

the patients which are more or less clearly traceable to a diminution of overcrowding.

It will be gratifying to your Committee to hear that the general health of the patients in the Asylum, and also those employed in your service, has been very good, and far above the average of most former years. Probably, to some extent, this is owing to the greatly extended cubic space which the residents now occupy, consequent on additions recently made to your asylum. There has been no epidemic disease, and little seen of diarrhoea or dysentery; and what has occurred has been readily overcome by treatment, and appeared to be owing to changes of temperature of an exceptional character, or errors in dietary. There have been only a very few cases of febrile disorder, and a marked exemption from erysipelatous affections, carbuncles, boils, and gangrenous patches of the extremities. Phthisis, which a few years ago showed a tendency to develop itself in an unusual number of our residents, has been reduced to a very material extent, and most of the cases now coming under treatment have been received with evident signs of its existence, and in only a very few has it developed itself during their residence in your asylum.

(To be continued.)

2. *English Retrospect.*

By JAMES MACLAREN, L.R.C.S.E., Assistant Physician Royal Edinburgh Asylum for the Insane.

The following are extracts from Dr. Laycock's paper "On certain organic disorders and defects of memory," published in the "Edinburgh Medical Journal," for April, 1874:—

"There are two physiological processes included under the word memory, which are fundamentally distinct."

"The word memory is commonly used to denote both retention and reproduction; consequently, these two fundamental processes are confounded with each other when the word is so used. Then, again, it is as often used to denote the reproductive process alone, because want of this is the only sign of defect in the retentive process; hence, the phrase loss of memory generally means loss of recollection. Again, there may be reproduction as a lower mental process, but no memory in the sense of knowing that what is reproduced denotes what occurred in past time. Aristotle notes this kind of memory, and says that lower animals possess it. By reminiscence, he meant the higher faculty of knowing the past, and therefore implying the knowledge of time. This is more especially intellectual memory—the memory of events in orderly suggestion. It would be well, therefore, to restrict the use of the word reminiscence to this higher intellectual process of reproduction, as distinguished from that simpler form of memory possessed by lower animals, in which there is reproduction without the concurrence of abstract ideas as to time. Aristotle makes the interesting observation that the memory, as thus defined, is the more powerful when the intelligence is the dullest, but reminiscence more vigorous when the intellect is the brightest."

"What happens is a cerebral vital change, which is the double result of mind or vital energy, acting conjointly with certain molecular energies, under certain physical conditions of the organic basis. The whole series of processes are

vital, and have their analogies in other vital processes. Simply the mechanism is this—the process of retention takes place in relation, firstly, to some antecedent retention; and, secondly, to some external impressions; the one includes recall, as “association of ideas;” the other recall in relation to external impressions, as recollection or remembrance. Thus, when a man ties a knot on his handkerchief, in connection with a certain intention he has fixed in his mind, so that he may be reminded of his intent by the touch of the knot, he receives virtually, when so reminded, a physical impression on or through the sense of touch, which being transmitted onwards to the *locus in quo* in the brain, acts on the organic seat of the retention, and so the organic change coincident with remembrance is excited, and he does what he intended. This process is, in fact, one of those cerebral states which, according to my view, are dependent on the reflex action of the brain. The first stage is an example of cerebral sensory reflex action, or association of ideas; the second, of reflex cerebral motor action. In thought without volitional activity, the reflex action is not directly induced by external impressions, but indirectly, and by successional waves of change in the sensory vesicular neurine.”

“Looking, then, at the physiology and pathology of organic memory from this trophic point of view, we can distinctly generalize two different, yet closely related, processes; the one kind including that organic nutrition of the brain on which depend the well-known mental processes termed remembrance, recollection, recall, reminiscence and association of ideas, and which are determined according to the laws of sensory reflex action of the brain; the other kind, without a distinct name, but which consists in the production of those states of molecular nutrition of the brain upon which the former depend. As this organic basis of memory is the result of mental, vital, and physical energies operating conjointly, I have elsewhere designated the process by which it is formed *synesis*, or a coming together, and so tried to indicate that conjunction.”

“We can now generalize further. The organic cerebral or encephalic process I term *synesis*, which corresponds to memory, considered as the process which subserves to the retention, conservation, and accumulation of knowledge and experience, being a manifestation of a general law of life; the correlative organic process which corresponds to that element of memory termed recollection, reproduction, and reminiscence, must be also a manifestation of some equally general vital law correlative with *synesis*.

