under the third head—conditions of mental excitement—we have, first, active melancholia. Doubtless, this may occur in the course of other mental affections, as, for instance, in primary Verrücktheit; but there, as a rule, the anguish or fear does not form the basis of the disorder, but is the consequence of delusions or hallucinations. Secondly, mania, the foundation of which is the abnormal vividness of the thoughts or imagination, and the transition of the central excitement into acts. The mildest form of mania has been designated by Mendel "hypomania," in his Monograph published in 1881, in which there is always the loss of an internal cohesion of ideas and the inability to pursue a logical train of thought. The next sub-class is that of acute delirious mania, in which there is marked disorder of the perceptions, which bears no relation to the strength of the morbid affections.

There is a certain dreamlike confusion and loss of connection of ideas, along with illusions and hallucinations, and a defect in the power of judgment which brings this form of disorder into near relationship with the semi-conscious states of a former group, only the presence of intense motor excitement is generally a marked feature. The first stage of febrile delirium is marked by a certain restlessness, mental excitement, susceptibility to powerful sensory impressions, and disturbance of sleep in consequence of vivid and often painful dreams; in the second stage the mind is more disordered, perception is perverted by illusions, and more rarely by hallucinations, and ideas assume great intensity. Expansive ideas increase until the height of the third degree of the disorder is reached, and the confused chain of ideas (ideenjagd), and often furious movements occur. Exhaustion, involving symptoms of palsy, passing into stupor and uncertainty of movements, constitutes the fourth stage of febrile insanity. The temperature is high, and the condition of the brain is considered by the author to be hyperæmic. Alcoholic delirium, or delirium tremens, is next described, but need not be noticed further. We pass on to the fourth grand group—Periodical Psychoses—which embrace periodical mania, periodical melancholia, and circular insanity. Under "periodical mania" Dr. Kraepelin includes dipsomania, defined as the uncontrollable propensity to indulge in alcoholic drinks. In periodical melancholia, which is by far less frequent than the maniacal form, there are most frequently delusions, hallucinations, and suicidal propensity, along with intense mental anguish followed by slighter degrees of melancholy in the periodical return.

Circular insanity is characterised by periodical oscillations between mania and melancholia, which follow one another, but are separated from one another by a comparatively lucid interval. Generally a low and high state form together an attack alternating with remissions. More rarely is the reverse sequence the course of symptoms, as also the interpellation of an interval between each phase of the paroxysm. As a rule a melancholy stage precedes the attack—usually simple mental depression.

The fifth division is that of primary "Verrücktheit" which may be regarded as the pet division of German nosologists, and therefore deserves to be clearly defined, more especially as it is constantly misinterpreted. The author defines it as a chronic deeply-seated loss of mental personality which makes itself known primarily in a morbid apprehension of the operation of external and internal influences. Chronicity marks this disorder as a rule, because it has its root not in transient disorder, nor in a process which will pass over, but in an abnormal condition of the entire psycho-physical organism. The clearness of the consciousness is undisturbed. The power of thinking is fully preserved, but the material of thought is falsified through the manifold subjective elements, and is manufactured into a morbid,

distorted, deranged (verrückt) mode of viewing things in the patient's environment and in his personality. It is therefore usual to regard as the characteristic symptom of "Verrücktheit," a fixed delusion firmly and persistently held by the patient, or still better a whole system of such delusions. The distortion of the perception and consciousness as such is a specially frequent symptom; as the "Verrücktheit" becomes marked, so is the circumstance that this distortion is not corrected, although the consciousness is clear and intellectual work is not disturbed through the affection itself, overpowering as the morbid feeling is. The disorder has consequently here seized upon the highest mental functions, for the *fixed delusion* is no isolated pathological symptom like a sensory hallucination—a motiveless disturbance—but is the infallible sign of a persistent fundamental incapacity (Unzulänglichkeit) of the whole intellectual being.

This foundation of the weakness, upon which alone this form of alienation can attain to perfection in its production, is either *primary* and congenital (originäre Verrücktheit), or it is gradually acquired in the course of individual development; or it is a stage from another psychical disorder (*secondary* Verrücktheit). The old German psychiatry knew only this last form, and sought to place all fixed delusions (Wahnsysteme) as survivals of a previous mania or melancholia. Now we have learnt to recognise *primary* Verrücktheit as particularly frequent and complex (formenreiche), which makes its appearance before the secondary form through a succession of clinical peculiarities.

