

## PART III.—PSYCHOLOGICAL RETROSPECT.

1.—*German Retrospect.*

BY W. W. IRELAND, M.D.

*The State of the Eye During Sleep.*—Dr. W. Sander ("Archiv," ix. Band, 1 Heft), observes that with some care and practice the eye may be opened during sleep, and its condition examined. The view commonly given in the text books is that during sleep the eyeballs are turned inwards and upwards. This, I think, was first taught by Sir Charles Bell. According to Sander's experiments, the eyes are in a middle position, the axes parallel to one another, as when looking at a far object. In falling asleep, the eyeballs are converged and turned upwards, and the same thing takes place when the sleep is disturbed through raising of the lids. We then can see the eyes slowly moving upwards and inwards, as if to avoid the light, and seek protection from the covering eyelids. It is this condition which has been mistaken for the permanent one during disturbed sleep. Divergent positions of the eyes were seldom observed, and Dr. Sander is inclined to regard them as the result of disease, or deep stupor.

In profound sleep the pupils are contracted to the size of a pin head, and this condition varies with the deepness of the sleep. Anything which tends to awaken the person, causes a rapid dilatation of the pupil, which narrows again more slowly as the sleep becomes deeper. When the sleeper is suddenly awakened, the pupil becomes much dilated, even if a light be thrown upon it at the time. When the man has become thoroughly awake, the pupil gradually adapts itself to the state of light of the situation.

If we open the eyes after a good sleep, it will be found that the cornea has lost the lustre which it had in the waking condition. The cause of this is a thin deposit of mucous upon the surface. In some cases there is an apparent increase of the vessels of the conjunctiva, which Dr. Langlet believed, perhaps erroneously, to be owing to a congestive condition of the brain during sleep.

Dr. Sander remarks that the state of the pupil varies with the changes in the mental condition and emotions of the individual. The condition of the brain, as a psychical organ, has an influence upon the changes in the condition of the eye. The channels of this influence are the oculo-motor nerves and the sympathetic.

In acute delirium, Dr. Sander finds, as in the dying, an alteration in the secretion which moistens the conjunctiva. In this disease, which depends upon an alteration of the cortex of the brain, the eyes are less widely opened than usual, and the pupils are contracted. The wearied-

out appearance of the eye is in striking contrast to the unquiet state of the patient, and this generally gives a bad prognosis.

Dr. Sander thinks that contraction of the pupils in the beginning of the mental disease, shows a decided affection of the functions of the cortex, and is a symptom ominous of mischief. He is disposed to agree with Leifert in holding that we ought to be very careful of considering insane patients as completely recovered as long as there is an abnormal motility of the iris.

Dr. Sander has also found that the physiological condition of the pupil during sleep, as described by him, is altered by disease of the brain. In some cases the contraction does not take place, in others, pupils which are dilated in one eye during the waking state, are still further dilated during sleep; the other eye either contracting as much or somewhat less than usual. This was observed in eleven general paralytics, and in two patients affected with brain disease, but in no patient affected with simple insanity. In some cases of general paralysis with extreme contraction of the pupil, there was a dilatation during sleep. Sometimes this was very slight.

Drs. Kühlmann and Witkowsky (*Centralblatt für Nervenheilkunde*, No. 9), whilst agreeing as to the condition of the pupil during sleep, differ from Dr. Sander as to the direction of the eyeballs. According to these observers, the eyes have no fixed position, but shift in an un-coordinated and often unsymmetrical manner.

The stimulus of light has no perceptible effect on those irregular movements of the eyeballs, which are supposed to depend upon the influence of certain portions of the brain, as Hitzig found that stimulus applied to some portions of the superficies of the brain of dogs caused movements of the eyes in the opposite side.

