Sixthly.—That there is impairment of tension and of coördinate action in the vocal cords, unaccompanied by any distress of respiration. This last fact, coupled with the absence of reflex activity, suggests that it is the superior laryngeal nerve, rather than the inferior, which is affected.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *German Retrospect.*

By W. W. Ireland, M.D., Ed., Larbert Institution, Stirlingshire.

The German Retrospect has been made from the following periodicals and papers which I have received:—

Archiv für Psychiatrie und Nervenkrankheiten, Berlin, iv. Band, 3 Heft.; v. Band, 1 Heft., 2 Heft., 3 Heft.

Allgemeine Zeitschrift für Psychiatrie, Berlin, 1874, xxxi. Band, 2, 3, 4, 5, und 6 Heft. 1875, xxxii. Band, 1, 2, 3, 4, 5 Heft.

Medicinische Jahrbücher herausgegeben von der K. K. Gesellschaft der Aerzte, redigirt von. S. Stricker, Jahrgang, 1875, 1, 2, und 3 Heft.

Psychiatrisches Centralblatt, Vienna, numbers from January, 1874, to December, 1875.

Correspondenz-Blatt der Deutschen Gesellschaft für Psychiatrie und Gerichtliche Psychologie, numbers from December, 1873, to October, 1875.

Der Irrenfreund, Coblenz, from number 7, 1873, to number 8, 1875.

Klinische Abhandlungen über Psychische Krankheiten von Dr. Carl Kahlbaum, 1 Heft. Die Katatonie, Berlin 1874.

Untersuchungen über das Gehirn (Neue Folge) von Dr. Eduard Hitzig, Besonderer Abdruck aus Reichert's und du Bois Reymond's Archiv, Jahrgang, 1874. Heft 4, Berlin, 1874.

Die Heil und Pflegenanstalten für Psychisch Kranke in Deutschland der Schweiz und den benachbarten deutschen Ländern von Dr. Heinrich Laehr, Berlin, 1875.

Fluid in the Sac of the Dura Mater.—Many anatomists, amongst others Henle and Virchow, held that the sac of the dura mater (the arachnoid sac of Bichat) is empty during life, and that the cerebral fluid is contained by the pia mater. Dr. Hitzig, in his observations on dogs, has arrived at the conclusion that during life a considerable quantity of fluid exists in the sac of the dura, but that it is absorbed by the mass of the brain shortly after death.—"Zeitschrift," xxxi. Band, 6 Heft.

Influence of Electricity upon the Nervous and Muscular System.—In these experiments Dr. Tigges has used the constant current, and

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has tried to measure the amount of electricity directly with a galvanometer. He found, leaving the spinal cord out of consideration, that the greatest excitability of the nerves and muscles is met with in mania. The excitability in melancholia, in general paralysis, and in dementia is less than in ordinary health, and occurs in the order stated.—"Zeitschrift," xxxi. Band, 2 Heft.

Hitzig's Vivisections.—The intention of Dr. Hitzig's new experiments on the brain is to find out whether the existence of the so-called motor centres, as indicated by Dr. Fritsch and himself through the application of the galvanic current, can be confirmed by cutting away pieces of the brain and watching the results. His vivisections were principally performed upon dogs, and the gyri or portions of gyri cut away are marked out on engravings of brains. This makes their situation very clear to the eye; only without a reproduction of these engravings it is impossible to give an accurate report of the contents of Dr. Hitzig's pamphlet.

In those parts of the dog's brain where no motor centres were found to lie, or which did not respond with muscular movements to the electric stimulus, it was found that no loss of muscular sense or muscular power followed on their removal; and this may be received as an indirect confirmation of previous experiments with the galvanic current which are sketched in our German Retrospect of January, 1875.

Unfortunately, on cutting away the gyri whence defined muscular movements can be excited by electricity, the results are not very definite. On removing a portion of convolution in which the "motor centre" of the fore leg was believed to lie, he found that the dog put and kept one paw in inconvenient positions, but it did not lose the power of the limb, and in active movements made use of it, though in an awkward manner. It sometimes put the back instead of the sole of the foot to the ground, and turned the limb inwards and sometimes outwards in a manner that it did not do on the other side.

In some cases the animal allowed its paw to be put in any position without resistance, though on being set free the limb returned with mechanical certainty to the position in which it was before.

Dr. Hitzig noticed that if the animal were turned upon its back, it held its limbs in a different manner from what it did when they rested on the ground. He calls the two conditions observed "loss of muscular consciousness" and "loss of the energy of the will." It is possible that we shall hear no more about motor centres in the grey matter of the hemispheres. Dr. Hitzig recalls a conjecture which he threw out in his previous work as more nearly explaining his new observations, that the part of the brain in which arises the volition to execute a movement may be in another place, or in other places, from the so-called motor centres, which must thus be regarded as gathering places whence intentional movements are propagated. Admitting the correctness of Dr. Hitzig's observations, it is clear from his own

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admissions that there it much room for doubt of his interpretations. How can we explain the following?—A dog, in which a portion of brain had been removed, suffered a great loss of muscular consciousness, but the power of vision was not affected; nevertheless he set the paw blindly over the edge of the table, and would have tumbled over head foremost had he not been caught. Evidently the sense of sight did not in this case assist him to repair the loss of muscular sensation. The author promises in a subsequent paper to attempt an explanation of the facts which he has observed.

