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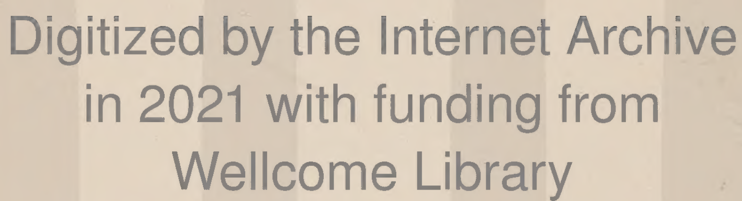
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THE JOURNAL

OF

MENTAL SCIENCE

(Published by Authority of the Medico-Psychological Association).

EDITED BY

HENRY MAUDSLEY, M.D.,

AND

THOMAS S. CLOUSTON, M.D.

"Nos vero intellectum longius a rebus non abstrahimus quam ut rerum imagines et radii (ut in sensu fit) coire possint."

FRANCIS BACON, *Proleg. Instaurat. Mag.*

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"IN adopting our title of the *Journal of Mental Science, published by authority of the Medico-Psychological Association*, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the terms, mental physiology, or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid, for although we do not eschew metaphysical discussion, the aim of this Journal is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is, in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our Journal is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanician uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow men, may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science, with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—*J. C. Bucknill, M.D., F.R.S.*

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THE JOURNAL OF MENTAL SCIENCE.

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PART 1.—ORIGINAL ARTICLES.

Reflex, Automatic, and Unconscious Cerebration: A History and a Criticism. By Thomas Laycock, M.D., &c. Physician in Ordinary to the Queen for Scotland, and Professor of the Practice of Physic and of Clinical Medicine in the University of Edinburgh.

(*Continued from Vol.* xxi., *p.* 498).

VIII.—Turning from the living mechanism and its energies, to the energies derived from without that move it—the "strings of the puppet"—to use the mechanical phraseology, we come upon another class of words and phrases which are ambiguously used in the "old metaphysics," but which have a definite and wholly different meaning in studying the organic bases of mental life. These are such words as *impression, irritation, suggestion*, and the like. I may be permitted to state, somewhat dogmatically, what is now admitted generally, that all changes in the constituent matter of living things result from the operation of physical or molecular energies therein. This being so, the cerebral series of changes involved in mental states of the individual, and constituting the process termed cerebral reflex action, are due to as purely physical causes as those on which spinal reflex action depends. And this is true, not less as regards feelings like corporeal pain, and sensations, than as regards the highest work of the intellectual faculties. This operation of physical energies, however, was not recognised by Marshall Hall and Dr. Carpenter in 1838, nor, indeed, by physiologists in general. One source of the difficulty experienced in doing this is in the imperfect appreciation of what is physically included under the word *impression*. Thus, an anonymous defender of the views of the eminent physiologists named observes, in 1846, in opposition to my views—

"Dr. Laycock mentions that the sight and hearing of certain things excite reflex actions of the brain. Will he maintain the absurdity that in hydrophobia the impinging of the sound upon the auditory nerves produced in the utterance of the word 'water' makes an impression different from the sound of any other word, and which is carried by an incident and reflex action to the vocal organ?" ("*Vindex*" in Lancet, 2nd May, 1846.)

The answer to this objection is simple. In cerebral reflex action, as in the "true spinal" kind, it is only certain kinds of excito-motor or excito-sensory impressions, and these acting on certain kinds of nerves going to certain centres, that can excite cerebral reflex actions and conscious states, whether they be instinctive, sensational, emotional, or volitional. Hence, I have named this class *affinitive impressions.* Words and like signs of ideas, whether of writing or of speech, are the result of the consensual actions of certain muscles, and, as such, are in excito-motor and excito-sensory affinity with the respective substrata upon which they depend; and so they not only make manifest the corresponding states of consciousness of the individual, but are affinitive excitors of corresponding states in others. It is thus that the signs of emotions in an individual are the excitors of emotions in others. Upon this law the arts of the orator and actor are founded. According to this, also, sympathies and antipathies are excited, even by a tone of voice or a glance; and to carry the analogy into the highest development of the human mind, it is by the same law that speech and writing, the affinitive signs of conscious states, as knowledge, act upon the hemispheres and excite therein the organic conditions of those conscious states as knowledge. Dr. Carpenter has himself witnessed how the notion of personal identity of persons in mesmeric sleep can be at once changed by spoken words to that effect. But this, according to the well-known law of pathology, is only an "abnormal" manifestation of the "normal," for in all the business of life mankind are thus subject to the influence of words and phrases in exciting thought and volition.

This affinity of impressions with their corresponding *locus in quo* of reception suggests the analogy of chemical affinity; but the reader to whom the *physics* of impressions are wholly new, will be better able to understand them if he will apply the principles of optics and acoustics to the solution of the problems, and bear in mind what wonderful mechanical adjustments of the optic and auditory apparatus are needed, to constitute the vibrations of sound and the undulations of

light into auditory and visual impressions. On this point the researches of Helmholtz are very instructive. It has recently been shown by calculation that, in hearing, the adjustments, by means of the muscles and the bones of the ear, are so minute as to be invisible to the highest microscopic powers. Then he has to consider how minute impressions, such as a glance of the eye in fencing, or in discourse, will excite an instantaneous thought or volition in adaptation to an end.

It is, therefore, to the reflex action of the cerebrum, thus excited through the recipient organs of those affinitive impressions which are the signs of feeling and thought, that the processes termed *suggestion* and *direction* of *attention* are due, whether they arise in ordinary life, or during mesmeric manipulations. Equally, too, the higher phenomena of clairvoyance and thought-reading are but exalted manifestations, due to an exaltation of recipient and reflex function, of what is normal and conscious. All men, and even dogs and children (and perhaps all animals), are character and thought-readers, *i.e.*, recognise the intentions or feelings or thoughts of those about them by the signs of their mental states. Intentional production — as imitation — of the muscular acts which are the signs of sentiments in others, has been used to discover those sentiments by thus producing cerebro-mental states like those of the person tested. In like manner the volitional production of morbid states is a method of *fraudulent* production of mesmeric phenomena to which I long ago called attention.

"There cannot be a question that the O'Keys [the subjects of Dr. Elliotson's experiments at the time of writing] thus excited real phenomena ('Lancet,' vol. ii., 1837-38, and of Sept. 8th), just as hysterical girls can bring on convulsions at will, and anybody ideas, sensations, and emotions, with more or less facility. Consequently, there can be no question of the possibility of voluntary common somnambulism. 'We can excite a sensible degree of the passion of anger in our own breasts by imitating the looks and gestures which are expressive of rage' (D. Stewart, on the Active and Moral Powers. Edinburgh, 1828, p. 119). This is one of the secrets of good acting." (My Essay in Edinburgh Medical and Surgical Journal, July, 1839, p. 25.)

There is, however, an involuntary and unknowing—or, as Dr. Carpenter would say—an "unconscious" imitation or reflex production of these phenomena by affinitive impressions, of much wider manifestation than the preceding, and which deeply influences man's physical and moral nature. Sometimes this imitation is manifested knowingly, yet reflexly

and *un*voluntarily, because the acts imitated cannot be restrained, although recognised. Hence the individual cannot help imitating the manner of speech, gestures, and other actions of those about him. It is a very common instinctive process in lower animals. Looking at the so-called imitation as a manifestation of cerebral reflex function, I may be excused saying that perhaps there is no more important chapter in biology and in mental science than this which has to demonstrate the excitor-influence of external impressions, considered as energies, upon the forms and habits of animals in general, and especially on man's moral constitution. It includes all unconsciously operating moral as well as physical influences from society and Nature. As a law, it certainly extends to the lower animals, as manifested in the so-called disguises of nature, in which there is an assimilation —as to the colour and form chiefly—of surrounding things. M. Pouchet read, at Brighton, in 1873, an account of some experiments he had made on fishes which change their colour to that of the river bed on which they rest, which clearly showed that the changes are due to impressions of reflected light received from the surrounding *media* through the optic nerves.*

These remarks refer, however, to only one portion of the great question involved—the *external* relations of the human consciousness; another, and not less important one, is the region of *internal* relations and internal impressions. This region is, as yet, almost wholly untouched by physiologists; nevertheless it contains some of the most elementary questions of mental science. The fundamental law is, that living things come into *immediate* adaptive contact with living things —corpuscle with corpuscle—cell with cell—protoplasm with protoplasm—their relations being regulated by fundamental divisions of the nervous system, named the trophic. I marked out the operation of a law of reflex nutrition and development thirty-five years ago, and gave illustrations from the physiognomical signs of the sentiments and propensities as denoted, not only by the facial expressions due to consensual muscular action, but also by features considered as the special forms into which facial bones and muscles and wrinkles are cast.†

IX.—Other instructive illustrations of the causes of mis-

* See also Comptes Rendus, 28th Dec., 1874.