“Now, these two laws are, in fact, none other than those termed evolution and reversion. To understand this, it is necessary to remember that the brains go on evolving long after the body has ceased to evolve, and that every addition to a man’s experience and knowledge is practically a higher evolution of brains, or of some special portion of them. And this higher evolution, due to ever recurring *synesis* in individuals, families, and races, may, and in fact does, become hereditary.

“So that a return in memory at any moment to that which was evolved *synetically*, a day, a week, a year, or a lifetime before, is, practically, a reversion to an antecedent but ancestral *synesis* as evolutions.

“Whether or not there be with the organic or ancestral reversions thus established, the knowledge that they belong to the past, and, as such, are true reminiscences, is another question, which I will not now discuss. As to these phenomena, whatever they may be—whether merely reversionary or reminiscient also—the process of recall is one of cerebral reflex action; they are re-excited by external impressions.

“It follows from all this, that the organic conditions upon which memory depends have a *locus in quo*, and that there is a portion of the brains in which the processes of *synesis*, or evolution and recall, or reversion occur.

“All organic memories are therefore local. This is, in fact, the principle which underlies the phrenological doctrine of ‘organs.’ Gall’s attention was first directed to the ‘organ of language’ by observing that persons with good memories had prominent eyes. But, then, these persons have not only a *copia verborum*, but a volubility sometime amounting to a logorrhoea in expressing

what they do know, although that may not be much. Hence there is a motor, as well as a sensory or sentient element in the processes to which the 'organ' is subservient. In phrenology, memory is the result of activity of each of the organs or faculties; thus by the organ of 'Time' a man remembers music, as well as language and words.

"The differences in power of retention of 'impressions on the memory' manifested by individuals is recognised by phrenology as a quality of brain, but the cause is not known. It is not difficult, however, to determine three conditions as necessary to the proper functional activity of the organic memory, viz. :— 1. Those of nutrient energy of the *locus in quo*, whereby synesis and recall are duly perfected. 2. Those upon which thought and ideation or the association of ideas depend, which are sensory; and, 3. Those which subservient to the expression of thought or feeling by words or acts, and which are motor. The pathology of memory must therefore discriminate as to these, both as to causes and seat.

"That the seat of the motor and sensory are distinct, may, I think, be learnt from an observation, which, however, each reader must make upon himself. Having selected some song of which both the air and the words have been stored up in his brains, the reader should first try to sing both the air and the words mentally—that is to say, without any motor activity whatever, and he will find that he can do this, unless it be that perchance his breathing keeps the time of the air involuntarily. Having done this sufficiently often, let him next end the process by energising into actual singing. In this way he cannot fail to discover that he has been engaged in two distinct cerebral processes, the one restricted to consciousness, thought, or mind, the other combining motor activity with the mental states. Now, let it be supposed that the former or sensorial brain state is induced physically or morbidly, and independently of volition and thought, then, in this case, the hallucination of hearing the words or the air, or both words and air, would occur; or, if that cerebral sensorial condition which corresponds to the volitional production of the air and words mentally were induced, he would have the hallucination that he sang them, although perfectly silent. This is, in fact, what occurs in dreaming of acts done. Again, suppose further, that the motor portion of the synesis—that which corresponds to actual vocalization—be also morbidly excited, then he would repeat the words or sing the song automatically or involuntarily.

"Neither class is of unfrequent occurrence during sleep and dreaming, in delirium, and in insanity.

"One day I had an interesting illustration of the dreaming class at the Royal Infirmary. A patient at visit complained that he was ridiculed by the nurse and the other patients. They pretended that he had been singing a Scotch song (which he named, a comic song of domestic life) in the night, but which it was impossible he could have done as he neither knew the words of the song, nor could he sing the air. Upon inquiry I found that it was indeed the fact that he had so sung, and loudly. This patient had no special head-symptoms, but he was hypochondriacal, and had a spinal neuralgia, and the singing might have been due to reflex action, originating in the spinal cord.

"To have this result, the patient must either have previously acquired the corresponding organic conditions by synesis, or else had derived them from his parents. The former is by far the more probable, although the latter is not perhaps absolutely impossible."

"What name should be given to the organic condition, the result of synesis, upon which memory in all its forms depends?"

