about melancholy and fragments of poetry bearing on madness. As it stands, the chapter is too brief, vague, and general to be of use to those who require instruction in order to sign certificates of lunacy or to give evidence with regard to unsoundness of mind in courts of justice.

The preface was written by his father, Dr. Forbes Winslow, who expressed the pleasure which he felt in assisting at the *début* of his son in these words: "I am glad of the opportunity of advancing with him to the footlights of the great stage of letters, and, after an affectionate grip of the hand, and a few cheering and stimulating words, leave him to the kind judgment of his audience—the *critics*." This introduction of his son was Dr. Winslow's last public act; for since this review was written, he has been summoned by death from the stage on which he for some time played so prominent a part.

The volume is respectfully dedicated to Her Majesty's Commissioners in Lunacy. Is the author correct in so designating the Commissioners in Lunacy?

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *German Retrospect.*

By W. W. Ireland, M.D.

The German Retrospect is taken from the following periodicals which I have received:—

"Medizinische Jahrbücher herausgegeben von der K. K. Gesellschaft der Aerzte redigirt von. S. Stricker. Jahrgang, 1873. i. und ii. Heft. Wien, 1873."

"Archiv. für Psychiatrie und Nervenkrankheiten." Berlin, 1873. iv. Band, 2 Heft.

"Allgemeine Zeitschrift für Psychiatrie und psychisch-gerichtliche Medicin." Berlin, 1873. xxix. Band, 6 Heft, und xxx. Band, i. Heft.

"Psychiatrisches Centralblatt." Wien, Nr. 2-11. 1873.

"Der Irrenfreund." Heilbronn, Nr. 1, 2, 4, 5, 6.

"Correspondenz-Blatt der deutschen Gesellschaft für Psychiatrie und Gerichtliche Psychologie." Neuwied. Nr. 3-11.

Dr. Theodor Meynert, Professor of Psychiatrie and Nervous Diseases at Vienna, fills forty-four pages in the "Archiv.," 4 Band, 2 Heft, with a description of what is already known or believed to be known of the arrangement of the anatomical elements of the brain and

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medulla oblongata. He discusses with great care and minuteness the manner in which the different bundles of nerve fibres are arranged and their relation to the grey matter in the hemispheres, cerebellum, and cerebral ganglia. He intersperses a few remarks on the functions of different parts of the brain, and the bearing of the experiments of Fritsch, Hitzig, Ferrier, and Nothnagel. Dr. Meynert's descriptions are accompanied by three pages of engravings, in which the tracts of grey matter and the peripheral and centrifugal nerve fibres are distinguished by different colours. The learning and research are very great, but the verbal descriptions are difficult to follow.

Dr. Rosenthal, of Erlangen, has made some observations upon reflex action, the results of which are given in the "Centralblatt" (No. 10). He found that the quickness of reflex action is diminished by fatigue, and increased with the force of the stimulus and the nearness of the part excited to the spinal cord. The reflex motion is a little quicker on the side whence the stimulus comes than on the other side.

Dr. Flechsig, at the meeting of the Psychiatrisches Verein, in Leipsic ("Zeitschrift für Psychiatrie," xxx. Band, 1 Heft), gives the result of his studies on the development of the white substance of Schwann in the nervous centres of man. It appears earliest in the spinal cord and in the nerves. It cannot be distinctly found in the brain before birth; but after birth it seems to develope with great rapidity. Its characteristic colour was observed in the optic tract three and a half days after birth. Dr. Flechsig gives the period at which he noted the first appearance of the white substance in the different parts of the brain.

In the "Psychiatrisches Centralblatt," Nr. 5 and 6, there is an account of the experiments of Fournier and Nothnagel on the function of the brain. Both these physiologists made use of injections, the one of chloride of zinc, the other of chromic acid, into various parts of the brain in animals, and observed their effects. As Schiff has already noted, complete hemiplegia cannot be produced in the rabbit by injuries to the brain. On lesion of one side the legs on the opposite side of the body deviate towards the middle line. Those of the other side are turned outwards, but to a less degree. The same lesion appears when the injection is passed into the white substance around the cornu ammonis, and when an incision is made into the optic thalami. Indeed, such symptoms have been regarded as pathognomonic of disease of the optic thalami. Nothnagel could find no proof of localization of the different mental faculties in particular parts of the brain.

Dr. Ewald Hecker has made some ingenious observations on the physiology of laughter, which are recorded in the "Zeitschrift für Psychiatrie," xxix. Band, 6 Heft. Laughing may be produced in two ways, by tickling or by the presentation of a humorous idea to the mind. The application of a stimulus to the sensory nerves has been

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proved by Nothnagel and others to produce, through the agency of the sympathetic nerves, a contraction of the blood vessels, and this condition is known to be accompanied by dilatation of the pupils. Dr. Hecker has found, by careful observation, that during the process of tickling there is a slight but decided intermittent dilatation of the pupils. This is best observed with young people. Dr. Hecker, therefore, assumes that during tickling there is a contraction of the vessels and an increase of the tonicity of the vascular walls. There is thus a relaxation of the pressure of the vessels on the brain, and by the *vis a tergo* effect of the muscular movements which accompany laughing, the blood is drawn from the veins to the heart during inspiration, while during expiration the column of venous blood is arrested. This explains the swelling of the jugular veins and the reddening of the face during violent laughter.

The author, therefore, concludes that laughing is a reflex movement destined to counteract the intermittent relaxation of pressure on the brain, through an increase of pressure. The cause then of laughter seems to be a diminution of the pressure of the vessels on the brain through an increase of the tonicity of their coats. Dr. Hecker affirms that when a comical idea is presented to the mind causing laughter there is also a dilatation of the pupils.