*Progressive Muscular Atrophy without Spinal Disease.*—Professor Lichtheim (*Archiv*, viii. Band, 3 Heft) publishes a case of this nature which tends to throw doubt upon the views of Charcot and others, who hold that progressive muscular atrophy is dependent upon disease of the anterior horns of the spinal cord, taking its place as “amyotrophie spinale protopathique chronique,” or as the Germans call it, “Poliomyelitis chronica.” In the case published by Dr. Lichtheim, the disease was of fifteen years’ duration, beginning after the woman was grown up. He is convinced that there was real muscular atrophy, while the peripheral nerves and nervous centres were quite healthy; from which he concludes that a diseased condition of the ganglion cells of the anterior columns of the spinal cord is no necessary prelude to the symptoms of progressive muscular atrophy, and that we cannot any longer hold such an alteration to be the exclusive cause of the myopathic degeneration. Dr. Lichtheim holds with Friedreich that progressive muscular atrophy is no poliomyelitis any more than pseudo hypertrophic paralysis is so, though he is not prepared to say that the inflammatory action is propagated from the muscles backwards through the nerves to the spinal cord.

The degeneration may, he thinks, be owing to the diminution of the functional activity of the cord. The observations of Dickinson, Vulpian and others upon the condition of the cord after amputations and sections of nerves are, he admits, not in favour of this explanation, but there is a wide difference between an amputation and muscular atrophy.

*Pathological Anatomy of Progressive Muscular Atrophy.*—Dr. Arnold Pick made a careful microscopic investigation, after the method of Gerlach and Clarke, on the body of a man who had suffered from progressive muscular atrophy, and had died from failure of the respiratory muscles. The white substance showed nowhere any alteration. In the upper part of the neck the large ganglion cells of the anterior horns of the grey substance were almost wanting. Some which still showed a process and nucleus were degenerated to brownish yellow lumps. In the surrounding grey substance there was much degeneration of the nervous cells. The vessels were not much altered.

The degeneration of the "spider" cells is most marked in the middle of the cervical enlargement. The processes thrown out by the cells may be observed as running along with the vessels, and sometimes one sees a thicker prolongation than usual sinking into the vascular wall without passing through it. This has already been described by Alexander Lubimoff as occurring in the brains of paralytics, and regarded by him as the beginning of neoplasms in the vessels. In the dorsal parts of the cord the destruction of the great ganglion cells of the anterior horns, as well as the degeneration of the spider cells, is not so marked.

The cells in the tractus intermediolaris, as well as those in Clarke's pillars, are not atrophied, but in the lumbar part of the cord the contraction of the great ganglion cells and the degeneration of the spider cells is again made out. It goes against Friedreich's views that a process of degeneration beginning in the muscles creeps backwards along the motor nerves to the anterior roots and thence to the cells of the anterior horn, and in this case the atrophy of the anterior roots is very marked, but the author thinks that the affection of the ganglion cells is the primary one, as from a comparison of the stages of degeneration which the different tissues had reached, the morbid action would have commenced in the grey substance.

The muscles were also examined, and showed increase of the areolar and fatty tissues and fatty atrophy of the muscular fibres with development and accumulation of pigment, as described by Friedreich.

*A New Type of Insanity.*—At a meeting of the Verein of German physicians, who occupy themselves with the treatment of insanity, held at Nuremberg, in September, 1877, there was a good deal of debating about the different forms of insanity, and the following resolution, proposed by Dr. Meynert, was unanimously adopted:—

"The members of the German Verein of Psychiatrie agree in recognising, besides melancholia and mania, a third original form of mental disease, primary craziness, or insanity (*primäre Verrücktheit*), what Tigges described as *Walmsinn*."

As it would not do to treat with disrespect this creation of so many learned physicians, it is incumbent on me to introduce our new friend to English readers as he is exhibited in the "Psychiatrisches Centralblatt" for December, 1877.

In these subjects there is a hereditary neurotic tendency, and something strange about the disposition from infancy. They are quiet, soft children, the delight of their mothers, and, at a later time, their bitterest sorrow. They shun the society of other children, and indulge in day dreams. Their bodily growth is normal, but even trifling diseases take on cerebral symptoms. Some of them towards the end of the period of development have illusions or hallucinations of the senses, indulge in false ideas, and sink rapidly into mental weakness. Others reach their twentieth year without any marked derangement. They may show talent in special directions, but their intelligence never passes out of the puerile stage.

They become morbidly sensitive; often they brood over some feminine ideal, generally a girl with whom, perhaps, they have never exchanged a word, though fancying they have had tokens of encouragement. They are apt to endeavour to attract the attention of others by an affected carriage. They want energy to resist bold opposition, though they get rapidly into a state of theatrical exaltation, spasmodic weeping and hysterical fits. There is a greater or lesser degree of hypochondria.