"The material basis has in fact evolutionary properties as manifestly as the primordial cell of the seeds and ova of plants and animals. I have, therefore, designated them sub-strata, those which belong to states of consciousness being *ideogenic*, and those subservient to volition and muscular action *kinetic*.

"The evolutionary properties of these sub-strata are best indicated by the phrase *ideogenic*, inasmuch as new ideas, the result of new acquisitions of knowledge, tend to evolve and develop as certainly as a seed or an egg, so that they are in no wise merely material."

Dr. Laycock illustrates his theories by notes of three interesting cases.

A lecture by Dr. Laycock on the "Clinical observation and practical estimate of Morbid Temperature," is published in the numbers of the "Medical Times" and "Gazette" for March 21st and 28th.

The following are two extracts from it:—

"Now the feeling of being hot or cold belongs quite as much to medical psychology as the imagination. Very often the feeling by no means corresponds to the real condition, but is an illusion leading to delusion. Is a pseudœsthesia. It is a neurosis in short."

"A usefully practical method of considering these thermal neuroses is to assume that there is a special set of nerves and nerve-centres for regulating temperature. Although, however, I only 'assume,' I think the theory is capable of proof. According to this view there are afferent or sensory, and efferent or motor nerves, and heat is produced as molecular motion, instead of visible and mechanical motion. And since the only painful sensations that can be induced thermally are painful feelings of heat and coldness, these are the neuralgiæ of the thermal nerves."

Pursuing his labours regarding idiocy, Dr. Ireland publishes two articles in the "Edinburgh Medical Journal" for January and February, 1874, on the subject, especially in its physical aspects, and still further elaborates and defines the classification, based on the pathology of the different forms, which he propounded in this Journal in 1872.

Many general causes are assigned for the production of idiocy, such as the existence of the scrofulous diathesis in the parents, unsatisfactory social conditions such as exist in the State of New York, where idiocy is said to be increasing, or fright to the mother during pregnancy. Besides these general causes, whose vagueness is not favourable to scientific inquiry, there are more determinate existing causes. The child becomes idiotic either through lack of development or nutrition, or through disease or injury befalling the brain before or after birth.

Dr. Ireland has classified idiocy under 10 heads.

I. *Hydrocephalic Idiocy*.—While the largest number of children affected with water in the head die, some recover completely, and a few neither die nor recover, but become idiots. As a rule they are easily recognised by the size of their heads, though sometimes they are not larger than usual, and, on the other hand, occasionally men with heads hydrocephalic both in size and shape are possessed of ordinary intelligence. "Hydrocephalic idiots are frequently of very feeble constitution, and of a tubercular or scrofulous diathesis," nevertheless, if in tolerable health, they are more educable than some other classes of idiots, and generally improve under training. They are, as a rule, gentle in their disposition and somewhat awkward in their motions.

II. *Eclampsic Idiocy.*—The most general, as well as one of the earliest exciting causes of eclampsia, is the cutting of the teeth. “The child is thrown into fits, often long continued, and returning with short intermissions, placing its life in the utmost danger. Most of those who survive escape without injury, but some become permanently idiotic.” In these the power of muscular motion, as well as the tactile sensibility, is generally well preserved, and special sense does not appear to be injured, but the intelligence is in a great degree destroyed, and the child remains, comparatively speaking, uneducable.

III. *Epileptic Idiocy.*—This term is applied by Dr. Ireland to those cases “where the epilepsy seems to be the cause of the mental obtuseness; for it ought to be kept in mind that congenital idiots are now and then subject to epileptic fits, which need not necessarily have a marked effect upon the intelligence, and in any case can only be regarded as a complication.” The probability of a complete cure of idiocy is greater in the epileptic idiot than in any other of the classes, save that of idiocy of deprivation. Dr. Ireland gives two interesting illustrations of this fact. One the case of a girl, an account of whom will be found in the German Retrospect of this Journal for July, 1873; and the other, mentioned by Schroeder van der Kolk, that of a boy, who was nearly idiotic from frequently recurring attacks of epilepsy, who recovered after incisions were made in the scalp and issues kept up.

Of eighteen patients of this class admitted into the Larbert Institution seven did not improve; one is not recorded in the case-book; four improved a little, and six improved considerably. “In three of these cases especially the progress was very satisfactory. The pupils increased in intelligence, and the fits diminished so notably in number that I consider a complete cure not improbable.”