I may here observe that there is another way by which laughter may be produced, viz., by forcibly pressing with both hands the arms and legs from the extremities upwards, so as to push the column of venous blood in the limbs towards the heart. As this is very likely accompanied by a lightening of the pressure of the venous current upon the brain, it may be held to be a confirmation of Dr. Hecker's theory.

It appears from a notice in the "Centralblatt" (No. 10) that Dr. Hecker has published a pamphlet of eighty-three pages, upon the "Physiology and Psychology of Laughter and the Comic," Berlin, 1873, in which his studies on the subject are pursued.

In the "Zeitschrift für Psychiatrie" there is a review of Dr. Fetscherin's report upon insane people and idiots, in the Canton of Berne. There were 1,512 idiots and cretins, and 1,292 lunatics; in all 2,804. This makes as many as one person of unsound mind to every 180 inhabitants. In the Canton of Aargau there is one to every 154 inhabitants; in Zurich one to every 192. This is a much higher proportion of the insane than in France, England, or Germany, where the proportion is said to be one insane to every 310—350 people. It appears to me that a census of this kind is much better taken in a small republican canton than in great countries with centralised governments. I could easily prove that the census of idiots in Great Britain is very delusive.

In the year 1846 there was a census of insane people in Berne; and the number of lunatics and idiots, or dements (Wahnsinnige und Blödsinnige) was 3,082, being a diminution of 278. "Without doubt," the reviewer remarks, "this is the first census which shows

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that the number of insane have diminished within the last 26 years." The diminution may be solely in the number of cretins.

Medical writers have stated cretinism to be decreasing in many places, and it is expressly said farther on that this is believed to be the case in the Canton of Berne, as well as in the rest of Switzerland. In all statistical returns of idiots which I have seen, the male idiots considerably out-number the female idiots, save in the present census, where, out of the 1,512 idiots and cretins, there were two more females than males. Possibly cretinism may be commoner with females than males, which would explain the discrepancy. Two only of the idiots have been married, one of whom has the misfortune to be a widower, and the other separated from his wife.

Professor Betz, of Vienna ("Psychiatrisches Centralblatt," number 7), in a demonstration of the brain of an imbecile and two idiots, has noticed the difference of the convolutions from the normal type. He finds that the arrangement of the grey matter is different both from that of the human brain and that of the ape. The bridging convolutions of the external occipital fissure were deficient in the idiot, while in normal human beings the grey substance of the brain is a conjoined mass (eine zusammenhängende Masse), in the idiots the connections are not so close (auseinander geworfen).

Dr. W. Erb ("Archiv.," iv. Band, 2 Heft) has a long paper upon Tetanus, with remarks upon the method of ascertaining the excitability of motor nerves to electricity. After comparing the excitability in sound and diseased subjects in a careful manner, Dr. Erb has arrived at the conclusion that in case of tetanus the excitability of the motor branches of the spinal nerves is much greater than in health, both to the continuous and interrupted current. Excitability of the motor cerebral nerves is not increased. He concludes from this that tetanus has its seat in the spinal cord, and that the spasms are the result of its increased excitability, which does not always remain the same during the disease, but is sometimes greater and sometimes less.

Dr. Erb tried the application of electricity as a therapeutic agent. He applied the anode to the spine, and the kathode to the sternum, and also directed a descending stream from the neck to the nerves of the arm. After this treatment there was some improvement, which soon, however, passed away. Dr. Erb then tried to concentrate the power which the anode has to diminish excitability by putting it upon the nervous trunks of the arm and the kathode upon the nape of the neck. In this way he applied a pretty strong current for some time. He did not observe any notable influence upon the increased excitability, but the spasms diminished, and gradually disappeared, whether in consequence of the treatment or from some other cause, he is unable to state with confidence. Dr. Erb shows the great difficulty of measuring the amount of galvanic electricity and the frequency of fallacy in physiological illustrations of this kind. Not

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only is the galvanometer inconstant, even with the greatest care and attention, but it is extremely difficult to insure that the same amount of electricity enters the nervous or muscular tissues. The varying size of the electrodes, the wetness of the sponges, the conductibility of the skin, and of the subcutaneous fat, have all to be considered, as well as the exact spot of either electrode. Those who prosecute inquiries of the kind will find assistance from the methods described by Dr. Erb, though his descriptions are obscured by hazy sentences.

Dr. Rabenau, in the Archiv., has made a number of observations with a view of finding out the pathological conditions of general paralysis. He thinks that his researches confirm the observations of Westphal, who held that general paralysis was accompanied by granular cells and corpuscles in the spinal cord. This, as Dr. Rabenau remarks, might explain the psychical peculiarities. On the other hand, he affirms that the loss of motion and sensation does not occur in those patients in whose spinal cords no change is found after death. He also wishes to put aside those cases where general paralysis is the result of chronic alcoholismus, of tumours of the brain, or where the only observed symptom during life is that of mental derangement. Taking, then, the cases which remain where injury to the motor and sensory functions of the spinal cord was observed during life, in common with the psychical symptoms of general paralysis, Dr. Rabenau sets himself to find lesions in the brain which would explain the mental aberration, and succeeds in several cases in detecting disease in the pyramids of the medulla oblongata, in the pons, and in the crura cerebri, as well as in the tract between the corpus striatum and nucleus lenticularis, and also in the centrum ovale of Vieussens. In these parts he found numerous granular cells, which could only be detected through the microscope, and, indeed, he notes that the parts appeared healthy to the naked eye.