They are always thinking of the conduct of strangers towards them, hear their names called in the street, find referenee to themselves in everything, and notice allusions to their doings in the newspapers. A young man of this sort imagines that a secret society persecutes him, because he is in their way, not because he is unworthy, and deserves punishment, as a melancholiac would put it.

The friends of the object of his affection put impediments in his way, slander and persecute him, on which account his own family look upon him with dislike. Often he disguises his feelings, his conduct passes as incomprehensible eccentricity, and, from his softness of disposition, violent outbursts are rare, though sometimes an accident brings out the morbid condition. At a later time illusions of the senses falsify the whole relations of the patient with the outer world. This or that person of distinction has looked at him in a meaning manner. A portrait of the ruling prince resembles him. Every change in the outer world has something to do with him. Political events, natural appearances and calamities are sent to punish his persecutors, or serve for his final triumph. God Almighty takes him under His protection, and has a blessed mission in store for him. People have had dealings with him under other names.

The progress of the disease is gradual; sometimes symptoms take a lull, again suddenly to break out. Sometimes the lunatics are very shy of bringing out their delusions, which are only shown in some unwonted state of excitement.

Dr. Meynert remarks that this form of alienation is not confined to males alone, and Dr. Fritsch ("Psychiatrisches Centralblatt," October, 1877) gives an example of it in a woman who had been married, although the vagina ended in a blind sack, and she was believed to have neither uterus nor ovaries. She, however, had undoubted sexual feelings, which, indeed, were very marked, was hysterical, and had the delusion of suspicion.

Any physician of experience must know cases which might very well be included under this new form. It cannot be confounded with mania or dementia, and is distinguished from melancholia by the conceited deportment of the patient, and his want of self-accusation or depreciation, as well as by the character of the delusions. Primary insanity may be combined with imbecility. It would appear that in the Vienna Asylum the cases classed under this new type were as numerous as those of mania and melancholia put together. Often it remains in the initial stage, or retrocedes, and the patient never reaches an asylum.

*Psychic Epilepsy and Colour Blindness.*—Dr. Weiss ("Zeitschrift für Psychiatrie," xxxv. Band, 1 Heft), amongst some examples of psychic epilepsy, mentions the case of a sailor, who did extravagant things, of which the recollection soon passed away. In the hospital he remained in a stupid, apathetic state, but one day he woke up suddenly, gesticulating and talking. He thought himself the captain of a ship, called one patient the steersman, another the cook; said he was sailing to Jerusalem in the "Novara." He correctly indicated the directions of the wind, and called the sparrows sea-gulls. It was observed that he exaggerated the size of objects and distances, and was colour blind. He called all dark colours dark blue, and bright colours bright blue. Black was complete dark blue, white strong light blue. As usual, he passed out of this state, forgetting everything he had done in it. On another occasion he saw a black figure standing before him, and thought he was close by the sea, although, as was next day ascertained, he was three thousand paces from the shore.

*Singular Cure of Epilepsy.*—The "Centralblatt für Nervenheilkunde," quotes the case of a young sailor, who was much troubled with epilepsy. The fits returned every day, and were preceded by an aura, consisting in an abnormal sensation in the stomach. He was treated for 134 days, and many different medicines were used, quinine in large doses (the fits being periodical), bromide of potassium, strychnine, nitrate of silver, morphia and chloral, all without effect. At last he took a teaspoonful of salt when the aura commenced, washing it down with a little water. This was followed by a burning feeling in the stomach, the abnormal sensation disappeared, and no epileptic fit came on. This remedy was used for eight days, at the end of which the aura itself ceased.

*Curare used against Epilepsy.*—At the Assembly of German Scientific and Medical Men, at Cassel (reported in the "Centralblatt für Nervenheilkunde," Nr. 10, 1878), Dr. Kunze, of Halle, stated that he

had found no success with the remedies usually employed for epilepsy. Bromide of potassium and bromide of ammonium retarded the attacks for a while, at most for six months, after which they returned in greater force than ever. He had tried curare, and had found, to his astonishment, that one could go on, without danger, using doses up to 0.03 of a gramme (?) in sub-cutaneous injection.

The first appearance of intoxication is a dimness of sight, so that near objects are only seen in faint outline. Eighty cases of epilepsy were treated, of which six cases were cured. Dr. Kunge considers this too small a number to settle the question.