† See a letter to George Combe, 7th April, 1845, in Lancet, vol. ii., 1845, p. 258; also my chapter on "The Vivifying and Co-ordinating Action of the Contenta of Cells and Vessels," in Mind and Brain, vol. ii. p. 218.

understanding which I have pointed out are to be found in the opinions either expressed by Dr. Carpenter, or implied in the context, that cerebral reflex action, automatic action of mind, and unconscious cerebration, are the correlatives, in physiology, of Sir William Hamilton's doctrine of "Mental Latency," as developed in his Lectures on Metaphysics. And here, for the better understanding of this point, I must note a verbal inaccuracy of Dr. Carpenter's. Hamilton, so far as I can find, never uses the phrase or means to denote "Latent Thought," as stated by Dr. Carpenter. The proper synonym, would be Latent *consciousness* or *Knowledge*.* But Dr. C. shall give his opinions on this point in his own language:—

"The psychologists of Germany, from the time of Leibnitz, have taught that much of our *mental* work is done *without consciousness;* but this doctrine, though systematically expounded by Sir W. Hamilton, under the designation 'Latent Thought,' has only of late attracted the attention of physiologists. Though foreshadowed by Dr. Laycock, in his memoir of 1844, on the 'Reflex Action [Function] of the Brain,' it was not expressed with sufficient clearness to obtain recognition on the part of any of those who studied that essay with the care to which its great ability entitles it. Some years afterwards, however, Dr. Carpenter was led, by considering the anatomical relation of the cerebrum to the sensorium, or centre of consciousness, to the conclusion that *ideational* changes may take place in the cerebrum of which we may be at the time *unconscious,* through the want of receptivity on the part of the sensorium, just as it is unconscious, during sleep, of the impressions made by visual images on the retina; but that the results of such changes may afterwards present themselves to the consciousness as *ideas,* elaborated by an automatic process of which we have no cognizance. This principle of action was expounded by Dr. Carpenter, under the designation 'Unconscious Cerebration,' in the fourth edition of his 'Human Physiology,' published early in 1853. . . . . The lectures of Sir W. Hamilton not having been then published, none but his own pupils were aware that the doctrine of 'Unconscious Cerebration' is really the same as that which had long been expounded by him as 'Latent Thought.'"—(Quarterly Review, Oct., 1871, p. 317.)

This statement has reference to the subject of Sir W. Hamilton's 18th Lecture, in which he proposes to solve the question—"Is the mind ever unconsciously modified?" Substitute the word *brain* for "mind," and that is *the* problem of cerebral physiology. But then he goes on at the onset to say that the question refers "in particular to the great phenomena of memory and association," and adds—

* I have discussed this question in "Mind and Brain," Vol. i., chapters headed "*Unconscious Existence*" and "*Latent Consciousness,*" p. 160 *seq.*

" The question I refer to is, whether the mind *exerts energies*, and is the subject of modifications of neither of which it is conscious?" Substitute, again, the word *brain*, or *man*, for " mind," and the word *the individual* for " it" in the question, and that again is the question we have to deal with as physiologists. This substitution may often be usefully made in reading philosophical works, as I pointed out long ago.*

And I would here suggest, that if Dr. Carpenter had realised the ambiguities and false resemblances which lurk in the terms of the metaphysician, he would have seen that what he designates unconscious cerebration is more correctly, either involuntary or unknowing cerebration or involuntary and unknown mental activity as regards the individual. I think in all Dr. Carpenter's illustrations the individual is in *some* state of consciousness, albeit not in a particular *knowing* state, or as having knowledge. To understand Hamilton's views, therefore, in reference to brain-function, it is necessary to bear in mind that he uses the words mind and consciousness sometimes synonymously to denote the same abstract thing, sometimes to denote a state of the individual as to mental activity. Mind may also be used synonymously for brain, as denoting a thing, and consciousness as denoting a state or condition of the thing, mind. But consciousness is chiefly used to denote the state of knowledge or of knowing. Hamilton, moreover, used the words *mind* and *consciousness* in the sense either of *an energy*, or as a manifestation (phenomenon) of an energy, upon which *continuous* mental life depends, and variously named mind, soul, &c. It was with these varying meanings attached to terms that he discussed two distinct problems; the one being whether consciousness, held to be both a general state and the cause of mental life, ever ceased. This he answers in the negative, maintaining, both from arguments and experiments on himself, that consciousness continues even during the most profound sleep. The other question is, virtually —although not put in that form by him—whether consciousness as knowledge, and as an energy, ever becomes *latent*, in the sense in which the physicists use the word in the phrase *latent heat*. This problem he also endeavours to solve by observation; and it is as to this kind that he " adduces some proof," by cases detailed, " of the fact that the mind [physio-

* " Even Locke scarcely ventured to refer to the brain and nervous system; but it is not a little curious that brain may be substituted for mind in numerous passages of his works. He speaks constantly of the mind as the organ; and of the will and of understanding, or perception, as the agents."—(My Essay, in Edinburgh Medical and Surgical Journal, July, 1838, p. 8.)

logically the brain] may, and does, contain far more latent furniture than consciousness informs us [*i.e.*, all mankind] that [he or] it possesses. To simplify this discussion I shall distinguish three degrees of latency."* The first of these degrees of latency includes ordinary memory as to knowledge, and habitual or acquired consensual acts as to will. The second I give in his own words—

"The second degree of latency exists when the mind contains certain systems of knowledge or certain habits of action which it is wholly unconscious of possessing in its ordinary state, but which are revealed to consciousness in certain extraordinary exaltations of its powers. The evidence on this point shows that the mind [brain] frequently contains whole systems of knowledge, which, though in our normal state [of brain] they have faded into absolute oblivion, may in certain abnormal states [of brain], as madness, febrile delirium, somnambulism, catalepsy, &c., flash into luminous consciousness. For example, there are cases in which the extinct memory of whole languages was suddenly restored, and, what is even more remarkable, in which the faculty was exhibited of accurately repeating, in known or unknown tongues, passages which were never within the grasp of conscious memory in the normal state." (Lectures, vol. i, p. 340.)

Hamilton then proceeds to narrate illustrative cases, including insanity, febrile delirium and somnambulism. He quotes, among others, the case of the well-known German maid-servant, who, when in the delirium of fever, "was incessantly talking Latin, Greek, and Hebrew in very pompous tones." The two degrees of mental latency, as defined, obviously correspond to the organic substrata of the memory of the individual as distinct from ancestral memory, and acquired during the current life-time.†

The third degree of "mental latency" is more abstract and is physiologically ancestral. It is that which alone, Hamilton remarks, has been hitherto argued by philosophers. This being so, he adopts a certain method—viz., he considers it in itself and in its history; and this he does "because the principal difficulties which affect the problem arise from the equivocal and indeterminate language of philosophers."

"The problem, then, in regard to this class is—Are there, in ordinary, mental [cerebral] modifications, *i.e.*, mental [cerebral] activities and passivities of which we are unconscious, but which manifest their existence by effects of which we are conscious? . . . . . In the

* "Lectures on Metaphysics," vol. i, p. 339.