Out of 26 cases where the spinal cord was diseased, he found the pyramids of the medulla had granular cells in twenty cases. In two cases they were not examined, but in four no morbid alteration was detected. In only nine cases were the crura cerebri diseased, and the presence of granular cells in the pons seems to be even less common.

It would appear from Dr. Rabenau's researches that in many cases of general paralysis no disease of the brain can be found. Other microscopists will, I dare say, find fault with his conclusions and manner of reasoning, especially with a distinction which it is best to give in his own words: "I have only here noted the granular cells which occur free in detached preparations; those which adhere to the vessels I have left out of notice. * * Those granular cells which adhere to the vessels of the spinal cord and brain are met with in entirely different diseases, and have no direct connection with paralysis." It is true the vessels, for the most part, suffer degeneration in pro-

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gressive paralysis; but this degeneration is in no way confined to the spinal cord, the pyramids, the pons, and the crura cerebri." Some, too, will likely demur to the separation of cases where the clinical symptoms were the same, apparently to support Westphal's theory on the connection of certain symptoms with a microscopic alteration of the tissues.

In the "Zeitschrift für Psychiatrie," xxx. Band, 1 Heft, p. 116, there is a short notice of Dr. Lubimoff's researches on the pathological lesions in dementia paralytica. He found alterations in the vessels, neuroglia, and band of Remak, both in the convolutions and in the cerebral ganglia.

In the "Archiv.," iv. Band, 2 Heft, Dr. Linstow describes a case of insanity following syphilis. The subject was a soldier, who led a dissipated life. He had paralysis of the left side, with melancholia passing into mania. Dr. Linstow thinks that the cause of these affections was syphilitic neoplasms at the base of the skull on the right side. The patient was discharged, cured, after having been insane nearly two years and a half. The author considers curability a distinctive feature in syphilitic insanity, while general paralysis, which some physicians regard as always of syphilitic origin, is invariably fatal in a few years.

Syphilitic insanity, he remarks, may be dependent upon—1. Anæmia of the brain; 2. Hyperæmia, meningitis, or inflammatory softening of the brain; 3. Tumours in the brain and meninges.

At the Psychiatrisher Verein, held at Leipzig, in August, 1872, reported in the "Zeitschrift," xxx. Band, 1 Heft, Dr. Heubner gave a case illustrating the influence of syphilis upon the larger arteries at the base of the brain. The patient was a man who contracted syphilis in 1860, when he was twenty years old, followed by a number of constitutional symptoms. In 1869 he suddenly became unconscious, and on passing out of this state lay in a drowsy condition, with occasional convulsions for five days. After this he felt great muscular weakness and dimness of sight, which, after some changes for better and worse, ended in total blindness. The man had enlarged glands and a fluctuating gummatous tumour, about the size of a cherry, on the forehead. He had also epileptoid attacks, leaving behind them drowsiness for several days. He died after having been a year in the hospital.

On dissection there was found syphilitic infiltration of the base of the brain and the parts adjoining. This covered the front of the pons and the posterior part of the commissure of the optic nerves, and the front part of the left frontal gyrus. The basilar arteries and the left carotid were embedded in the infiltration, and their calibre as well as that of the smaller arteries reduced by thickening of their coats.

Dr. Müller, of Leutkirch, has a series of articles on Brain-Syphilis in the "Correspondenz-Blatt" (see Numbers 5, 6, and 7), in which he tries to clear up the differential diagnosis between general paralysis and brain disease of syphilitic origin. One of his cases very well

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illustrates the difficulties in the way. The man was believed to have general paralysis, when an osseous tumour was noticed on the sternum, and under the administration of iodide of potassium he quickly recovered.

Dr. Müller considers that alterations in the coats of the arteries, with a diminution of their calibre, and consequent mal-nutrition and degeneration of the tissues of the brain, are common to both diseases, and account for many of the symptoms being in common. In the syphilitic cases the morbid alterations are not confined to the arteries of the brain, or to the brain itself; they extend to the membranes and the bones of the skull, causing pressure on the nerves at their foramina of exit. Syphilis also causes alterations in the sympathetic nerves, hyperplasia of the interstitial connective tissue with pressure upon the nervous cells and fibres. Amongst the symptoms common in brain-syphilis, and on which he is disposed to rely in diagnosis, are headache and æsthesia of particular spots of the cutaneous surface (which are much more common than neuralgic pains). There are also sometimes epileptoid fits and attacks of paralysis, which, though they sometimes pass away in a few days, are, as a general rule, more liable to continue than the paralytic attacks of general paralysis. In brain-syphilis, single cerebral nerves not unfrequently lose their power, which rarely happens in general paralysis; in the former disease, too, the paralysis comes on gradually. In the latter it generally appears without warning. It strikes me that these distinctions are of more use to establish two separate generalisations of disease than to assist us in detecting them in special cases. The curability of brain-syphilis is without question the clearest as well as the most valuable distinction; but it is inconvenient that the curative treatment should go before the diagnosis.

Dr. Wille, of Rheinau, Zurich, reported in the "Irrenfreund," Number 1, takes much the same view as Dr. Müller. He thinks brain-syphilis a quite different disease from general paralysis, and rests the distinctive diagnosis upon the headache, local anæsthesias, &c. The existence of progressive paralysis with fatuity in a man still under twenty-one would indicate syphilitic insanity. According to Dr. Wille, the mental symptoms are a state of hypochondriacal melancholy, followed by increasing hebetude of intellect, with loss of memory, but without the grandiloquent delusions of general paralysis. This state of depression sometimes alternates with acute delirium; in other cases the insanity appears abruptly in the form of acute mania.