The Motor Centres in the Hemispheres.—Dr. Eckhard has repeated the well-known experiments upon the effect of electricity on the cortex of the brain. His results tend to confirm the views of Hitzig, and to oppose the explanation of Schiff that the motions produced are the result of reflected action. Dr. Eckhard claims to have followed the course of the motor fibres for the anterior extremity from the surface of the brain to the outer edge of the corpus striatum. —"Zeitschrift," xxxi. Band, 4 Heft.

Electricity applied to Brain of New-born Animals.—Dr. Otto Soltmann has made a number of experiments upon the brain of new-born animals, of which the following are some of the results:—

1. No muscular motions were excited by the application of electricity to the hemispheres in new-born animals.

2. They were observed in the dog about the tenth day, and the first motions were in the opposite fore leg, then in the hind leg and the motor muscles of the eyes. The extent of the motor centres is at first larger than it is at a later age; gradually they are isolated to the situations pointed out by Hitzig.

4. The extirpation of the grey matter of the frontal lobe does not lead, in new-born dogs, to any motor disturbance either immediately or later. The corresponding lobes of the opposite hemisphere seem to discharge the functions of the lost part. The extirpation of the grey matter of the frontal lobe causes in older animals a loss of muscular sense, which is the more decided the older the animal is. The extirpation of the grey matter of both frontal lobes causes loss of motor power neither at the time nor after; but in the full-grown dog it causes incomplete ataxia on both sides.

6. The corpus striatum is not motor in new-born dogs, only the application of electricity to the internal capsule between the corpus striatum and optic thalamus produces contractions in the fore paw of the opposite side. In a dog of three months old, from which the left lobus præfrontalis had been removed at birth, Soltmann produced motions in both the fore paws by stimulating the right motor centre. —"Centralblatt," Nos. 8 and 9, 1875.

Meynert's Views on the Basis and Tegmentum of ascending Peduncle. —Dr. Wernicke gave a demonstration at a meeting of the Psychiatrischer Verein at Breslau, in illustration of Meynert's views upon the nature of the basis of the ascending peduncle (Hirnschenkelfuss)

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and of the tegmentum, (Hirnschenkelhaube). These two tracts are separated by the substantia nigra and by the fillet or Schleifenschiste. The basis is connected with the nucleus lenticularis and corpus striatum; the tegmentum with the optic thalamus and corpora quadrigemina. Descending towards the cord the basis of the peduncle answers to the anterior pyramids; the tegmentum to the posterior tracts.

Meynert observed that the peduncle only approaches to the size of the tegmentum in man; in the lower animals the tegmentum is about seven times as large. After man the relative size of the basis is best developed in the harlequin monkey, out of 16 brains of animals examined by Meynert. In the fœtus of seven months the basis is only half the size of the tegmentum, and consists of grey matter, whereas the tegmentum is fully developed. From this Meynert concludes that the functions of the basis of the peduncle must be at their highest in man and not required for intrauterine life. In like manner the development of the basis of the ascending peduncle rises and falls with the development of the brain as well as that of the nucleus lenticularis. This ganglion, otherwise called the corpus striatum externum, is situated in the motor tract, and is only in connection with fibres passing to or from the hemispheres; it has no connection with sensory nerves.

Bearing in view its development, it would appear that the basis of the peduncle conducts the voluntary motor stimuli from the brain, while the sensory fibres that pass to it from the posterior pillars of the spinal cord conduct sensory impressions to the brain. The relations of the tegmentum are quite different: by the corpora quadrigemina and optic thalami it is directly connected with the optic tract.

Adamük's experiments have shown that the corpora quadrigemina contain several centres by which some of the combined motions of the eye are directed. Schiff has remarked that in sections of the optic thalamus the extensors of one extremity and the flexors of the opposite side come at once into action. This is analagous to the sideward movement of the eyes by which the external rectus of the one eye and the internal rectus of the other work in common.

Meynert has found that each optic thalamus has fibres going to the muscles of both sides. The tegmentum seems then to be the tract by which impressions causing reflex motions are propagated to the extremities, and it contains at the same time an anatomical mechanism through which certain combinations of muscular activity are put in play.—"Zeitschrift" xxxi. Band, 6 Heft.

Function of the Optic Thalami.—From numerous experiments on rabbits, Nothnagel comes to the following conclusions on the functions of the optic thalami. They have nothing to do with the innervation of voluntary motions, nor had any destruction of the sensibility of the skin been observed after their extirpation. On the other hand they seem to stand in a certain relation to the muscular sense.—"Centralblatt" Nos. x. and xi.