† See my chapter as already cited, "Journal of Mental Science," July, 1875, p. 158, *et seq.*

question proposed, I am not only strongly inclined to the affirmative—nay, I do not hesitate to maintain that what we are conscious of is constructed out of what we are not conscious of—that our whole knowledge, in fact, is made up of the unknown and the incognisable."—(Lectures, vol. i., p. 347.)

It ought to be noted, to understand this, that Hamilton includes the origin of our "activities," considered as modes of energizing—our "conations"—in the same origin as our "passivities" or states of feeling and knowledge. Physiologically, the problem includes those mental states which have led Leibnitz and many others to the hypothesis of the pre-conscious existence of the soul. I have classed them in the chapter referred to under ancestral substrata, and made their origin evolutionary.

Hamilton's views will be more clearly understood if we read between the lines what were the practical questions he was thus endeavouring to solve, and at the same time bear in mind that to attain this end he used that speculative method which he clearly describes in the next (19th) Lecture as wholly excluding all physical and physiological research.* About the time he was appointed to the chair of Logic and Metaphysics in the University (1836), he was much interested in animal magnetism, and many experiments were made in his house. Another period of excitement began in 1850, when at least three of his colleagues in the University were making inquiries into mesmeric-magnetic phenomena. At that date the late Dr. Gregory, Professor of Chemistry, was an ardent disciple of Reichenbach, who, he believed, had discovered a new force in nature, which was named "od" force, and published a translation of Reichenbach's book in 1850. In 1851, Gregory published his "Letters to a Candid Inquirer on Animal Magnetism." At this same time two of Hamilton's other colleagues—Simpson and Hughes Bennett—tested the phenomena of animal magnetism by the physiological method, and showed that when not fraudulent, they were due to known causes and conditions of the nervous system.†

* Lectures, vol. i., p. 364, "Difficulties and Facilities of Psychological Study."

† A conjuror, calling himself Barnardo Eagle, but said to be a Yorkshire stable boy, whom I knew well, and who explained to me his method, performed clairvoyance publicly in York as an exposure of the tricks of the mesmerizers, together with other conjuring tricks, his daughter acting as his *medium* or "subject." But honesty, in this respect, was not the best policy. "Barnardo" became embarrassed; his apparatus was seized and sold; and after practising sleight-of-hand in a humble way in York, he appeared at the date in question in Edinburgh with his daughter as a *real* clairvoyante, receiving five guineas a "séance" for their united services.

During the summer of 1851 I reviewed the whole subject for Dr. Carpenter, at that time the Editor of the Brit. and For. Med. Chir. Review, and took for my illustrations the writings of Reichenbach, Gregory, Herbert Mayo, J. Hughes Bennett, Braid, and Dr. Alex. Wood. This article appeared in the number of that Review for October, 1851. At this time, as in 1836, Hamilton was in the thick of the "mesmeric mania," as Hughes Bennett termed it.

It would be a mistake, however, to conclude that Hamilton's researches were conducted solely by the speculative method. His examination of the claims of phrenology in his controversy with George Combe shows that he could work well by the physiological method. And in investigating the functions of the cerebellum, he came to the conclusion that it "is the intracranial organ of the nutritive faculty" and "the condition of voluntary or systematic motion."* Now, if "trophic centre of the body" be substituted for "intracranial organ of the nutritive faculty," the doctrine is that which I have worked out and applied to practice for several years past (Mind and Brain, 1860, vol. ii., p. 452. § 1008). Hamilton was not merely more thoroughly acquainted with the literature of mental physiology than the majority of modern physiologists, but he made, also, more extensive and more accurate experimental researches and observations. "His tables," as he states, "extended to 1,000 brains of 50 species of animals, accurately weighed in a delicate balance.† He conducted very numerous experiments with his own hand on the brains of living animals, and had a constant succession of the latter in his house for this purpose.‡ And he was well qualified to do this, for he had studied medicine during several years both at Edinburgh and Oxford. His researches into cerebral function led him to take great interest in the translation I was making in 1850 of Unzer's *Erste Gründe,* in which work are evolved the doctrines of reflex function as to the energies at work, and he certainly had read my early papers on the subject. The following letter, addressed to me at this date by Sir William Hamilton, is conclusive evidence as to his physiological pursuits, and his special interest in the phenomena of animal magnetism:—

* Lectures, appendix, vol. i., p. 410; and Munro's Anatomy of the Brain, p. 7. Edinburgh, 1831.

† See Medical Times, May, June, and August, 1845, for his papers on the Frontal Sinuses.

‡ "Life," by Veitch, p. 117.

North Berwick, 12th Sept., 1850.

My Dear Sir,—Mr. Colquhoun was here yesterday, and brought the "Artz," which I send you, along with Albinus. . . . I send only the first volume—there are four in all—as that volume contains his doctrine on the nervous system. You will find an extract made by me from other notes taken by an anonymous auditor of Albinus of another and earlier course of lectures on physiology by Albinus. . . . Since I wrote last I have read your article with much interest and instruction, and also large portions of your book. From this I find that you are the author of some papers in the [Edinburgh] "Medico-Chirurgical Journal," which I was much struck with at the time I read them, touching the tendency to concealment—the cunning of birds in the breeding season, with the deceits practised by their female patients on the doctors. Mulieri, ne quidem mortuæ, credendum. I hope you will find matters of interest in the "Artz." It seems an amusing farrago. Mr. Colquhoun tells me that before animal magnetism was heard of, Unzer, from his own experience, professed his belief in the fact of a transference of perception. Have you seen Herbert Mayo's late work in approbation of mesmerism? I have not; but Mr. Colquhoun* says he goes the whole hog.—Believe me, my dear sir, very truly yours, W. Hamilton.

It would be a wearisome iteration to show how Hamilton disposes of Leibnitz's "obscure ideas," "insensible perceptions," "perceptions without apperception or consciousness," which constitute his third degree of "mental latencies." Nor need I quote his discussion as to the origin of "Acquired Dexterities and Habits" (the consensual actions of Dr. Carpenter), nor his criticisms of the "mechanical theories" of Hartley and Reid. Those who are interested may see in the original that all this part of Dr. Carpenter's doctrine of unconscious cerebration is, in truth, a child of the old metaphysics, with all their ambiguities of terms. Unconscious cerebration, as applied to the explanation of table-turning, might be named unknowing conation, a useful term applied by Hamilton (after Cudworth) to denote both the act and the consciousness of the act of energising. (Lecture 11.)

So far, then, we may conclude that if the word consciousness be used, in the physiological sense, to include all states of feeling, as of pain and pleasure, and all sensa-

* Mr. Colquhoun (a member of the Scottish Bar), who thus favoured me with rare books from his library, was on very intimate terms with Sir Wm. Hamilton, and assisted him in experiments on animal magnetism. His *Isis Revelata* (1836) is an interesting history of animal-magnetic and mesmeric phenomena. He published also "Lectures on Somnambulism" and an "Exposure of Phreno-mesmerism."

tions referred to the body as their seat and point of origin, as well as all propensities, desires, emotions, the higher sentiments, and the intellectual capabilities—and as to all these that they are, physiologically, *coincident conditions* of the individual—unconscious cerebration is not proved. If, however, the word consciousness be used to denote a *cause* of the actions of which the individual may or may not be knowable or cognisant, then it is proved.

X.—This paves the way for the consideration of the question whether consciousness of any kind is ever a cause of processes included under the phrases in question. Can cerebral reflex action be proved by direct observation and experiment, taking the physiological definition of the term consciousness? Undoubtedly, the proof is most difficult, because of unavoidable difficulties in the way of accurate observation. The primary and most important difficulty is that none except the individual, who is the subject of inquiry, can say whether, when he did any particular act at a particular time, he was in any state of consciousness at the time. I say at the time, for the inquiry must always be as to acts done in *past* time. I subjoin an illustrative example:

A gentleman of highly cultivated intellect, when he was in advanced years, consulted me as to an urinary disorder, the chief trouble of which was that he had paroxysms of intense pain—" attacks of gravel"—so-called. Mr. Syme was consulted as to the source of the pain; and since he found no calculus in the bladder, it was concluded that a renal calculus was the cause of the misery. After two years or more of this kind of suffering at intervals of varying duration, my patient became the subject of defective brain-nutrition, and finally passed into a state of such extreme senile dementia, that he had no memory and no knowledge of those about him, or of his home. One day, when visiting him, while yet at a distance, I heard him uttering the most dreadful cries, and found him just passing out of a paroxysm of pain such as he had formerly had. Within two minutes after his cries had ceased, and while his features still bore the traces of suffering, I asked him if he had suffered pain just now? " Pain? pain?" he replied, impatiently, " No! none whatever!"