“In the matter of treatment bromide of potassium seems to have a less favourable effect upon the inveterate cases of epilepsy which come into an institution for idiots or into an asylum for lunatics than it has in out-door practice—where improvement follows treatment I am disposed to attribute it as much to diet as to medicine.”

IV. *Paralytic Idiocy.*—“Cerebral apoplexy is not common with children, but it is clear that paralysis, associated with idiocy, must have a centric origin. I have seen about a dozen such cases. They seem to improve mentally rather than physically.” Dr. Ireland quotes Schroeder van der Kolk to show that in some cases there is atrophy of one side of the brain, accompanied by paralysis of the other side of the body. Impairment of mental function does not necessarily accompany this state. He also points out that “it not unfrequently happens that idiots cannot pronounce particular words or letters, or can pronounce them only in particular combinations. They often substitute one letter for another.” One difficulty in regarding these as cases of deficient pronunciation appears to me that most

of the muscles used in speech are the same as those used in chewing and swallowing the food; and if we assume paralysis in the one function, how do we account for it not taking place in the other? We know that in labio-glosso-pharyngeal paralysis, which has generally been found to be associated with disease of the pons or of the corpora olivaria, swallowing is impaired along with that of speaking. This consideration appears to me not without weight, but it ought to be borne in mind that the articulation of words demands a much finer adjustment of the muscles than in moving the lips or swallowing, and that a loss of power over the muscles generally commences with difficulty or hesitation of the speech before any other motions are affected."

V. *Inflammatory Idiocy*.—The examples of this form which Dr. Ireland has met with were of different grades of intelligence. "It is evident that the injury from inflammation must depend in a great measure upon its extent or situation, which we have no direct way of measuring during life."

VI. *Traumatic Idiocy*.—"Owing to the softness of the bones of the skull in the new-born infant, as well as the looseness of the sutures, displacements and other injuries are not uncommon during parturition. As the head of the male infant is a little larger than that of the female, he is thus more liable to suffer injuries at birth. This may serve to explain why male children are more subject to idiocy, deafness, and diseases of the nervous system than female children." In most of the cases of this form which Dr. Ireland has met with the patient was simple-minded or imbecile rather than belonging to the lower grades of idiocy.

VII. *Microcephalic Idiocy*.—This is the rarest of all the forms, but owing to the speculations of Darwin has had special attention directed to it. With regard to the size of head which necessarily implies impaired mental function Dr. Ireland assumes that "below seventeen inches in circumference the manifestations of intellectual power would be feeble. But heads of this small scale are rare even amongst idiots, for idiocy is generally the result of disease, not of smallness of the brain." "In the microcephales the impressions of the senses are lively. They are fond of moving about, but have little power of continuous attention. Their restless motions recall those of a butterfly. It would appear they are late in learning to walk, but in general they have the free use of their limbs, which Gratiolet accounts for by the comparatively large development of the cerebellum. If the brain be healthy the prognosis is better than that of many cases where the brain, though of normal size, is the seat of chronic disease."

VIII. *Congenital Idiocy*.—The predisposing causes assigned for this form are numerous, but their operation is vaguely understood. Heredity often exists, there being insanity, epilepsy, or some other nervous disease in the family; sometimes the tendency to it is intensified by a

consanguineous marriage. "A very common accompaniment of congenital is the keel or saddle-shaped palate." "Congenital idiots are seldom well made, often of the scrofulous diathesis; sometimes, however, they are strong and good-looking, with well-formed heads, good teeth, and no deformities whatever. They present every variety of mental power or feebleness, and are not less educable than other classes."

IX. *Cretinism*.—The specific cause of this form is only known through its effects on the human body. "It seems to be more common on rocks of magnesian limestone, but is also known to be rife in the valleys where the primary or schistose rocks are the main or only formations. It is not hereditary in the constitution of the parent." "The most characteristic traits which occur in Cretins are the stupid monotonous facial expression. The nose depressed at the root and broad at the wings, the remarkable distance between the eyes occupied by a hollow from which the root of the nose seems to issue, the eyes dull and heavy, the broad zygomatic arch, the wide mouth, the broad lips, and the thick tongue. The teeth are generally bad, and soon come to decay; sometimes first teeth are not renewed. Cretins rarely attain the usual height; many are dwarfs, no higher than three feet. The limbs are often disproportioned, the walk awkward—what is called the 'Barengang' or bear gait, in the German parts of Switzerland. The neck is generally short, and from one third to two thirds of Cretins are said to have goitre." Although Guggenbuhl has claimed to have made a number of complete cures, Dr. Ireland was informed by the teachers of several training schools visited by him in Switzerland that Cretins do not seem to improve under training faster than idiots of other classes.