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Function of Nuclei Lenticulares.—Nothnagel found that all voluntary motion was destroyed by extirpation of both nuclei lenticulares. The animal sits without stirring, as when the hemispheres are removed, till death comes; reflex movements are not impeded. This condition can be induced without injury to the nuclei caudati.—"Centralblatt" No. ii. 1874.

The Sense of Equilibrium.—Dr. Breuer has a paper of 70 pages upon the static sense, the organ of equilibrium, which is believed to be situated in the vestibular apparatus of the labyrinth of the ear. It is impossible in the space at our disposal to give a detail of the delicate experiments and subtle interpretations of this ingenious physiologist. The author now considers it certain, in spite of the arguments of Dr. Mach, that through the terminations of the nerves of the ampulla changes in two directions are indicated to the mind. He considers that a sensation of turning is caused by the pressure of the endolymph against the termination of the nerves of the ampulla. The appearances caused by lesion of the semi-circular canals in animals seem to be identical with those of giddiness induced by turning rapidly round, which causes alteration in the pressure of the endolymph.—"Jahrbuch" 1875, 1 Heft.

Dr. H. Curshmann has a long paper on the function of the semicircular canals. He used pigeons in his experiments, because in those birds the canals can be reached without injuring the brain. The results of his experiments are that the power of directing movements is so much injured by the destruction of these organs on both sides, that the pigeons lost even the capacity of feeding themselves; but they were still able to maintain equilibrium in the standing posture, though on the smallest movement they fell helplessly to the ground. The sense of hearing remained after complete destruction of the semicircular canals.—"Archiv" v. Band, 2 Heft.

Motor Centres in the Cord.—Dr. Schroff thinks that the centre whence convulsions can be propagated may extend lower down than the pons or medulla oblongata. Several recent observers have shown that the nerve centre for the vessels stretches farther down than had previously been supposed. The same remark holds good for the centres of respiration, while motor centres for erection, the emptying of the bladder, for the sphincter ani, the uterus, and for some movements of legs have been found in the lower part of the spinal cord. Bearing this in view, the opinion that epileptiform convulsions were only propagated from the pons seems to demand further examination. He experimented upon dogs in whom the spinal cord was divided. By keeping up artificial respiration and secluding the animals in a box at a temperature of from 1.33° to 35°C. he found that they could be kept alive for about 19 hours. His experiments made him suspect the existence of nerve centres, for the vessels below the medulla oblongata and centres for respiration below the calamus scriptorius. Dr. Schroff found that general convulsions could be excited when the cord was divided below

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the pons and the medulla oblongata. He noticed that after section of the spinal marrow rigor mortis came on very soon. In some cases it came on in one or other of the limbs before death. In one case it came on in all four extremities, two hours and a half after the severing of the cord, while the animal was still alive.—"Jahrbuch" 1875, 3 Heft.

Meynert on Aphasia.—Dr. Schlangenhausen gave an account of three cases which illustrated Meynert's view about aphonia. His view is that the first temporal convolution is the termination of the acoustic nerve, and the first frontal convolution is the centre for the motor nerves for the muscles of articulation. In the first case there was a motor aphasia, and the patient understood what was said to him. In the third case there was no paralysis, and the patient could understand what was conveyed to him by signs, but the perception or recognition of word sounds was destroyed, though he could hear perfectly well and repeat tunes which were sung to him. Dr. Schlangenhausen considers this a case of sensorial aphasia, and believes that there must be a different centre for the perception of musical sounds from that of the perception of word sounds.—"Centralblatt," No. 4, 1875.

Deficiency of Corpus Callosum.—The "Centralblatt" quotes from the Italian a remarkable case of deficiency of the corpus callosum observed by Professor Malinverni Germano, of Turin. A subject was brought into the anatomical rooms for demonstration of the corpus callosum, when it was found that the very organ in question was wanting. The gyrus fornicatus and the septum lucidum were also absent.

The convolutions of the brain were quite normal; but the anterior commissure was somewhat larger than usual. The man had served eight years in the army, and afterwards lived by field labour. He bore the character of an industrious, quiet, and tolerably intelligent man. No mental deficiency had been suspected during his life. There is mention of an idiot girl of eighteen years of age in whom the corpus callosum was also wanting. In most cases of absence of the corpus callosum some other parts of the brain are also deficient. —"Centralblatt," No. 7, 1874.

There is a case reported by J. Sander where a woman of twenty-one, who died of pericarditis, was found to have the corpus callosum entirely absent. She had no trace of mental unsoundness. "Zeitschrift," xxxi. Band, 3 Heft. Dr. Cramer showed to the Psychiatrischer Verein of the Rhine provinces the brain of a microcephale in whom the corpus callosum was completely absent, and the commissures deficient. The right hemisphere was shortened; the cerebellum was normal.