This case might be held as substantiating the conclusion that the feeling termed corporeal pain is not the cause of the cries, writhings, and other signs of the feeling, if we adopted the *dictum* of the speculative method which affirms that a man cannot feel and not know it.* And even the physiolo-

* " Can I know without *knowing* that I know? Can I desire without *knowing* that I desire? Can I feel without *knowing* that I feel? This is impossible." (Sir W. Hamilton, Lectures on Metaphysics, vol. i, p. 158.)

gist might be led to the same conclusion if he did not bear in mind what are the cerebral conditions for *knowledge;* yet I think such conclusion would be erroneous. The state of the higher strata of the convolutions was in this case such that the sufferer probably did not *know* what I meant by the word pain; or (which is equally probable) such that no conservative memory, as synesis, was possible, and consequently no *knowledge* as *reminiscence.* This defect of memory renders it difficult to say whether patients suffer pain if undergoing a painful operation when anæsthetic from chloroform. They groan, and their groans differ in cases of amputation as different parts are divided—are louder, for example, when the bone is being sawn. But I can vouch that a draught of Lethe is a blessing in these cases. Anyhow, it gives a "sweet oblivion," as Milton terms it.

Sir Wm. Hamilton encountered a similar difficulty in his attempts to prove that a man (or, as he phrased it, the mind) is conscious even in profound sleep. He had himself repeatedly awakened out of sleep, and he always found that a state of dreaming preceded full consciousness; this he, therefore, thought the normal state in sleep. But, then, this is simply the transition degree to consciousness from unconsciousness; and it is certain that a dream, although apparently of several minutes' duration, may not occupy as many seconds. If the "conscious subject" could always remember his, or its, state there would be no difficulty in solving the problem from clinical observation. It is not an uncommon event for certain epileptics to utter a loud cry of fear or horror just previously to a fit; but it is very rare to meet with a case in which the patient has the *knowledge* of having had a fit, and that he thus cried out, much less that he can say whether he experienced a feeling of mental pain or the emotion of terror at the moment of the cry. I had, however, a case of an epileptic brought under my notice in consultation with my friend Mr. Trotter, of Stockton-on-Tees, of this kind, in which the cry was not always followed by a fit, and the patient did not become unconscious. He was thus aware of the cry, and of the alarm it gave his friends, more especially his wife. But he told me in her presence that the cry meant just nothing; he was in no fear or pain at all, but he could not help it.

When my correspondence on the subject with George Combe and Professor Reid was published in the "Lancet" of 1845, in which I maintained that the states of consciousness named sensations are not causes, my late friend, Dr.

Cowan, sent me an illustrative case of another kind, as follows:—

"Having seen some of your thoughts on reflex cerebral acts, and believing your views to be substantially, if not theoretically, correct, it struck me that any confirmative fact might, in this early stage of your inquiries, prove interesting. I am now attending a lady who evinces the reflex visual and auditory phenomena very strikingly. The shadow of a bird crossing the window, though the blinds and bed-curtains are closed, the displacement of the smallest portion of the wick of a candle, the slightest changes in the fire-light, induce a sudden jerking of the spinal muscles, extending to the arms and legs when violent, and this without the slightest mental emotion of any kind, beyond the consciousness of the movement. At times the vocal organs are implicated, and a slight cry, quite involuntary, takes place. I have no doubt that the slightest conceivable influences affecting either the eye or the ear, under the circumstances I have described, do induce, apart from all pain or mental intervention, sudden contractions of the spinal muscles in a perfectly similar manner to the contractions following the application of a stimulus to a paralyzed limb. She, of course, both sees and hears, and is conscious of [or knows] the source of impression; but, as I have before said, the effect is clearly independent of any conscious bodily or mental sensation." (Lancet, vol. ii., 1845, p. 364.)

I have, since that date, had opportunities of examining several similar cases with the same results. The acts for which I was consulted, and which annoy the patient, are those that are the natural signs of the feelings, termed emotions; but they are manifested without such feelings, and in spite of all attempts to restrain them.

Another group of signs under this head are the laughter and weeping which often constitute a part of the hysteric paroxysm. It is difficult, by cross-examination, to arrive at satisfactory information as to the state of consciousness at the moment in these paroxysms, but there are other paroxysmal cases in which laughter alone occurs at regular periods, and which occurs not only independently of the will, but cannot be restrained by volition—yet in which there is nothing "in the mind" to excite laughter. When the feet are tickled laughter with convulsive jerking of the legs occurs in some persons. If, however, in certain kinds of spinal palsy, the lower limbs and the feet be tickled, there is no laughter, although the limbs jerk. In this case the patient feels neither the tickling nor the jerking, nor laughs, because disease of the cord

has stopped the upward course of impressions to the encephalon.

Experiments innumerable have been made on lower animals, especially on frogs, to solve the question; but they are all, without exception, fallacious, because we know that in man mere adaptive movements do not necessarily imply either the antecedence or the coincidence of consciousness, and need not therefore necessarily denote states of consciousness in lower animals. Professor Pflüger, of Bonn, experimenting on a headless frog, found that if it was hindered in its attempts to retract the one foot which he irritated, it used the other to remove the cause of the hindrance to retraction, or of the irritation; hence he concluded that the spinal cord of a frog is endowed with sensation and conscious adaptation, and then extended the conclusion to the cord of man. But, even if Pflüger's facts proved what may possibly be true, that the headless frog is conscious, and intentionally adapts its limbs to remove an irritating thing, a man with his head on is surely too widely unlike a frog with its head off to be included in the deduction. In fact, however, we know that if the conducting function of the spinal cord of a man be wholly destroyed near the axis-vertebra, he has no sensation in all the parts below. On the other hand, the same kind of reasoning which leads Pflüger to conclude that the headless frog has the endowments he attributes to its spinal cord, would be available to show that all living things whatever are conscious, since all equally display a like adaptivity. Perhaps they are, but they alone can know that they are conscious.

[Since writing this sentence, I have read Dr. Lauder Lindsay's interesting essay on "Mind in Plants." I observe he seriously concludes from a sentence in a previous paper of mine, in which I meant to say that cerebral processes, when considered as vital processes, may be compared with vital processes in plants, that I entertain the "fancy" that plants have something like brains. This is a curious illustration of the strange inferences which may follow on ambiguities of language. I do not know on what authority Dr. Lindsay attributes to the late Dr. Forbes Winslow certain opinions contained in a review of Sir B. Brodie's "Psychological Inquiries," published in "The Journal of Psychol. Medicine," for Oct., 1854 (vol. vii). It is right, however, that I should correct this statement, since I am the author of that

review, and responsible, therefore, for all that is contained in the extract from it which Dr. Lindsay gives.] *

XI.—So far, then, it is certain that self-examination in some form is essential to solve the problems in question; but then it is self-examination conducted in relation to the mechanism. And this method serves as to all states of consciousness whatever. It must be remembered, however, that the method implies the knowledge that we have brains, and so use them in our most profound speculations that without them, or without the use of those portions available to speculation, we cannot speculate at all. So that, even to speculate satisfactorily, we need always to bear these facts in mind. That, however, is not the method of speculative philosophy, nor that which Dr. Carpenter adopts when he entirely agrees with the method of an eminent dignitary of the Roman Church. He says:—

"The writer entirely agrees with Archbishop Manning in maintaining that we have exactly the same evidence of the existence of this *self-determining power* within ourselves that we have of the existence of a *material world outside ourselves*. For, however intimate may be the functional correlation between Mind and Brain—and Abp. Manning seems disposed to go as far as the writer in recognizing this intimacy—for he says, [in Contemp. Rev., Feb., 1871, p. 469]—'There is another faculty and another agent distinct from the thinking brain. . . That we are conscious of thought and will is a fact of our internal experience. It is a fact of the universal experience of all men; this is an immediate and intuitive truth of absolute certainty. . . . . . I may, therefore, lay it down as another maxim, side by side with that of Dr. Carpenter, that the decision of mankind, derived from consciousness of the existence of our living self, or personality, whereby we think, will, or act, is practically worth more than all the arguments of all the logicians who have discussed the basis of our belief in it.'—(Mental Physiology, p. 6.)