In *primary* "Verrücktheit" the form of the disorder is governed by the insane current of ideas which morbidly distort the understanding of the relation between the individual and his surroundings. The healthy perception is in the highest degree perverted through hallucinations of all kinds as well as through the subjective interpretation of normal impressions; the disposition and conduct are guided into abnormal paths through the influence of delusions. The origin of the delusions may be effected principally in two distinct ways, through the operation of hallucinations or in the form of so-called primordial mental derangement. There are doubtful cases in which hallucinations, mainly of hearing, represent the proximate and exclusive cause of the delusion; especially do delusions of persecution originate in this way. The patient hears occasional remarks, threats, insulting words, calls for help from his relations, believes himself despised in consequence, hated, everywhere observed, his beloved in danger, and now begins to interpret under the persistent influence of his hallucination other perceptions also in the sense of these morbid imaginations. An unprejudiced consideration of the clinical course allows us to recognise in it, with clearness, that certain peculiarities in the majority of cases precede a commencement of the phantasies, that is to say peculiarities in the apprehension of the surroundings which indicate a more deeply-seated disorder. As a rule the external world appears to the patient in quite a different light before the formation of his halluci-

nations; so that without the perceptions being exactly false, he sees things and persons with other than healthy eyes. Unessential secondary circumstances strike him and acquire a different meaning, whilst often what is nearest and most obvious remains unobserved. The character of the hallucinations stands, therefore, as a rule, in a certain relation to the patient's former thought, while it strengthens his fears, encourages his hopes, and especially varies the *thema* of the delusion, in a variety of ways, without the patient himself being conscious of this connection, which no doubt is frequently only quite general and indefinite. The hallucinations are, in other words, not always the cause of the mental derangement in the patients, but may be only a symptom of his general morbid condition. The psychosis would not be put aside in any degree through the removal of the hallucinations; it would remain essentially unaltered.

Certain cases may be observed in which the disappearance of the false perceptions, or their possible correction after some years' duration, indicates a certain recovery of the patient. Here the phantasies possess mostly a great uniformity; the construction of the delusion always remains upon a lower plane of development, and does not involve a complete derangement of the whole mental personality, so that it is doubtful whether one can regard this morbid condition as, properly speaking, "Verrücktheit." In the case of those who labour under the true disorder, a correction of the delusion would be impossible by means of the most patent argument, because his capacity for objective criticism is wanting; he appears to be impelled in the highest degree to hypotheses of the most absurd character. But where a false isolated idea depends upon hallucinations which, not on account of the intellectual incapacity of the patient, but on account of the objective difficulties of control, are not recognised as such, we have to do obviously with a totally different kind of disorder.

If we may not recognise hallucinations as special causes of delusions to any great extent, still it is unquestionable that they possess great importance in the characteristic form and the further development of the delusion. When the once-awakened general distrust of the patient is led through a false perception into definite paths, and is immovably fixed there, the slumbering, exalted idea, which has an obscure form in the consciousness, suddenly assumes a clear ineffaceable form. The powerful irresistible power which the hallucination exercises over the patient does not depend so much upon its vividness to the senses as upon its profound, although to the patient unconscious, connection with the peculiar circle of ideas, and of the internal correspondence with his secret fears and wishes. No sane man would consider the words of a passer-by, "This is the Emperor," as referring to himself, or suppose that he was on that account truly the Emperor, while such an hallucinatory perception produces upon the person labouring under "Verrücktheit" the most profound and overpowering influence, and has the direct effect of making him believe not only

that the words were truly spoken, but that they also contain the real truth.

The origin of the delusion of those labouring under "Verrücktheit" is generally much deeper than the hallucinations to which the patients are accustomed frequently enough to return, when they have not become conscious of the complete derangement of their whole mental being, which first must be accomplished before the delusions can altogether develop their influence. As a fact, we meet with many persons labouring under "Verrücktheit" with whom particular hallucinations have never been present. One cannot be easily misled in the determination of this question through the apperception of hallucinations and illusions, which not unfrequently are described by patients with similar expressions. By means of a fresh examination one may almost always distinguish them from actual sensory disorders. To these belong the inner voices, the thought-speaking, the telegraphing, and many visions, &c., which frequently are expressed by the patients with newly-invented fantastic names. They always stand in the most direct relation to the course of thought—sometimes even under the influence of the patient's will—and are by him referred, under the complete separation from normal perception, to mystical distant influences, secret magnetic relations, divine inspiration, and so forth. Clearly such apperception indicates already a widely extended loss of critical power and confusion of the patient in his deranged (Verrückt) perception of the world.

These apperceptive delusions, to which one can scarcely give any other name, form, to a certain extent, a transition from hallucinations to primordial derangement. We find in them, as a general rule, the conception related to external, if of no longer simple sensory, origin, whilst the primordial derangement has throughout the character of the conceptions, which suddenly rise to consciousness and acquire an overwhelming power therein. Hence it happens to the patient labouring under "Verrucktheit" that in perceiving a few chestnuts the idea strikes him at once that they are the symbols of lordship over the five divisions of the world; to another, a female patient, who contemplates the likeness of the Russian Emperor, it suddenly becomes manifest that he is her father. Indeed, these conceptions have, in the patient's circle of ideas, acquired even at the moment of their origin the character of such unquestionable truth that they stick to him in this form for probably his whole future life, and mould all further experience in accordance therewith, instead of being itself corrected at every step thereby.

T.

(To be continued).

https://doi.org/10.1192/bjp.32.138.274 Published online by Cambridge University Press