The prognosis is good when the mental symptoms are without complication; when accompanied by convulsions or local paralyses they are doubtful; when the symptoms simulate general paralysis the prognosis is worst.

In some cases, diagnosed as syphilitic insanity, no lesions were detected after death. The treatment recommended is iodide of potassium and mild mercurials.

Dr. P. Petrow, in "Virchow's Archiv." lvii., 1 Heft (quoted in the

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"Centralblatt," No. 7), gives the results of microscopical examination of the sympathetic nerves after constitutional syphilis. In the nerve cells he found increase of the pigmentary matter and degeneration of the cell-wall. Some of the cells had undergone the colloid degeneration. He also found hyperplasia of the connective tissue.

In the "Centralblatt," Number 3, there is a short account of the contents of a monograph upon "Hirnsyphilis, von Dr. Otto Braus, Berlin, 1873."

The author has collected above one hundred cases of brain-syphilis. The disease may appear a few months after infection, but generally later. Among the symptoms mentioned are headache, giddiness, sleeplessness, starting of the limbs, with alteration of character, and often weakness of memory. Out of a hundred cases Dr. Braus found paralysis in 82; of these there was paralysis in the optic nerve in 34 cases; in the facial in 27; in the hypoglossal nerve, 22; in the bladder, 17; in the intestines, 15. In 31 cases there was hemiplegia; in 18 cases paralysis of a single limb; and in 8 cases paraplegia. As a general rule, the paralysis was incomplete. In 45 cases out of the hundred the mind was deranged.

A short report of destruction of the anterior convolutions without any aphasia, occurring in Sweden, is given by Dr. G. Bergmann, of Stockholm. A man fell from his horse, and received so violent a blow upon the forehead that several pieces of the frontal bone were driven in, and some pieces of the brain oozed out of the wound. He lived seven days after, retaining his consciousness for the most part clear. There was no loss of power, save paralysis of the right side of the face and paralysis of the detrusor.

There were frequent convulsions, especially on the left side, in the upper and lower extremities. Sensibility, sight, and hearing remained good, nor was there any loss of memory. On the fourth day he fell into a state of quiet delirium, from which, however, he could be roused when spoken to. The power of speech still remained unaffected.

On examination, it was found that the frontal gyri on both sides were partially destroyed. On the left side gangrene had appeared, and the third frontal convolution (the first of Meynert) was entirely destroyed, and the convolutions of the island of Reil affected in great part. It has been assumed that on destruction of the left side its function may after a time be learned by the corresponding convolution on the right; but in this case speech was not affected, nor was there any time for the right side to learn its new duties, had it been in a state to do so.

Mr. Rudolf Arndt ("Archiv.," iv. Band, ii. Heft) fills thirty-four pages with the case of a young woman who was six weeks ill in the Asylum of Greifswalder. Before her death the diagnosis was made of a sarcomatous tumour of the pia mater at the base of the brain, between the crura cerebri, impinging upon the pons, and pressing more upon the right crus than upon the left.

As this diagnosis was confirmed by examination after death, the

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reader will perhaps like to learn the ingenious process of reasoning by which it was made out. Among the symptoms were loss of power in the limbs, frequent recurring dilatation of the left pupil, increased pulse, anomalies in the secretion of the mucus of the nose and saliva, sickness, with pain in the head, giddiness, dragging of the limbs, pricking sensations, apathy, and at last fatuity.

From the order in which these occurred it was thought that they depended upon one lesion, and that this lesion must be at the base of the brain at a place where the nerve fibres collect together before being distributed to the different organs of the body. Since both extremities were affected the lesion could not be confined to one hemisphere. For the same reason, and because there was no disturbance of vision nor of smell, the lesion could not be in the anterior part of the base of the skull. The sight being good and the pupils contracting to the light, the lesion could not implicate the corpora quadrigemina. The impairment of the intellect, the absence of pain, and of the ominous knocking in the occiput, as well as the absence of all disturbance of vision, made it also probable that the disease was not in the cerebellum, although the loss of mobility might lead one to suppose this to be the case. All went to show that the lesion was at the base of the brain, near the pons and medulla oblongata. There was no trace of sugar in the urine, no disturbance of hearing, and no deficiency in the articulation of speech, which last deficiency has been found to be associated with lesions of the olivary bodies and pyramids of the medulla oblongata, or pressure upon the floor of the fourth ventricle. The disease could not then be in the medulla oblongata, so it must be either in the pons or in the crura cerebri; but there never had been any crossed reflex spasms, and difficulty of swallowing (which is common in disease of the pons) had not appeared at the beginning; besides, affections of the pons are for the most part on one side. Here, however, the symptoms on the left side of the body were sometimes more prominent, though very slightly so. The disease then must be in the crura cerebri, or between them. The slow and gradual march of the symptoms, and the absence of any sudden shock or sign of inflammation of the brain rendered it probable that it was a tumour which they had to deal with, instead of an abscess or extravasation of blood.

The author goes on to show the differential diagnosis between tumours of various kinds. The article is worth reading, though it might have been improved by compression.

Dr. Meynert, at a meeting of the Society of Physicians, in Vienna, reported in the "Jahrbuch," 2 Heft, gives another case of diagnosis of a local lesion founded upon an intimate knowledge of the functions of the nervous system. The subject was a woman 37 years old, who had insufficiency of the mitral and aortic valves with hypertrophy of the heart. In 1871 she began to have violent headache, vomiting, and whirling of the body to the left. This soon passed

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away, to be followed by painful spasms of the limbs of the right side and violent headache, which lasted longer than the previous symptoms. In 1872 she began to be blind, and at the end of March could not distinguish night from day.