The Cardinal herein states alleged facts and draws inferences. It is probably true that every man who is *capable*

* As I have reason to suppose that a like error has been current in respect to other unsigned articles in that journal which I wrote, and which contain practical applications of my views, either to method or to practice, I may here name as amongst these—in Vol. iv (1851), "Woman in her Psychological Relations," and "Sleep, Dreaming, and Insanity." In Vol. v (1852), "The Overworked Mind." In Vol. vii (1854), "On some of the Latent Causes of Insanity;" Review of Dr. Noble's "Correlation of Psychology and Physiology;" "Modern Demonology and Divination;" and "On Demoniacal Societies and Literature." In Vol. viii (1855) I name "Oinomania," and also "Further Researches into the Reflex Function of the Brain," which first appeared in the "Brit. and For. Med. Chir. Rev.," for July, 1855.

of abstract thought as to his living self (but all men are not capable—indeed, comparatively few men are), will recognise the origin in consciousness of the notion that he is in *act* and *fact* a living self—a person, an individual, or *one* organism. But how do all men get at the other notion—the inference—that the energy or cause by which they thus think or know, and act individually, thinks and acts *independently* of the living self? The Cardinal says it is "an intuitive truth," which means that it is knowledge acquired independently of experience, *i.e.*, is an *innate* conviction or belief. This being so, the belief "is of absolute certainty."

We can examine this conclusion physiologically. The physiological basis of all states of consciousness (as Dr. Carpenter assumes that the Cardinal admits) being brain-activity, it follows that all states of both belief and doubt have this basis. Here, therefore, a doubt arises, and we need to inquire whether "intuitive" belief, as so dependent, may ever be erroneous—whether there may not be physiologically "intuitive" errors? It is not a conclusive answer to say that what *all* men believe *must* be true. As to this point the reader needs only to be reminded of the firm belief in the motion of the sun in space and of the fixity of the earth still prevalent almost universally amongst untaught men, and for controverting which, as alleged truths of both theology and cosmogony, an infallible authority as to truth had Galileo imprisoned. This conviction of absolute certainty as to notions is truly compared with the conviction of absolute certainty as to perceptions of the external world, which the Cardinal also holds to be of undoubted authority; that is to say—that a man can infallibly rely on the testimony of his senses—as thus: I certainly *see* the sun move—I certainly *feel* that I am stationary, and that the earth is solidly fixed—*ergo*, the sun *certainly* moves, and the earth is fixed. It is precisely this belief in the infallibility of their perceptions which inspires the delusive methods of "the spiritists," zoists, mesmerists, mystics, credulous enthusiasts, *et hoc genus omne*.

Now the facts collected by the physiological method show why it is that our perceptions and beliefs and intuitions are so often erroneous, and why we cannot implicitly trust our senses. Knowing that whether we think, or doubt, or believe, we need to use our brains, the inquirer asks what part do these same brains of ours play in perceptions, intuitions and beliefs? Many mental physicians, having to deal with the unalterable beliefs and convictions of the insane, however

absurd, learn the fallacies of brain-work; and every theologian might equally know them, if he would study the cerebral relations of beliefs, and doubts, and perceptions in the insane, or even in himself, if he dream; and thus knowing those relations, he would certainly acquire salutary doubts as to the infallibility of his senses and of his perceptions and beliefs, and so gain freedom from error.

But what are the results to Christian faith and morals of this method? For that is a test of its practical value. A detailed answer to this question would show that incessant strife as to dogmas and grossly erroneous beliefs as to the Supernatural have resulted from its use. So that the method has not been found available for ascertaining the truth as to the order of nature in thought and belief, and in faith in God. Practically, men are so constituted that they are much more ready to believe than to doubt; there is little fear, therefore, of the mass of mankind becoming "sceptics," or inquirers. Doubt, as distinct from belief, is, however, the first step to knowledge; and *verification*, the process whereby we test our belief or conclusion as to what appears to be true, is the second step. But, for all this work, healthy, well-trained, well-developed brains are necessary, and this is the practical lesson of "unconscious cerebration."

Theologians agree that the truths of science and of religion cannot differ; a truism, provided the truths be discovered. If, however, the methods used for attaining to a knowledge of truth (which, as to the present subject, is in science the knowledge of the order of nature, and in theology the knowledge of the order of Divine Providence) be wholly different, how can it be reasonably expected that the conclusions reached as truths will be similar?

It is, then, by a combination of methods that the two departments of knowledge can be made to harmonize. And since this great end is a special object of theological science, it is clearly the business of the theologian either to investigate the order of nature according to the scientific method, for himself, or, failing in this obvious duty, so to examine and verify the investigations of others.

The Hypodermic Injection of Morphia in Insanity. By John M. Diarmid, M.B., C.M., Assistant Physician, Perth District Asylum.

In 1843 the subcutaneous injection of morphia was introduced into this country by Dr. Alex. Wood, of Edinburgh, as a means of treating nervous disease. He found it remarkably efficacious in relieving neuralgia, but believed its action to be almost, if not entirely, local. His results as to the relief of pain have received almost universal confirmation; but subsequent experiments have shown that the drug acts on the nerve-centres, and thus indirectly soothes the pain of an irritated nerve, and not by causing direct anæsthesia of the seat of pain. To Dr. C. Hunter is due the credit of having first demonstrated that local injection is not necessary for the relief of local pain. He employed the hypodermic injection of morphia very successfully in controlling the spasms of chorea, in subduing the excitement and overcoming the sleeplessness of Delirium Tremens and Acute Mania, and in alleviating the restless wakefulness of traumatic inflammation. (His experiments were published in the "Med. Times and Gazette," for 1859.) Two years later, in 1861, Dr. W. C. McIntosh, now Superintendent of the Perth District Asylum, then Assistant Physician of Murray's Royal Asylum, Perth, employed morphia, subcutaneously, in almost all forms of insanity, and found it, to use his own words, "a sedative to the furious, a calmative to the depressed and despairing." His observations were published in the "Journal of Mental Science" for 1861; and although this mode of using morphia rapidly became known, employed, and esteemed in many asylums, and by many alienists, the results, so far as I am aware, were published only as isolated notes till Dr. J. B Ward's paper appeared in the "West Riding Asylum Medical Reports" for 1871.

By most alienists, opium—or its alkaloid, morphia—is regarded as distinctly the most reliable of hypnotics and sedatives in one or more forms of mental disease. Cullen, Ferriar, Van Sweeten, Valsalva, Morgagni, Guislain, Odlir, Esquirol, Brandreth, Pliny Earle, Pritchard, Halloran, Seymour, Shute, and hosts of other physicians have given it as a hypnotic and sedative in mania, and as a tonic and calmative in melancholia; and all concur in giving it the place of honour. Dr. Bucknill calls it "the right hand of

the physician in the treatment of insanity"—"a true balm to the wounded spirit, a sedative in mania, a restorative in melancholia." The same eminent writer calls the "skilful and discriminating use of opium the sheet-anchor of the alienist physician." Schroeder Van der Kolk bears similar testimony in favour of opium and morphia, as sedatives in melancholia and mania.

The concurrent opinions of those men—many of them most eminent alienists, and all of them quite competent to judge of the value of a remedy—thus establish the usefulness of opium too securely to be overthrown by a few isolated attacks. But there remains the objection that, given by the mouth, opium and its alkaloids are exceedingly apt to cause "nausea, dryness of the mouth, loss of appetite," and constipation. The experience of Drs. Bucknill, Hunter, McIntosh, and Ward has been that, by administering morphia subcutaneously, there is very little tendency to loss of appetite or constipation.