Deficiency of the Cerebellum.—Dr. A. Otto gives an account of a case of small development of the cerebellum found in a man called Joseph Degler. He was weak-minded from childhood, but grew up

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to be strong and active, and dexterous in the use of his hands. He had very little sense of morality, stole, and repeatedly attempted arson and homicide. He had a decided inclination for the other sex, and was addicted to onanism and paederasty.

On dissection the cerebellum was found to be very small, weighing with pons varolii and medulla only 20 grammes.

The author gives a short analysis of three cases of deficiency of the cerebellum, and compares them with his own. The first case is the well known one of Combette. The cerebellum was found entirely wanting in a girl of eleven years of age (Alexandrine Labrosse). She was of deficient intelligence, and had a slight disorder in the movement of the legs. She was addicted to masturbation. In the second case, reported by Fiedler, there was an atrophy of the cerebellum and pons. The patient was unsteady upon his legs, and often fell backwards. He showed no sexual propensities. The third case was described by Meynert. There was atrophy of the cerebellum and pons, and great disturbance of the movements of the legs, other functions being normal. Dr. Otto thus sums up the fourth case (Degler's)—weak intelligence, want of normal sense, obedience to low instincts, impulsive character of the movements, and powerful sexual desires. The results in these four cases are somewhat contradictory; hence, Dr. Otto tries to analyse the different symptoms, and separate what is essential to the deficiency of the cerebellum. He puts down the want of motor power as owing to the small size of the pons, and regards the deficient intelligence, in cases one and four, as the result of cerebral disease or defect. He thinks three symptoms are common to all—Increase of the sexual propensity, of the instinctive (only observed in two cases) in the sphere of the will, and of the impulsive in the sphere of the motive activity. Where the cerebellum is of normal size one may expect that the reverse of this should hold good.

He comes to the conclusion that the cerebellum has the power of checking or restraining the desires, and in a wider sense of regulating the will.

Granular Cells.—Since the observations of Jastrowitz that granular cells occur in the normal development of the embryo, there has been much doubt about their pathological signification when found in the spinal cord. Dr. Adler has made some researches to find out where the cells most abound. He found that the vessels on entering the cord from the pia mater are accompanied by connective tissue which forms septa that lose themselves in the neuroglia. Dr. Adler comes to the conclusion that the granular cells found in the spinal cord of insane patients are most frequent in the connective tissue of the septa, and follow their radiations among the nervous substance. The granular cells are found diffused from around these septa after the division of the vessels, which the septa accompany both in a horizontal and a vertical direction.—" Archiv." v. Band, 1 Heft.

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Hydrocephalic Idiocy.—Dr. Ludwig Meyer has made a careful study of a hydrocephalic idiot named Carl Fuge. The most noticeable observation is that the difference of length between the upper arm and the forearm is much less than usual.* The difference in an European is 88 m.m.; in the negro, 90 m.m.; and in the Gorilla, 70 m.m. The difference in the leg, above and below the knee stands respectively 101 m.m., 70 m.m., and 75 m.m. The difference between the humerus and forearm in Carl Fuge was 4 m.m; in another idiot only 30 m.m., and 50 and 30 m.m. respectively for the difference between the leg above and below the knee. The limbs were found to be shorter in proportion to the body, as was also the case with the Egyptian mummy measured by Granvil.

Dr. Meyer points out that in the fœtal condition the humerus and femur are shorter than the other bones of the arm and leg; about the fiftieth day their length becomes equal. He finds in the hand the same excess of the carpus and metacarpus, but has to acknowledge that fœtal conditions will not account for the small size of the thumb.

Microcephaly.—Dr. Stark has a study of a case of microcephaly in a woman who died under his care. She could speak and do easy work. She was subject to epileptic fits. When ten years old she had hemiplegia of the left side, with a cessation of growth in the left arm and leg, which the author attributes to spinal disease. The right hemisphere, however, was much smaller than the left. Dr. Stark found traces of myelitis of the anterior grey horn, especially on the left side, and traces of chronic encephalitis with amyloid degeneration. The capacity of the skull, 785 c.c., was less than that of a child of one year old, which he gives at 850 c.c. It is clear that this is a somewhat complicated case, and the author raises the question that many examples of microcephaly are not the consequence of a simple lack of development, but of diseases of the cerebral tissue in intra-uterine life. He thinks that some of the cases described by Vogt were of this character, and urges that a microscopic study of the brain should, in these cases, always be made.—"Zeitschrift," xxx.Band, 5 Heft.

Surface versus Thickness of Cortex.—Dr. Zensen has some very careful researches, illustrated with plates, upon the connection between the condition of the brain and insanity, made upon six brains of patients who were all of unsound mind. The principal conclusion at which Dr. Zensen arrived is, that in taking into consideration the extent of surface of a brain and its relation to intellectual power we ought also to estimate the thickness of the cortical substance; and he is

* On comparing Dr. Meyer's figures several of the remainders have been found misprinted or wrong, and have been corrected. I have repeated his measurements on some idiots in the Larbert Institution, but have failed to get proof that a diminished difference between the length of the upper arm and forearm is characteristic of idiots.—W. W. I.