By-and-bye appeared hemiplegia on the right side with hyperæsthesia of the skin. Stimulation being applied, brought out reflex motions on the right side. There was a slight loss of power on the right side, in the respiratory tract of the face, in the uvula, and the velum palati. The muscles of the forehead and eyelids were unaffected.

At the end of 1872 the symptoms had become modified. The paralysis of the limbs on the left side is complete, the loss of power in the face is less marked, the hyperæsthesia of the skin is replaced by a paralysis of sensation. Impressions are hardly felt at all, pricks with a needle, if repeated, are felt, but later than when they are made. The loss of sensibility is on the left side of the body, but on the right side of the face. Dr. Meynert diagnosed encephalitis from the heart affection, and disease of the pons on account of the facial paralysis being on a different side with that of the limbs. He explains the other symptoms as follows :—The whirling of the body to the left shows disease of the crus cerebri ; the incomplete character of the paralysis of the facial nerve and its limitation to the under part of the face probably excludes a tumour of the base of the brain, for in that case the whole root of the facial nerve would have been implicated and the paralysis would have been more complete.

The crossing of the loss of sensibility in the body to the left (in the face it appeared on the right side) shows that the root of the fifth pair on the right side is affected. This is given off from the pons and the medulla oblongata, without any decussation, whereas the crossing of the posterior pyramids accounts for the hemiplegia being on the left. The disease was then in the right half of the pons, and implicated the lower nucleus of the facial nerve. This nucleus, as the learned Secretary (Rokitansky) remarks, has never before been taken into account in diagnosis. The facial nerve has two other roots, and this explains how the paralysis was incomplete. The diagnosis has not yet been confirmed by necroscopy, and no explanation is given of the blindness.

Dr. Rosenthal added some remarks upon cases which he had studied of tumours implicating the pons and crura cerebri. Amongst other symptoms mentioned, Dr. Rosenthal has found partial turning of the axis of the body (Axendrehung) with rotation of the head forwards, crossed hemiplegia with paralysis of the trifacial abducens oculi and acoustic nerves. On section there was found a tumour of the size of a hazel nut involving the left half of the pons and the left crus cerebri. In a case of hemiplegia, with intermittent paralysis of one side of the face, there was loss of contractility to the interrupted current. Another instance of successful diagnosis of tumour implicating the crus cerebri and corpora quadrigemina may next be

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given in the " Anzeiger" attached to the " Jahrbuch," 1 Heft. Dr. Meynert holds that the symptoms observed after division of the left corpora quadrigemina, bending of the head to the right side, flexion of the right arm and extension of the left one, are not owing to paralysis of the muscles which might counteract such motions. The power of the will over the muscles is not affected, but the muscular sense is injured, and the subject cannot correctly judge of the amount of muscular contraction to apportionate it so as to produce the equilibrium necessary for a sustained position.

In the report of a meeting of the Psychiatrischer Verein for the Rhine Provinces, Dr. Ripping gives some cases of tumours of the brain which are of interest, and very well described.

Dr. T. H. Tilling, in the St. Petersburg " Medical Journal," 1872, No. 3, quoted in the Centralblatt, Numbers 5 and 6, has given an account of three cases of tumours of the cerebellum. The first was that of a woman 38 years old, who had suffered for some years from headache, which, for a few weeks before her entry into the hospital, had been quite intolerable. There was also vomiting and giddiness, noise in the ears, some loss of power in the left side, pain in the lower cervical vertebræ, and behind the right ear and in the right side of the chin, constipation and emaciation. There was nystagmus, and, on examination, the ophthalmoscope showed the presence of neuro-retinitis, with ecchymosis in the retina.

On examination there was found a cone-shaped tumour at the base of the right hemisphere of the size of a half rouble. It displaced the flocculus and the tonsil, and pressed the medulla oblongata towards the left. The right side of the medulla appeared atrophied. There were atrophy of the nerves of sight and smell, and hydrocephalus. In this case the paralysis was crossed. Luys has observed that in paralysis resulting from disease of the cerebellum the paralysis was on the same side as the lesion in eight cases out of fourteen, but here it will be noted that there was pressure on the medulla oblongata. There was, however, dullness of sensation in the right arm.

The second case was a man of 28 years of age who had violent pain in the forehead which lasted for six weeks, after which the headache was replaced by giddiness. There was neuro-retinitis of the left eye; the tongue, when protruded, was turned to the right. There were no other signs of paralysis. The patient died of marasmus five months after the beginning of the disease. There was found a tumour about the size of a bean in the right occipital convolution, which seems to have brought out no particular symptom, but near the vermiform process of the cerebellum there was a yellow tumour the size of a walnut, implicating both sides, and on the left hemisphere of the cerebellum a third tumour about the same size. The nucleus dentatus on this side was so much destroyed that it could scarcely be recognised.

The third case shows that the degeneration of the fibres of the pons

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can call out the same symptoms as disease of the cerebellum. There were headache and marked giddiness, injury to the sight and hearing, diminution of power and anæsthesia of the left side reaching at last to paralysis of the left leg and arm. The right arm was diminished in power; the intelligence remained unchanged, if we except a certain degree of apathy. On examination there was found a tumour on the right side, implicating the medulla oblongata and the horizontal fibres of the pons. The superficial fibres descending from the pons, and behind these the pyramids, in all a layer of four lines thickness, had escaped from the tumour.