Constipation is produced in either of two ways, viz., by paralysis of the nerves which govern the peristaltic action of the intestinal canal, so that its lumen becomes dilated and blocked up by masses of fœces; or by suppression or diminution of the secretion of the digestive and mucous glands of the stomach and intestine. Now morphia has, as is well-known, a local anæsthetic action,* and by contact with the gastric and intestinal glands, may, and probably does, act on them so as to check the production of their lubricant and softening secretions, and thus cause constipation.

The condition of the tongue and mouth is always diagnostic of the state of the stomach; and when we have a parched mouth and a furred tongue, as after stomachic doses of opium and morphia, we may reasonably infer that the stomach is in the condition which, considering its functions, is analogous. It is very probable that a furred tongue is nothing but the result of a morbid secretion from the glossal mucous glands, due to reflex irritation from, or in sympathy with, the gastric tubules or intestinal mucous coat.† By the subcutaneous injection of morphia, we avoid any possibility of local interference with the gastric functions; and that there is great probability of the

* E.G. Its value (as suppositories), in relieving irritability and pain of the rectum, and in checking "emotional" diarrhœa.

† It (the hypodermic method) has the advantage of disturbing the stomach and parching or furring the tongue much less than when morphia is given by the mouth.—Bucknill and Tuke, p. 727.

topical action of this drug being the cause of its producing constipation, is indicated by its influence in controlling diarrhœa, which can likewise be checked by direct astringents, such as logwood and catechu.

The difference between the action of morphia taken by the mouth, and introduced into the system by the cellular tissue, in tending to produce constipation, cannot be due to difference of effect on the nerve-centres; for, in whatever manner the drug gets into the blood, its effects must be uniform. We may reasonably conclude, then, that the loss of appetite and constipation, apt to occur from the stomachic use of morphia, are, to a great extent, due to local action. Nor is this advantage confined to the hypodermic administration of morphia alone; for experiments (Dr. Lente) with quinine in intermittent fever have proved that, when given subcutaneously, it does not interfere so materially with digestion, nor so readily cause vomiting, as when administered by the mouth; and Dr. John Duncan, of Edinburgh, has found that the secondary effects of mercury seem to disappear more quickly when introduced by the cellular tissue.* Dr. Lente also found that where the use of quinine by the stomach was precluded by constant vomiting it acted well subcutaneously. He notes that it caused much less cerebral disturbance, and acted more rapidly, by hypodermic injection. Dr. C. Hunter also found in some cases where morphia, given in the ordinary way, caused vomiting, that no such result followed the hypodermic injection of a similar dose.

In some cases of melancholia, where I found morphia very useful as a sedative, there was a condition of great gastric and intestinal irritability, as shown by alternating constipation, diarrhœa, and vomiting; but the risk of local aggravation of the state of the digestive organs was avoided, and the beneficial effects were obtained by subcutaneous administrations.

Again, when morphia is given by the stomach, it runs considerable risk of being altered, and having its virtues impaired, by the gastric secretions, or the constituents of food; it may not be wholly, or not at all, absorbed, or its absorption may be delayed, and thus its influence may be diminished or lost. The efficacy of morphia given by the mouth thus depends on the condition of the stomach; but, when employed subcutaneously, its action is independent of any such probable source of deterioration.

Even if it has escaped the action of the gastric juice, and has

* "British Medical Journal," vol. ii., p. 795, 1874; "Medical Times and Gazette," vol. i., p. 573, 1874.

passed into the blood (as all such crystalloid solutions are supposed to do), it has to go the round of the portal circulation and to pass through the liver cells. And even if the hepatic structures have no effect on it, it may have a prejudicial action on them, just as alcohol and other substances have; while opium is well known to check the secretion of bile, an action which may not be desirable at a time when its other properties are useful.

We can accurately observe the amount of morphia introduced into the system subcutaneously and with exactitude estimate the results, for, once in the cellular tissue, it must be absorbed; whereas we can never tell the exact amount which is absorbed in the alimentary canal, because we cannot detect how much may pass away with the fœces.

We can, also, give a definite dose subcutaneously to a patient who refuses to swallow medicine, and to whom it can be given by the mouth only after a struggle (in which part is often spilt); and the same objection applies to its administration in food artificially introduced into the stomach, with the further one of its interfering with the digestive process, it may be, where there is great need for aiding digestion, as in melancholics. At any hour of the day, to the patient most averse to take remedies, morphia can be be given subcutaneously with ease at the most suitable time, and almost without a struggle.

And, as is well-known to experimenters, many substances produce their effect much more rapidly when given subcutaneously than when given by the mouth; and speedy action is frequently most desirable in insane paroxysms. Substances which act as nervines or through the nervous system act more rapidly when employed subcutaneously, *e.g.*, apomorphia. Tartar emetic, which seems to act as a direct irritant to the stomach, on the other hand, acts much more speedily when given by the mouth.

It is held by many, if not all, physiologists that pain necessarily implies coexisting impairment of nutrition, pain being an indication of irritation, and irritation depressing vitality. It cannot be denied that much impairment of the nutrition of the nerve-centres exists in melancholia, nor that the morbid fears of the melancholic are as much a symptom of irritation and depression of the brain as neuralgia often is of a similar condition of a sensory nerve. It is undeniably established that of all remedies the hypodermic injection of morphia is pre-eminent in soothing neuralgia. Indeed, Anstie says, "the supreme utility of the hypodermic method is due to the

certainty with which, in moderate doses, it will cut short the pain." It is probably on account of its rapidity of action that morphia is so useful an anodyne when administered hypodermically in neuralgia. Hence, as the influence of any agent on the brain—pressure, for example—is in proportion to its rapidity of action, rather than to its force, a smaller dose of morphia hypodermically has a greater effect than a larger dose by the stomach, but the influence of which is spread over a longer period. This potency makes the hypodermic method most valuable, but at the same time increases the danger attached to the use of opiates in any form. Hence more caution is required with the hypodermic than the stomachic use of morphia. All powerful remedies have, however, an element of risk in their use, and the value of a soporific or sedative is in inverse ratio to its perfect safety.

It would thus follow that the hypodermic injection of morphia should have analogous usefulness from the certainty with which it could alleviate brain-pain or melancholic depression. The argument is strengthened by the fact that many attacks of neuralgia are centric in reality, although the pain is referred to some peripheral nerve.

I gave morphia hypodermically in eight persons suffering from melancholia—two males and six females. In no one case did the treatment fail in having a beneficial effect. It was the most certain hypnotic, the best and most prolonged sedative, and almost invariably had a good influence on the appetite, partly through the recuperative aid of sound sleep, and partly by soothing the constant, gnawing misery which took away the desire for food, and (in some cases) the ability to sit still sufficiently long for a proper meal to be taken. Nor did I find it tend to cause constipation; for where the motions were regular before the hypodermic treatment, they remained so during its continuance, and after it was stopped. In one case I injected morphia upwards of 40 times—frequently daily on 4, 5, and, at one time, on 9 consecutive days. On each of these 40 days, the bowels were moved, and the appetite was unimpaired. Generally the intelligence of such patients is sufficiently acute to enable them to judge which sedative affords them most ease. Two of the eight (the men) distinctly preferred the subcutaneous administration of morphia to any draught, whether cannabis indica, chloral, or an equivalent dose of Liq. Morphiæ Mur. One always asked for a "strong dose," and the other said he got "twice as much sleep" with the hypodermic treatment as with-

out it; and both were constantly begging for it, until one did not require it, by recovery, and until it was discontinued in the other, lest the opium habit should be acquired. Neither of the two men required a dose of medicine for constipation; and in the case of the man who recovered, a night of sound sleep was always succeeded by increased cheerfulness and an improved appetite next morning. All the six women, but one, frequently refused to swallow medicine; and it was found much easier to use the hypodermic than the stomachic mode of administration. I must, however, add that of the directly tonic properties of morphia, apart from the restorative effects of sound sleep and calm of mind, I have never been able to detect any distinct trace.