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disposed to think that smallness of surface may be compensated for by increased thickness of the grey matter. Should this be true, it is useless trying to find a relation between the internal capacity of the skull and the weight of the brain.—" Archiv.," v. Band, 3 Heft.

Morbid Lesions in General Paralysis.—Dr. Ludwig Meyer gives the result of his examinations of thirty selected cases of general paralysis. The changes which he finds after death are turgescence of the brain which makes the dura mater appear tighter, the convolutions broader, and the sulci generally, though not always, narrower. The grey matter is redder and has a glancing look, and in sections its breadth was found to be increased; its consistence is generally softer, though sometimes the reverse holds good.

The histological examinations have been carefully made. The first changes are believed to occur in the vessels. There is a proliferation of cells around the wall of the vessels. These are full of formed cells, and not degenerated nuclei as Dr. Meyer once believed; and they occur in patches, often leaving healthy spaces between. Sometimes they bulge into the vessels, or cause the lumen of the vessels entirely to disappear.

These degenerations are found not only in the hemispheres, but also in all the cerebral ganglia down to the medulla oblongata.

The author then describes the progress of fatty and calcareous degeneration of the vessels, the widening of their calibre, and the formation of minute aneurisms often of the dissecting variety. In this way the circulation is stopped, retarded, or altered in course, and small extravasations of blood take place. These are restrained from becoming greater by the elastic masses of the neoplasms which lie round the outer walls of the vessels.

Meningeal hæmorrhages of considerable extent have been found to occur in ten cases out of 168 necroscopies of general paralysis, and if we consider the existence of congestion and the weakened state of the vessels, this proportion cannot appear large. Adhesions, thickening, and other alterations of the pia mater are very common, but this chronic meningitis is not found in all cases. Dr. Meyer could not find in the early stages of general paralysis any alterations in the nerve cells. In the later stages the signs of shrinking and atrophy are observed. He is unable to connect the pathological lesions with the rapid variations of mental power and motor capability observed in this disease.

Lesions in Brain of Insane.—Dr. Adler gives as the result of his investigations on the pathological alterations in the brain of the insane that the vessels are first affected, and then the connective sheaths, which, passing from the pia mater, accompany the vessels. At this stage the vascular tube itself may be still quite intact. The next process in order is a hyperplastic one in the vascular sheath itself, which may be accompanied by hypertrophy of the fibrillar radiations of the connective tissue. The alterations of the nerve cells

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are to be viewed only as secondary, they follow in many cases, while in others they do not, without our being able to tell the cause.—"Archiv.," v. Band, 2 Heft.

Blindness from Chronic Hydrocephalus.—Dr. Geissler gives the details of a case of sudden blindness in chronic hydrocephalus. It was found to be dependent upon softening of the corpora quadrigemina. Only the anterior pair of ganglia were recognisable; the posterior pair and the crura cerebelli were reduced to a reddish paste.

Hydrocephalus Congenitus et Acquisitus.—Dr. Meynert gives some rules for distinguishing congenital from acquired hydrocephalus in post-mortem examinations. Hydrocephalus congenitus extends the lateral ventricles in their long diameter, and pushes back the posterior horn, so that it sometimes comes within a few lines of the surface; while hydrocephalus acquisitus increases the ventricles in their vertical and cross diameter. Sometimes the enlarged hollow in the posterior horn becomes filled up by the union of the lining of the ventricle on each side, leaving behind it a cavity containing serum and cysts. The medullary matter forming the walls of the ventricles is hard and tough in congenital hydrocephalus. One may also expect to find Wormian bones in the lambdoid and under parts of sagittal sutures.—"Centralblatt."

Dr. M. Bernhardt gives a number of cases from his own observation and reading in which he sees confirmation of the recent experiments of the function of the superficial parts of the brain. Such observations are of great value, if they are not merely selections of results chiming in with the vivisections and experiments of physiologists; but, as Dr. M. Bernhardt himself observes, clinical observations are rendered uncertain by the admission of Hitzig and Nothnagel, that the extirpation of the motor centres does not necessarily lead to the permanent destruction of the functions over which they are believed to preside, other parts of the brain being supposed vicariously to take up the functions of the destroyed centres.—"Archiv.," iv. Band, 3 Heft.

Hyperæmia of Lungs after Injuries of Brain.—Dr. Heitler has shown in a series of experiments that wounds of the encephalon cause hyperæmia of the lungs and effusions of blood under the pleura and in the substance of the lungs. These hæmorrhages were observed after injury to the hemisphere and optic thalami, crus cerebri, vermiform process, and the medulla oblongata. Injuries to the corpora quadrigemina were only occasionally followed by hyperæmia of the lung.—"Jahrbuch," 1875, 1 Heft.