Mr. Gaston Sieffert, in a thesis quoted in the same number of the "Centralblatt," gives an account of two cases of tumours of the cerebellum. In both the principal symptoms were neuro-retinitis and headache. No mention is made of giddiness.

In the "Centralblatt," No. 11, there is an account of some observations of Dr. H. Curschmann on the effect of lesions of the crus cerebelli. In a patient under his care the head was turned to the right and held slightly forwards. The decubitus was always on the right side; if turned he persistently resumed the old position. After death a small extravasation with a reddish-brown spot of softening was found in the right crus cerebelli. Experiments on animals were found to produce, with lesions of the crus cerebelli, a constrained decubitus on the same side as the lesion.

We have a paper by the editor of the "Archiv.," Dr. Westphal, 4 Band, 2 Heft, upon Diseases of the Spinal Cord. He gives us three cases, very carefully studied, of disseminated myelitis in grown-up people, and shows that the inflammation was spread over patches of the spinal cord, with sound portions of tissue intervening. One of these cases followed small-pox, another syphilis, the third phthisis. He points out the resemblance between these diseases and some described by Damaschino under the title of Infantile Paralysis, and shows that this latter affection sometimes follows fevers in children. In like manner partial paralysis, with atrophy of the muscles affected, has been noticed after acute disease in grown-up people, especially after small-pox. Dr. Westphal argues that what has been called infantile spinal paralysis is not entirely confined to children, but also occurs in grown-up persons. He failed to find in adults the division of the nerve cells, especially in the anterior horns of the spinal cord, which has been observed in the cases of children. He, however, thinks that this condition may be the result of atrophy following on an old myelitis. The paper is illustrated by engravings of sections of the spinal cord.

In the next article Dr. M. Bernhardt gives some cases which lend support to the views of Dr. Westphal. The most striking is that of a man who had almost total loss of the power of the lower limbs and great diminution in the power of the arms, while the sensibility was well preserved. On trying electricity it was found that the interrupted

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current had very little effect in arousing contractions of the paralysed muscles, while the excitability to the combined current was very slightly diminished in the affected parts, while in some muscles it was actually increased.

In the "Jahrbuch" for 1873, 1 Heft, there is an account of the observations of G. Bizzozero and C. Golgi on the degeneration which is undergone by the muscular tissues after the division of the nerves going to the part.

At a meeting at Leipzig ("Zeitschrift," xxx. Band, 1 Heft), Dr. Meschede gave a very curious case of demoniacal possession. The patient was a man about 47 years of age. He believed himself possessed of two spirits, one of whom spoke Polish, the other German. Between the two they made such a noise that he felt quite bewildered. Generally he heard the voices in his head, but sometimes they seemed to come from the neck, chest, or abdomen. He said he had two spirits, who had their abode in his head, and who controlled his thoughts and influenced his will. Sometimes he struggled against them, but generally he had no power to resist them. One was the spirit of his father; the other of a man whom he named. They abused one another, and suggested bad and shameful thoughts to his mind. Sometimes, in despair and full of rage, he would hold his clenched hand before his eyes and cry out, "Accursed spirit in my brain, I know I cannot get rid of you; but you will perish with me." This unfortunate man died of a perforating ulcer of the duodenum, and there was found in his head four cysticerci, which had hollowed out the surface of bone at the sella turcica, and were partly covered by the chiasma of the optic nerve.

One of these cysts contained a still living, another a calcified, scolex of the tænia solium. A calcified cyst was also found in one ventricle. The arteries of the base of the brain were atheromatous, and there were some alterations of the right olivary body.

The author is disposed to refer many of the symptoms to the presence of the living parasite under the commissure of the optic nerves. The patient had described the visions and representations which forced themselves into his mind in the following manner:—"Strange thoughts and images of all sorts crowded into his consciousness, destroying the quiet flow of his thoughts. Scarcely had he begun to think when other representations and thoughts mix themselves with those which he has already in his mind, accompanied by corresponding images upon the field of vision which moved before his eyes, generally appearing to cross from right to left or from left to right. The words spoken by the spirits seemed to come sometimes from one side and sometimes from another."

In the "Zeitschrift für Psychiatrie," xxx. Band, 1 Heft, there is a long account of a case of religious insanity in a shoemaker, who, if he had lived two hundred years ago might have founded a new sect, or who, if living in the East in our own times, might have been revered as an inspired teacher.

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In the same number we have reports of the subjects discussed at meetings of the "Psychiatrisch" Speciality at Berlin and Leipzig. There is especially a paper on catalepsy and insanity, and a description of cases of insanity excited by the recent campaigns in Austria and France.

Dr. M. Bernhardt, "Archiv.," iv. Band, 2 Heft, points out a case already recorded by Griesinger (Gesammelte Abhandlungen), which seems of interest in connection with the recent observations of Fritsch and Hitzig upon the electrical excitability of the brain. It was that of a man who had involuntary motions of the right leg, with convulsive motions of the right arm. At last the side seemed to become paralysed, and the convulsions were followed by loss of consciousness. Shortly before his death the convulsions and paralysis affected also the left side. On section large cysts were found on the right side of the falx cerebri, about the middle of the vertex of the head, and other cysterci of smaller size were found in different parts of the brain; but there was none in the deeper parts. From this observation Griesinger was led to the conclusion that the part on the left side, where the cysticerci were largest, had an influence on the movements of the lower extremities. Dr. C. Westphal, commenting upon the contribution of Dr. Bernhardt, gives an account of a case where the existence of cysticerci was suspected during life. The symptoms on which he is disposed to rely were confusion in the intellect and a rotatory motion of the arms, which seemed to hold the mean between a voluntary and convulsive character. The skin and eyes were examined for the parasites without success; but numerous cysticerci were found in all parts of the brain.