X. *Idiocy by Deprivation*.—"This condition, if it be not idiocy, simulates it so closely that it is needful to say a few words about it." "A being deprived of sight and hearing, the two senses most useful in perception, is, even when in possession of a potential intellect of good capacity, in reality an idiot as far as his relations with the outer world go." "Idiocy by deprivation is like a seed which does not sprout, because it is kept away from sunlight and moisture, while incurable idiocy is like a seed in which the germinal faculty has been destroyed; and the higher grades of idiocy resemble seeds in which the germinal capacity is much impaired, and the growth enfeebled, so that they require unusual stimulus."

In concluding his valuable paper Dr. Ireland indicates that in reducing all cases of idiocy to ten classes he does not expect the arrangement to be final, but anticipates that the advance of pathology will lead to changes in the nosology of the disease.

At the Annual Meeting of the British Medical Association in London, in August, 1873, Dr. Yellowlees read before the Psychological Section a paper on "Insanity and Intemperance," which has since been printed.

There are three forms of dipsomania. (1) The acute, where the patient, formerly temperate, suddenly, on some loss, shock, or disappointment, takes to excessive drinking. (2) The periodic or paroxysmal form, in which a person, ordinarily of irreproachable character, is seized with an uncontrollable craving for stimulants, under the strain of over-work, or consequent on a casual indulgence. (3) There is the continuous or constant form, where the disease is associated with other vices, and with an active form of moral insanity.

As regards treatment, Dr. Yellowlees points out the necessity of "the absolute withdrawal of alcohol, except in the very rare cases where physical prostration forbids it, and the seclusion of the patient from all temptation and opportunity to indulge his habits." The chance of ultimate recovery is seldom hopeful.

PART IV.—NOTES AND NEWS.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

A quarterly meeting of the Medico-Psychological Association was held on the evening of Wednesday, the 29th April, at 52, Berners Street; Dr. Harrington Tuke, President, occupied the chair. The following members and visitors were present:—Dr. Harrington Tuke, President; Dr. H. Maudsley, Dr. J. Sabben, Dr. G. H. Savage, Dr. F. J. Wright, Dr. W. C. Daniel, Dr. F. H. Ward, Dr. W. J. Mickle, Dr. H. Rayner, Dr. W. Orange, Dr. D. Nicolson, Dr. Boyd, and Dr. W. Rhys Williams.

The PRESIDENT having taken the chair, after the usual formal business the minutes of the last quarterly meeting were read.

The PRESIDENT said he could not accede to the correctness of the report of the minutes of the last meeting, which on the whole he did not consider satisfactory.

Dr. SABBen proposed, and Dr. RAYNER seconded, that the minutes should be confirmed, subject to the opinion expressed by the President.

This was carried.

The PRESIDENT intimated that it was usual to devote the first half hour to discussion.

Dr. SAVAGE apologised for bringing before the meeting two cases of no extraordinary interest, and of which he had only with him the shortest notes.

CASE I.—Ellen B—, *et. 74*. Admitted into Bethlem in 1839. Married, four children. Cause of insanity hyperaetation (16 months); suffering on admission from mania, with suspicion. Temperate, timid, solitary, talking to herself, idle, and dirty.

1851.—Has settled into a quiet style of life of her own. Answers when spoken to. 1854.—The most useful patient in Bethlem. She used to refrain from work on Fridays, but has given up that whim now, and works steadily at any work given to her. Still calls herself Queen of Ireland. She is clean. Talks to herself. No change till

1872 (*August*), when one morning she was found hemiplegic (on right side) and speechless.

February 14th, 1874.—Since last note has lain in bed constantly, right arm and leg being flexed and stiff. She has double cataract. She eats well, sleeps profoundly, passes urine and motions under her; remembers the names of the doctors at the time of the fit, but none since. She has perfect sensibility of the skin, and can tell her wants. She is supposed to have had another fit about February 5th or 6th.