Pernicious Anæmias.—Dr. Schüle gives some studies which he has made upon what he calls pernicious anæmias. He believes that hyperæmia of the meninges and parts of the brain may be a cause of poverty of the blood, dropsies, and subsequent degeneration of the vessels and tissues. He cites the observation of Goltz that the tone

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of the vessels, as well as the absorption of the food, is dependent upon the functional activity of the nerve centres. His views are illustrated by several clinical reports of cases in which anæmia occurred in connection with diseases of the nervous centres.—"Zeitschrift," xxxii. Band, 1 Heft.

Katatony.—Dr. Kahlbaum thinks he has discovered a new type of disease, or made a new generalisation of insanity, to which he gives the name of Katatonie. Like general paralysis, it has a mixture of mental and nervous symptoms. The essential symptom is convulsions, as paralysis is the central symptom in dementia paralytica. The mental disturbance may vary.

Katatonie generally commences with melancholia, along with convulsions, tonic or clonic. We may then have mania, stupor, extreme loquacity, a disposition to repeat words or rhyming sounds, obstinate taciturnity, confusion of thought, and finally dementia; or one or other of these forms of derangement may be wanting.

Dr. Kahlbaum has found, in the last stages of katatonie, some contraction in the size of the brain, a diminished quantity of blood within the cranium, and what he lays most stress upon, opacity, exudation or alteration of the arachnoid at the base of the brain, especially where this membrane stretches over the space between the pons and commissure of the optic nerve. The arachnoid over the upper part of the hemispheres is free from disease. The prognosis is much more favourable than in general paralysis, speedy recovery being not unfrequent.

Movements in Hemiplegia.—Dr. Westphal has a paper upon this subject, in which he gives two cases who were hemiplegic from childhood, but when certain movements were made in the sound limb were accompanied by movements of the same muscles in the paralysed. Dr. Westphal accounts for this by supposing that in hemiplegia a portion of the opposite hemisphere is destroyed, but the commissures remaining intact, through their means the great ganglia at the foot of the brain become connected with the motor centres of the healthy hemisphere, and act in obedience to its stimuli.—"Centralblatt."

Perversion of Will.—Dr. Meschede, at a meeting at Breslau, gave an account of a patient who found himself in the singular condition that when he wanted to do a thing, either from his own desire, or from the directions of others, he, or rather his muscles, did the very opposite. If he wanted to look to the right, his eyes were turned to the left; and this anomaly extended to all his other motions. It was thus a simple misdirection of movement without any mental derangement, and differed from involuntary motions in this, that he did not move unless he wanted, but when he did move, he did the very opposite of what he wanted.—"Correspondenz Blatt," No. ii, 1874.

Insanity in Children.—Dr. Rinecker remarks that insanity is very rare in children, and gives two cases. The first was a girl of 11 years old. She had suddenly become solitary in her habits, and lost

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her appetite and her blooming complexion. She became more and more unquiet, and several times attempted to escape from her mother's house, on which account she was sent to the lunatic department of the Julius Hospital, at Würtzburg. Here her unhappy condition only became worse, and she was seized with epileptiform convulsions, accompanied by high temperature and quick pulse. The child died after about five weeks' illness. Tubercular meningitis was a probable diagnosis, as there were convulsions, fever, and occasional remissions; but this was not confirmed by examination. The brain was apparently healthy, and there was catarrhal pneumonia with bronchiectasis in both lungs.

The second case was a boy, who became insane when thirteen years of age. He became very restless and suicidal. The insanity lasted two years. Great benefit was derived from the use of Indian hemp, but he left the hospital without being quite cured.

Dr. Rinecker considers that insanity in children is generally accompanied by disturbance of the motor system, frequently in the form of chorea.—"Zeitschrift," xxxii Band, 5 Heft.

Hallucinations in Hearing.—Dr. Frederick Jolly has made observations upon five cases. In four of these, accompanied by hallucinations of hearing, there was an increased irritability of the acoustic nerve to the electric stimulus, and there was paradoxal reaction. This he defines as hyperæsthesia, in which the closing with the anode and opening with the kathode lead to sounds heard, not on the side where the galvanic stream is applied, but "rather" upon the opposite side. On the applied side the normal reaction is at the same time heard at the opening with the anode and closing with the kathode. In general, paradoxal reaction requires a higher degree of electricity.

The effects of electricity were felt in both ears, which the author considers must be owing to the diffusion of the electric current through the brain to the nerve on the other side. In three of the cases the hearing was affected. In one, however, it was quite normal, though there were marks of chronic inflammation in the outer meatus. The anatomical alterations were as various as the degree of sensibility to sound, the only thing common being hyperæsthesia to the electric stimulus. This agrees with the observations of Brenner, who found the hyperæsthesia associated with no fixed anatomical changes; but, owing to the difficulty of the investigation, it is possible that structural alterations might be overlooked. Dr. Jolly upholds the view that hallucinations of hearing are really the result of disease of the nervous auditory apparatus, whether through alterations in the structure of the ear, or through functional disease of the auditory nerve. In several of his cases there were also hallucinations of vision.