In acute mania, this method of treatment was found most useful. Many writers agree in praising the efficacy of opium, given by the mouth, in subduing the excitement and removing the sleeplessness of the maniacal. When given by the cellular tissue, morphia has all these virtues of opium, and is "more rapid, pure," and powerful in its action. Dr. Hunter found that $\frac{3}{4}$ gr. of morphia given by the mouth, to a patient suffering from acute mania, had no effect until the lapse of an hour; the same dose, administered subcutaneously, caused sleep in five minutes. In the same patient the dose by the mouth secured only an hour's sleep; that by the cellular tissue was followed by a sleep of 12 hours' duration. In another similar case, $\frac{3}{4}$ gr. morphia, subcutaneously, was succeeded in an hour by sleep of $6\frac{1}{2}$ hours' duration; administered in the ordinary way, it was succeeded by furious excitement. Many more similar instances might be adduced from his experiments. In my own experience, I have found $\frac{1}{2}$ and $\frac{2}{3}$ gr. of morphia followed by sound sleep in a quarter of an hour, or twenty minutes, after injection during the uncontrollable excitement of general paralysis.

Rapidity of effect is always most desirable in any sedative or hypnotic given in maniacal paroxysms. The advantages thereby gained are, that the exhausting cerebral action is speedily checked, that the restorative processes are more quickly brought into play, that nurses and attendants are saved trouble, and (it may be) danger, and that the chances are lessened of patients being excited by seeing or hearing another in a paroxysm.

I tried the method in eight patients labouring under acute mania. Of these, six have recovered, one is convalescent, but is not yet discharged; and one has passed into a chronic, and therefore doubtful, condition. In all, morphia was given subcutaneously for excitement and restlessness. The hypnotic

effects in all but one were most satisfactory, and the subsequent sedative influence in all was most beneficial. The exception to the soporific action was a female suffering from puerperal mania, who seemed to have an idiosyncracy to morphia, as it caused vomiting, but very little sleep. In another female, who had slept very little for two weeks previous to admission, and was very little in bed on the night after, the result was most encouraging. She was very excited, excessively restless, refused to take food, and constantly denuded herself. $\frac{1}{3}$ gr. of morphia injected at bedtime, on the second night after admission, caused sound sleep. She slept well for the succeeding five nights; and on a recurrence of the excitement and sleepless condition, $\frac{2}{9}$ gr. proved effectual as a calmative and soporific, its sedative results extending over next day. A few days afterwards she began to work, and was convalescent in two weeks from her coming under treatment. The influence of the hypodermic treatment in controlling the excitement of acute mania was even more strikingly exhibited in the behaviour of a young man who had shown homicidal tendencies before admission. On the night after admission, he was very restless and excited; and during the succeeding day was greatly excited, danced on the chairs and tables, and denuded himself. At 7.30 p.m. he had $\frac{2}{9}$ gr. of morphia injected; shortly afterward he became quiet, and was sound asleep at 9 p.m. He has slept well every night since (a period of rather more than two months), was quiet and composed next day; began to work in three days, and five days after was employed cleaning windows. He has continued in well-doing, and is to be discharged ere long. In these two cases morphia had an alterative as well as hypnotic and sedative action on the brain. The alterative action may have been indirect, due to the recuperative effect of sound and prolonged sleep, or may have been directly tonic. Dr. McIntosh's paper records similar instances in which this alterative influence of morphia was manifested.

As might be expected from the utility of the treatment in acute mania, it is strikingly efficacious in mitigating, and sometimes even seems to cut short, a paroxysm of excitement, whether it appears as recurrent mania, or occurs in the course of chronic mania or dementia. Three patients suffering from recurrent mania, five labouring under chronic mania, and three dements, had attacks of restlessness, with loss of sleep and great excitement, treated with morphia subcutaneously. The total number of injections was 111; the doses varied from $\frac{1}{4}$ to $\frac{2}{3}$ of a grain of morphia; and the successful injections were

92. The narcotic was either given in the morning as a sedative, or in the evening as a sedative and hypnotic. Frequently, when the sedative action of a morning dose was not well marked during the day, the hypnotic effects were satisfactory at night; and often, when an evening dose failed in causing sound sleep, its quieting influence was noticeable next day. Another marked characteristic of the hypodermic treatment was the invariable improvement of appetite which followed a successful dose in a case of chronic mania, and in one of dementia. Both patients, when excited, refused food, except in small quantities, and at considerable intervals. $\frac{1}{4}$ gr. of morphia, subcutaneously, generally sufficed to give sound sleep, temporary or continued improvement of conduct and appetite. Elaterium in $\frac{1}{6}$ gr. doses was given to both on various occasions, but never succeeded so well as the morphia. The dement had a most fœtid breath when excited, but it became perfectly sweet after a few doses of the sedative. In the homicidal paroxysms, the value of the hypodermic method has often been proved. Dr. McIntosh once injected 1 gr. of morphia into the cellular tissue of a most "dangerous" and "furious" maniac, who "had just torn a canvas dress to fragments, and was meditating further mischief." In an "hour he calmed," and was set to work a few hours after. The same patient frequently tore his blankets to pieces; was in the habit of beating himself, tearing his face, throwing stones; and without any provocation used to attack patients and attendants with hands, feet, and teeth. He was, perhaps, the most troublesome patient ever at Murthly. During his paroxysms of excitement, which occurred at irregular intervals—from a week to a month—he suffered from obstinate constipation, for which doses of $\frac{1}{3}$ gr. of elaterium and 2 ♏ of ol. croton were given frequently. The depressing and derivative action of the purgatives had not such a beneficial influence on his conduct as $\frac{1}{4}$ gr. to 1 gr. of morphia. Indeed, a powerful narcotic was the only safeguard for his fellows.

Many patients, during a period of excitement, refuse medicine, and decline a meal, rather than take food which they suspect to be drugged. Sedatives can be given, where this occurs, with the greatest ease by the subcutaneous method. The dement referred to can never be persuaded to take medicine by the mouth; and as he rarely takes anything but milk during an attack, it has frequently been found impossible to give him sedatives, such as cannabis Indica, in the ordinary manner. He makes little or no resistance to subcutaneous injection.

The beneficial results of the hypodermic treatment have been more marked where the destructive attempts and homicidal assaults have been of the nature of sudden impulse; less successful where those efforts were the manifestations of a sullen, obstinate, and savage disposition. Where the impulse was simply destructive, morphia was more satisfactory as a sedative than in curbing homicidal tendencies.

The moral influence which this method has on the conduct of some patients is remarkable. For example, A. R., chronic mania, with paroxysms of excitement, and destructiveness. This is a man of a most fiery disposition, who, during the six months preceding last Christmas, had nine maniacal outbursts. While suffering from these recurrences, he used to threaten the medical officers, and frequently assaulted the attendants. He would take no medicine, broke his bedstead, the door of his room; and was in the habit of denuding himself and tearing his clothes to pieces. He had delusions as to his being a wild animal (*e.g.*, a bull, an otter, a stag, etc.), possessed of unusual strength; and, acting on this idea, defied everyone. On the 23rd of last December, after he had been unusually violent and destructive, $\frac{1}{3}$ gr. of morphia was subcutaneously injected. This was in the afternoon, and he remained quiet for the rest of the day, after the operation. Next day he piteously begged not to be injected; and, instead of blustering and bullying, cringed, and almost cried. From that day to the present time (a period of seven months) he has never once denuded himself, never once threatened a medical officer or attendant, never once committed an assault or torn his clothing; and although he has had several attacks of excitement, he has been obedient as a child. The sight of the injection syringe, or of another patient undergoing injection, stops any tendency to bluster; and yet his delusions are as vivid as ever.

The restraining influence which the knowledge that medicine can be adminstered to them, whether they are willing or not, exercises over many of the insane is very potent; while the defiant and triumphant attitude of mind which such patients frequently assume after an ineffectual attempt to give drugs by the mouth, is most subversive of the quiet and order of an asylum.