Dr. C. Westphal has kindly sent us a reprint of a paper in the "Berlin Klinische Wochenschrift" (1873, No. 18), giving an account of a case of intra-cranial echinococci, ending in recovery, which is remarkable, not only for the extraordinary nature of the details, but for the masterly manner in which they have been studied and reported. The subject was a lad of seventeen received into the hospital of Charité, at Berlin, in November, 1872. His illness had commenced about the end of the previous May. The symptoms were head-ache, vomiting, and photophobia, which passed away, leaving weakness of sight in both eyes, and blindness of the right eye with exophthalmos. There was a weakness of the left arm and leg, and frequent pulse. A bulging of the right temple gradually appeared, and a crack or split could be felt in the bone on the 23rd of December.

On the 31st of the same month the first echinococcus passed through the opening; and from this date until the 20th of February, 1873, as many as ninety bladders of all possible sizes, from that of a man's fist to that of a pea, found their way through openings in the wall of the temple, the parietal bones, and the nostrils.

On the 13th of March the lad left the Hospital, the issues having closed. He recovered from all the symptoms save the blindness and exophthalmos of the right eye, and the weakness of vision of the left.

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Dr. Westphal is inclined to think the parasites had their first seat in the right orbit, and that in any case their origin was extra-cerebral, either without or within the dura mater, but only acting upon the brain by pressure or displacement.

Dr. Arndt treated of the sensations which accompany great mental distress; the most frequent of these is, as every one knows, a feeling of soreness about the heart.

When this feeling is very powerful, it occasions symptoms which cannot be separated from those of angina pectoris. Every time one feels heart sore he has a slight angina pectoris. The abnormal rythm of the heart following on great mental distress is communicated to consciousness through an abnormal excitability of the nerves of that organ.

Dr. Arndt would treat the feeling of misery so common in asylums, and which is accompanied by pain about the region of the heart, in the same manner as he would treat angina pectoris. For this purpose he recommends the anti-spasmodics and the galvanisation of the pneumo-gastric and other nerves which regulate the heart's action, as well as quinine and digitalis, which act directly upon the nerves of the heart. Opium he has found of little use, and often the cause of much harm. He says nothing of nitrite of amyle.

In the "Irrenfreund," No. 5, there is a case of loss of memory for events occupying several months of a man's life. During this time he was treated with extraordinary inhumanity by his wife, who drove him out of his house because he had lost in business all his money, save what he had settled upon herself. The man's memory was good for events following this defined period. He had no delusions, but when received into the asylum at Münsterlingen was in a most apathetic condition. It was thought that he could soon be discharged.

Dr. Meschede, of Schwetz, read a paper on "Persistent Delusions in Early Childhood." He considers that insanity is much more frequent in childhood than has been supposed, and gives a case of the kind occurring in a child of five years and nine months old This was a little girl, who had been quite healthy up to the fourth year of her life, after which she had intermittent fever. At the close of the fifth year she suffered from hooping-cough, which lasted for fourteen weeks, and was accompanied by frequent bleedings at the nose. Soon after, the first symptoms of mental derangement were observed. She complained of sudden feeling of cold or heat in the head, and this was soon succeeded by hallucinations of vision, hearing, and common sensation. She said she saw her playfellows appear at the window to strike her, saw bread lie upon an empty plate, and believed that her food contained injurious substances. She heard her little sister, a child of five weeks old, distinctly cry while she was fast asleep, and the room was quite quiet. She complained that her other sister who was three years old had affronted and spoken ill of her; that she had thrown a piece of wood after her, and had stuck it in her nose, and

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had struck her with a whip. She complained that her mother had put things in the bed which made it uncomfortable, and said that worms were crawling upon her eyes and hands. She was often in a state of terror that some one would come to steal her and her sister, and would not be appeased until her mother had locked the doors.

These paroxysms of insanity occurred with intervals of sanity, and were not accompanied by any symptoms of fever or inflammation. After a time, however, an attack of eclampsia supervened, which was succeeded by cerebral congestion ending in death. In the discussion which followed a number of cases of insanity in children were mentioned, in which melancholia and hallucinations were the most prominent characteristics.

In the "Centralblatt," number 3, there is an account of a girl of the poorer class who was in the habit of seeing apparitions. Amongst other spectres she saw the figure of some one lately dead, who touched a piece of sackcloth which she (the ghost seer) had in her hand, and burned four holes in it. The high temperature of the ghost's fingers is explained by the place she came from; in this case it was purgatory. I have heard several stories resembling this when I lived in the Rhine country. The doctor who reports the case can find no symptom of mental derangement about the girl.

In the "Irrenfreund," number 6, there is an interesting contribution from the late Dr. Friedrich Karl Stahl, who had long been a diligent and successful worker in the field of medico-psychology. It gives a description of a case of Melancholia Metamorphosis. A man of thirty-three was brought, in June, 1854, into the Asylum of St. George, because he had tried to eat a child and had killed and eaten a young sheep. The most remarkable thing in the description of this man is the enormous hypertrophy of the parotid glands. He had assumed the habits, as he had manifested the appetite and passions, of a wild animal. After two months' residence in the Asylum he showed great improvement. It is scarcely needful to point out the resemblance between this case and those known in medical history by the name of lycanthropes or werwolves.