In the fifth of his cases, with chronic catarrh of the middle chamber without deafness, the auditory nerve was evidently less sensible than usual to electric stimulus, which Dr. Jolly would fain account for, by supposing that, owing to the unusual thinness of the petrous bone,

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the current had taken a new direction. In this case, however, under the influence of the electric stream, not only was there a simple sound, but hallucinations of hearing. This the author thought not to be due to a direct influence on the auditory nerve, but to a reflex effect from the stimulus of the trifacial. Dr. Jolly was unable to find any curative effect from the application of electricity applied to the ear, though, in all the five cases, the sensibility of the auditory nerve was increased by the prolonged use of electricity.—"Archiv." iv Band, 3 Heft.

Stupor from Anæsthesia of the Skin.—Dr. Arndt reported a case of a woman of twenty years of age, who, on recovering from typhus, remained in a state of extreme listlessness, accompanied with anæsthesia. She was insensible to pricking, tickling, or pinching in any part of the body, except the face. She swallowed her food, but lay continually in bed with half-closed eyes. Faradisation was tried, with a large Stöhrer's apparatus, and in nine days the patient came to herself, answered questions, fed and dressed herself. The faradisation was given up, and in twelve days she had fallen into her old condition. The electricity was resumed, and in ten days more her lethargy had again disappeared, and as the recovery seemed this time to be permanent, she was dismissed as cured.—"Centralblatt," Nos. 4 & 5, 1874, and "Zeitschrift," xxx Band, 6 Heft.

Use of Galvanism in Aphonia.—Dr. H. Emminghaus has succeeded, in several cases of aphonia, in bringing back the voice by passing galvanic currents through the brain. He used a Stöhrer's battery, and applied the kathode upon the mastoid process, and the anode upon the glabella, or, at other times passing the current from one mastoid process to the other. The current was strong enough to produce giddiness. During the application the voice perceptibly gained in strength. In peripheral or catarrhal aphonia, no benefit was derived from this method of treatment, but in one of these cases faradisation did good. The author is unable to say whether the favourable effects were owing to the direct physical effects of the current upon the brain or roots of the nerves, or by increasing the mental energy.—"Archiv.," iv Band, 3 Heft.

Bromide of Potassium in Epilepsy.—Dr. Stark, in a series of careful observations upon the action of bromide of potassium, found an improvement from 61 to 64 per cent of those treated for epilepsy. These were all lunatics, and some of them quite chronic cases of epilepsy, but in no instance does he seem to have obtained a cure. In most cases the fits returned with the same frequency as before. In none of his patients was there any improvement in the mental symptoms. Many epileptics become maniacal if the intervals between the fits are prolonged, and this excitement appears when the fits are kept away under the influence of bromide of potassium. In such cases he thinks it best that no attempts should be made to suppress the fits. In 40 per cent. of his cases, there were symptoms of an intense nervous intoxication when the bromide was given in large doses. These

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doses were rarely under 10 grammes a day. From some observations which Dr. Stark made on the bromide of potassium and chlorate of potash, he is inclined to think that the bromine is the active agent. —" Zeitschrift," xxxi Band, 3 Heft.

Dr. A. Otto gives a report of thirty-one cases of epilepsy which he has treated with bromide of potassium, and has found benefit in all. He claims cures in 75 per cent., and 25 per cent. in which there was improvement, though the fits returned in more than half his cases on the medicine being discontinued. This success was obtained through using high doses continued for months. The doses varied from 120 grains to 180 grains a day. He considers that the bromide acts by diminishing the excitability of the central ganglia, as well as that of the periphery of the nervous system, and in opposition to several observers, he holds that the bromide, and not the potassium, is the active curative agent. In the brain of almost all the epileptics which he examined he found sclerosis and atrophy of one or more cornua ammonis. Dr. Otto has got a low opinion of atropine, digitalis, and nitrate of silver as remedies against epilepsy, and has tried inhalation of nitrite of amyl thrice a day without any effect. Even in those cases where the amyl had been inhaled after the aura, he finds that it is at best very uncertain in its action. —" Archiv.," 1 Heft, v. Band.

Nitrite of Amyle.—Dr. Otto has tried nitrite of amyl in nine cases of epilepsy, but without success. He used it in one case of religious melancholy. The patient inhaled five drops every two hours, and in eight days was very much improved, and she is now almost recovered. Dr. Höstermann, in Vienna, used the amyl in eight cases of melancholia; in four of these there was permanent improvement. In three there was a temporary improvement, and in one case the patient got worse.—" Zeitschrift," xxxi. Band, 4 Heft.

Dr. Adolf Schramm has made some researches upon nitrite of amyl upon melancholia, and in some cases found an improvement, especially where anæmia of the brain appeared to be present, though amelioration was also noticed where lesion and congestion of the head were believed to exist. If amelioration does not at once appear the remedy need not be persevered in. At best it is only palliative, and even, as such, it was found inferior to opium.—" Archiv.," v Band, 2 Heft.