The injections were made every fifth day for three weeks, and then a pause was made, and the next attack was expected. The preparation used was aquæ distillatæ, 5; curare, 0.3, to be used for from 6 to 8 injections.

Professor Binz remarked that we can heal convulsions generally fatal with curare. A case of hydrophobia was successfully treated at Münster with that drug. Professor Binz had made experiments on animals poisoned with brucin. In five instances he had saved their lives with curare, whilst the other animals who got no curare died. In three cases the dose of curare was too small. He thought that in using curare we might lay aside the groundless fear of asphyxia. In using it against hydrophobia, artificial respiration might be employed.

*Cure of Progressive Muscular Atrophy by Electricity.*—In the "Centralblatt für Nervenheilkunde" (Probe Nummer), there is quoted from an Italian medical journal, a report by Dr. Gannini, of a female patient, twenty-two years of age, who had, for two years, weakness in the right arm, and for one year weakness in the left hand and legs, and the right hand. In the arm the muscles were reduced to thin layers, the hand was like a claw. The other limbs were much less reduced. After 110 sittings with the induced current, the patient was almost completely restored. The muscles had well-nigh recovered their former size and strength. The author hopes that the improvement will endure. This case is worthy of notice, as showing the advantage of the Duchenne method of applying the electricity to the muscles affected, instead of passing a galvanic current along the spinal column and the sympathetic nerve, which, even when the cathode is applied to the atrophied muscles, is not often of any efficacy.

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*Two Cases of Pulmonary Disease with Hemiplegia Developing by Stages.* Prof. H. SENATOR, Berliner Klinische Wochenschrift. Nos. 4, 5, and 6. 1879.

The first case was one of putrid bronchitis, with chronic ulcerating pneumonia. The first paralytic symptom was weakness, with increase of temperature and sweating in the right arm, followed next day by almost complete motor paralysis of this limb. On the third day the arm was convulsed, and subsequently the whole body was seized with tetanic spasms, causing opisthotonism (three attacks). In a few days

the inferior branches of the facial became paralysed on the right side. Next the speech was affected, and lastly came motor paralysis of the right leg. The patient, without looking, had no idea in what position his right limbs lay. During this short time rapid atrophy of the right arm had taken place.

The autopsy revealed an abscess involving the second frontal convolution, more especially on its posterior aspect; the first and third frontals were slightly flattened and decolorized. The *gyrus centralis* was hardly affected at all.

The second case was also one of chronic ulcerating pneumonia, in which the progress of the paralysis followed the same course as in the first, except that there were no convulsions and no speech affection. The same anatomical diagnosis was made, but nothing further found than diffuse passive hyperæmia.

In concluding his remarks on these two instructive cases, the Professor points out the importance of paying attention to the state of the lungs in the frequent cases of idiopathic abscess of the brain.

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*Italian Psychological Literature.*

By J. R. GASQUET, M.B.

Professor Verga has collected the statistics for all the asylums in continental Italy (excluding, therefore, Sardinia and Sicily), taken on the night of December 31, 1874. There were then 170·79 lunatics to every 100,000 inhabitants, a proportion somewhat higher than in England, Ireland, and France, but lower than in Scotland. In the province of Naples, where the ratio was lowest, it was 1 to 908; while in Lombardy, where it was highest, it was 1 to 435. In Umbria the proportion of insane persons had doubled in 15 years, and in Lombardy nearly tripled in 10 years.

Italy seems to be an exception to the general rule of the greater frequency of insanity in females; for, while in the population at large there are 100 males to 99 females, there are 100 male lunatics to 91 females. Dr. Verga considers that the total number of the insane is greater by one-third than those confined in asylums; while scarcely one-thirtieth of all idiots and imbeciles are thus accounted for, 24 per cent. of all patients in asylums are returned as demented. Among the remainder mania is more common than melancholia.

The *Archivio* contains a number of interesting papers, of which (as usual) I can only notice the most important. Dr. Michetti, of Pesaro, contributes an elaborate paper on the relations between *Insanity and "Herpetism"* (using the word, in Bazin's sense, for any chronic cutaneous eruption). He gives cases illustrating the co-existence of these conditions, and of the prevalence of chronic eczema or impetigo