Dr. Sponholz, in the "Zeitschrift für Psychiatrie," xxx., Band., i. Heft., writes upon the influence of bodily diseases and mental derangement. During thirty years' experience with two thousand cases of insanity under his care, he has only noticed two cases where recovery seemed to be accompanied by critical perspirations. He considers that lunatics resist morbific causes better than sane people, and that the insane recover quickly from wounds and illnesses. Some authors have observed recoveries from insanity to follow intermittent fever. He has not been able to observe any such effects, though from the situation of his asylum ague sometimes appears. Dr. Sponholz gives some cases where recovery from insanity seems to follow the accession of diseases such as cholera, measles, and erysipelas. These instances are few, and occur amidst a large number of cases, so that after all, they may be

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simply coincidences. As a general rule, he is confident that the delusions of the insane are not in any way cured by bodily illnesses; in some cases they are made worse. This is especially the case with organic diseases of the heart, which increase the delusion, and surround it with such horrible agony, that suicide is sought as a relief with a persistence which requires incessant watching. Dr. Sponholz advocates the use of Autenrieth's ointment rubbed upon the scalp, though, as he remarks, it may not be very prudent at a time when mild measures are all in all to recommend a proceeding of such severity, and which cannot well be carried out without the help of the camisole. He has tried rubbing an irritating ointment on the neck upon 130 cases of confirmed insanity, and of these 55 were discharged, of whom 12 had relapses. We infer from Dr. Sponholz's remarks that he has not used the treatment since 1860, so that one feels curious to know why he has discontinued a method of treatment of which he approves.

As promised in our last Restrospect, I give an outline of Dr. Hitzig's paper on "The Relative Value of some Methods of Applying Electricity," in the "Archiv.," iv. Band, 1 Heft.

Hitzig regards it as now settled that we can send the continuous current through the brain or any part of the body in the direction indicated by the application of the electrodes. He cites with approval the experiments of Brenner. This observer found that the sensation of hearing was excited when the chain was closed, if the kathode was placed in the ear or near the ear; but when the chain was opened the sensation of hearing could only be produced by the anode (instead of the kathode) being applied. In no other way could the sensation of hearing be excited by galvanization.

From his experiments Brenner drew the following conclusion—that in using galvanism for therapeutic purposes one or other pole should be applied as near as possible to the nervous tract on which it was wished to act, and that the other pole should be kept at a distance. In this way he hoped to obtain the specific effect of the nearest pole without the modifying effect of the other. If a calmative influence were desired, the anode should be used; if stimulation were desired, the kathode should be applied.

Dr. Hitzig, however, argues at great length that experiments upon other nerves do not bring out the same results as are produced on the acoustic nerve. This he explains by a consideration of its peculiar position. It is a short, straight nerve, losing itself at the other extremity in the fibres of the brain. We can, he says, at pleasure subject the auditory nerve to the one or the other modification, *i.e.*, put it into a state either of anelektrotonus or katalektrotonus, but we can only put the other nerves into both modifications of sensation at once. The current passes through the auditory nerve only in one direction; in other nerves in from two to five directions. A method of treatment, he remarks, whose healing power depends upon the raising or lowering of nervous irritability will only be efficaciously applied when one knows that the cause of the disease consists in the lowering or

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raising of this irritability, and if we can successfully cause the alterations of irritability existing during the duration of the galvanic current to continue sometime after its cessation. This last Dr. Hitzig believes, from general observation as well as from special experiments on the muscles of frogs, not to be the case. All we know at present, he thinks, is the property of electricity to act as a stimulus to the nerves. The half constructed bridge built for physiology to pass over must be broken down, and we are again sent back to empiricism. It strikes us that many of the explanations of electrical phenomena in the living body explains only a few facts, and do so in an awkward manner; that they are difficult to understand, and more difficult to remember, and that a wider range of experiment always tends to make them doubtful or insufficient.

Dr. Tigges, in the "Zeitschrift für Psychiatrie," xxix. Band, 5 Heft, has a long article upon "Cases of giddiness with double vision, and their treatment with the constant current." He finds giddiness with double vision frequently connected with gastritis, and gives a careful analysis of the symptoms. Apparently double vision has often nothing to do with the two eyes, or with the two optic nerves, for sometimes when the patient shuts one eye he still sees double with the other. In one case the patient saw single when the two eyes were opened; when one was shut he saw double. Sometimes they saw single within a certain distance, while they saw the same object double when the object was brought nearer, or farther off. Dr. Tigges mentions a case where the patient saw objects single at a distance of from one to one and a-half feet; objects held nearer were seen double, as also objects farther off; but about four feet distance they appeared threefold, and beyond this the patient could not distinguish anything.

In treating these cases great benefit was derived from the application of the constant current. The stream was directed towards the sympathetics of the neck, or passed through the base of the brain from one to five minutes. Occasionally the application was followed by a prompt cessation of the symptoms, and a cure followed after four or five sittings. Dr. Tigges also tried electricity, with advantage, in cases of giddiness without double vision, and in tabes dorsalis with giddiness and double vision. Some of his patients were insane, for the most part affected with melancholia; in others the mind was not disordered. Dr. Tigges used Stöhrer's constant battery. He has found by experiments on the dead body that a current directed through the mastoid processes reaches the posterior plane of the medulla oblongata; that when directed a quarter of an inch before and above the border of the ear it reaches the crura cerebri; and that directed a quarter of an inch above the middle of the ear it reaches the corpora mammillaria.

The paper is interesting, carefully studied, but not so carefully written. It might be made shorter and clearer, and Dr. Tigges' abbreviations of words have cost me much trouble.

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