Ergotin in Mania.—Dr. A. H. van Andel has found ergotin very useful in some cases of acute mania. He used it in the form of subcutaneous injection, prepared with a little glycerine and rectified spirit. The dose is about 100 milligrammes of ergotin. He cites the observations of Brown-Sequard, who saw the vessels of the membrane of the brain contract under the influence of this drug. Dr. van Andel has used it in epileptic insanity, and to combat hyperæmias of the nerve centres. The common effect was diminution of the excitement; the ravings and shriekings

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gradually ceased, and, though the patient might remain distracted, he was, at least, more ready to listen to what was said to him. Sometimes the injection of ergotin was followed by a refreshing sleep. Dr. van Andel gives a very striking case of the master of a ship who passed into a condition of furious mania, so that it required four men to hold him. His fits of irritability were found to be subdued by subcutaneous injection of ergotin. Fifteen of these were used in fourteen days. In his case the injection was followed by small abscesses which were not long of healing. Considering the dreadful nature of the disease and the benefit derived, this could not be held as a contra-indication. In the other cases the irritation following the injection was of a slighter character.—" Zeitschrift," xxxii. Band, 2 Heft.

Census of Insane in the Tyrol.—From the census in the Tyrol it was found that the number of the insane stood as follows:—

	MALES.	FEMALES.
Insane, including several paralytics .	627	542
Fatuous, including idiots and dements	236	229
Cretins	307	270

The population is 779,072, thus making one inhabitant out of every 352 to be affected in mind. This seems to prove mental derangement to be very common in the Tyrol; but it must be remembered that all the statistics of small states show a similarly high average, because false returns are easily detected.—" Centralblatt," Nos. 8 and 9, 1875.

Agricultural Colony of Insane.—At a meeting of the Psychiatrisch at Hanover, Dr. Snell gave an account of the Agricultural Colony at Einum, which was begun on the 1st of April, 1864. This experiment was connected with the Asylum at Hildesheim, which now contains about 400 male patients. It was found that about 11 per cent. of these lunatics could be suitably sent to Einum. The number of patients employed there was now 45. The great majority was composed of patients who had passed the stages of excitement, and were willing and able to work. Those who shewed an anxiety to escape, or had bad habits, were excluded. During the ten years 31 cases had been returned to the asylum on account of attempts to escape, recurring mental excitement, or bad health. Ten of the colonists had been sent back to their families, but some of them were again returned, having relapsed. The staff consisted of a director, 7 male and 3 female attendants. In ordinary circumstances one visit in the week from an asylum doctor was thought sufficient. The farm consisted of 78 morgen of arable land, and 10 morgen occupied by gardens and courts. The land was cultivated by spade husbandry. They had 15 milch cows, 3 horses, 2 asses, with pigs and poultry. The expenditure had at first been greater than the profits, but during the last year there was £221 17s. clear profit. The patients in the

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Colony live in full freedom, the door is never shut. They go freely in and out. Some go to the town alone to transact business. The effect of the daily work upon the minds of the patients is said to be very happy. But Dr. Snell confesses that about the same percentage of patients are left at Hildesheim who do work within the asylum grounds, and he assures us that the population of a German asylum is different from that of an English, Dutch, or even French establishment of a similar character. Apparently the German Asylum contains a larger proportion of manageable patients. Would these patients then be at liberty in Great Britain, Holland, or France?—"Zeitschrift," xxxi. Band, 6 Heft.

Those who in travelling through Germany wish to visit its asylums will find full information about them in the little book of Dr. Heinrich Laehr. It gives an account of each asylum, the number of patients and attendants, and the names of the Superintendents. It is illustrated by a map, with the different asylums and hospitals for the insane indicated by lines drawn below the places. I must confess that I never knew before looking at it how many institutions of this kind I had passed by when travelling through Germany.

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2. *English Retrospect.—Asylum Reports for* 1875.

Such of these Reports as have as yet come to hand are of average interest. There has not been anything particularly stirring in asylums, and the Reports share in the general placidity. We are gratified to notice that there is year by year a more general tone imparted to the medical portion of them, and that they are in some quarters becoming what they ought to be, namely, the expression of the sentiments derived from another year's experience in the management of the insane. We have never yet been able to see what good purpose was served by expending the rates in paying for the printing of a long story about incidents in the life of the asylum during the past year, addressed to the Committee who know all about them already. If there has been anything important in the alterations, improvements, and so on, the proper people to say so are the Committee themselves; and the Superintendent discharges his functions far better by putting his statistics into a readable shape, and pointing the moral of anything particular in them. Important questions of management and treatment will undoubtedly often arise out of structural changes, but they should be treated from a medical, not from a stone and lime point of view.

Fifth Report of the Berks, Newbury and Reading County and Borough Asylum.—The Entry by the Commissioners in Lunacy in the Visitors' Book of this Asylum is not published, an omission which is to be regretted in most cases, but especially so when the Superintendent devotes a paragraph to the flattering remarks which

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