In a case of general paralysis in which laudanum by the mouth increased the restlessness, from which, together with sleeplessness, the patient was suffering, Dr. McIntosh found $\frac{3}{4}$gr. of morphia, subcutaneously, followed in a hour and a half's time by sleep of ten hours' duration. Dr. Ward also secured

several nights' rest to a patient suffering similarly, by $\frac{1}{3}$gr. each evening, after hyoscyamus, digitalis, and chloral had lost all efficacy.

In three cases of general paralysis which have come under my observation I administered morphia subcutaneously 84 times with most successful results.

The first is a chronic case, the patient being at present able to walk about vigorously after three years' duration of the malady. After three days of great excitement, with restless nights, he had $\frac{2}{3}$ gr. injected on two successive evenings. The hypnotic effects were manifested in an hour's time with sedative action lasting 24 hours after. During the three days of excitement he refused food, and was constipated. After each dose of morphia, he took food well next day, and his bowels were moved.

The next case was of a more acute nature, lasting only about a year. He was under observation for 174 days, and an exact record was kept of the diurnal phenomena. This patient exhibited all the restlessness and sleeplessness characteristic of general paralysis. He had morphia administered to him subcutaneously, in doses of $\frac{1}{5}$ to $\frac{5}{6}$ gr, 70 times; bromide of potash, in 40gr. doses, was given twice; 30grs. of chloral once. Tincture of cannabis Indica in ʒi doses four times; and 30 ♏ of chlorodyne once. The cannabis failed as a hypnotic and sedative every time given; the bromide failed once as a sedative, and the chlorodyne and chloral had no effect. Warm baths were followed by sound sleep, seven out of eleven times, exhibited alone. With cannabis (♏ 60) a bath was unsuccessful. With morphia warm baths were successful five out of six times. Of the 70 hypodermic injections, 55 were followed by strongly marked hypnotic and sedative action. Of the 55, 48 were unsupplemented by baths or cannabis; two were successful ($\frac{2}{3}$ gr.), aided by tincture of cannabis Indica (♏xx. and ♏xxx). Once an injection of $\frac{2}{3}$gr. was unsuccessful, although supplemented by ♏xxv. tincture of cannabis indica. The addition of $\frac{1}{7}$gr. to the $\frac{2}{3}$gr dose caused sound sleep when injected next evening. Of the 174 nights, if we subtract the last six of his life, when he was too feeble to be restless, as he was dying from cerebral exhaustion and pneumonia, and if, likewise, we subtract 89 on which he had some form of hypnotic or sedative, there remain 79 nights on which he had no drug nor other stimulant to sleep. Of these 79 nights, 33 were spent in wandering about his dormitory (except when held in bed), and disarranging his bedclothes. Of the 70 nights on which he had morphia subcutaneously, 15 only were spent in unrest.

Frequently, however, when the drug failed to give sleep at night, its action was only delayed, and almost invariably he slept by snatches on the day following. Such was rarely the case when he had no sedative on the preceding evening. At one time he was watched for 14 successive nights without hypnotics, and on seven of these he never closed an eye. When he did not sleep his dormitory was invariably wet and filthy; when he did sleep it was seldom in either condition, and, still more rarely, when he slept under the influence of a soporific.*

So great was the improvement in cleanliness at night in this patient by the hypodermic treatment, that we were prompted to extend it to some patients of incorrigibly filthy habits. We tried it in four chronic dements, one male and three females. It was completely successful in one young woman, whose habits during the summer and autumn, and until the very cold weather in December, had been cleanly. After she was found wet on four or five successive mornings $\frac{2}{9}$ gr. of morphia were injected one evening; her bed was found dry the two succeeding mornings. Of the next 16 nights she was dry four. During the next 40 days she had morphia six times, and was dry on the night after each injection. Of the remaining 34 nights she was dry twice on nights, each second to that of an injection. Unfortunately, vomiting almost always occurred after each administration, although the dose was diminished to $\frac{1}{6}$th of a grain. Tonics (iron, quinine, and strychnia†) were given without any reformation of her habits. As the weather became warm, in last April and May, she began to improve in cleanliness, and, by the beginning of June, a complete amendment had occurred. The next case—a female—was described by the head attendant as the filthiest patient in the house. On the first four nights on which morphia was administered, she was simply wet. Whenever not injected she was wet and dirty. Of the four subsequent injections, two were successful. The third patient had been dry only one night for two years. She was twice injected (gr. $\frac{1}{6}$), and was dry once. In these three cases the degraded condition was simply due to habit, as the bodily organs and functions were healthy. No improvement had followed night nursing. In the male, as was afterwards

* The third case is a male suffering from frequent violent paroxysms which are easily controlled by doses of $\frac{2}{3}$ gr. of morphia subcutaneously.

† Dr. Kelp found, in a young woman suffering from melancholia, and in an imbecile, that incontinence of urine (lasting from childhood) was cured in the one, and checked in the other, by subcutaneous injections of $\frac{1}{16}$ to $\frac{1}{6}$ gr. of strychnia. Strychnia given internally had no effect.—"Brit. Med. Jour.," vol. i, p. 278, 1875.

discovered, the condition is due to weakness of the bladder, and, of course, the hypodermic treatment had no effect, as neither dietetic nor medicinal regimen hitherto has had.

As is well known, the closure of the apertures of the rectum and bladder by the sphincters is purely involuntary; but the opening of these is more or less voluntary in the normal condition. Hence, when the ideo-motor centres are under the influence of morphia, the sphincters voluntarily remain closed, and prevent either micturition or defœcation. In the younger female referred to, I am convinced the wet habits were purely voluntary, and were due to a reluctance to expose herself naked to the cold wintry air; but when narcotised she was prevented, by involuntary action, from wetting her bed.

Dr. Ward found that during eighteen months an epileptic, who was injected nightly, never had a fit. This patient was subject to violent paroxysms of excitement, headache, and constipation. In two cases which came under my observation, morphia was given subcutaneously to soothe the irritability and calm the excitement which succeeded a prolonged series of severe fits. The sedative and hypnotic effects were well marked, but no great influence on the recurrence of the attacks could be detected. Indeed, a fit once occurred two hours after the administration of the morphia, and when its action was well pronounced. It is very probable that in Dr. Ward's case the fits were caused by reflex irritation, which the morphia soothed. The headaches would indicate this view.

In a case of puerperal mania Dr. Ward noticed that the action of morphia, instead of becoming apparent in from a quarter-of-an-hour to an hour's time, was deferred for eight or twelve hours. Some of the cases observed at Murthly exhibited this peculiarity. It was noticed in a case of puerperal mania, one of chronic melancholia, and in one of general paralysis. At one time the writer was inclined to attribute the delayed action to faulty absorption from a fatty and thickened condition of the capillaries (such a condition being found in general paralysis), because a crystalloid solution, like that of morphia, would take much longer to pass through a fatty than a colloid septum, such as a normal capillary wall. It is true that the melancholic referred to has dilated capillaries and a diseased heart, yet the delayed action does not always happen; and the patient suffering from puerperal mania is young and healthy, so that the hypothesis is not very tenable. A careful consideration of the instances, however, show a preponderance of evidence that the delay is due to a nervous cause, to some condition of

the brain.* Probably the hypnotic effects of the drug are possible only after the cerebral condition causing excitement has been modified by its sedative properties. In the case of puerperal mania there was often rapid action on the excito-motor centres (as shown by contracted pupils and vomiting), while the effects on the ideo-motor centres came only after a considerable interval.

When morphia is long in being followed by sleep, various adjuncts may be advantageously employed in some cases. For rapid and safe action, a warm bath is pre-eminent. In melancholia, acute mania, and general paralysis, warm baths are often most efficacious calmatives and soporifics, being stimulants to the skin, lungs, kidneys, and bladder, and dynamic tonics to the nervous system. Sometimes however, nay frequently, they are ineffectual in themselves, and not seldom do they increase the excitement of maniacs and general paralytics, more especially after a continuance. When combined with the subcutaneous use of morphia, they invariably act like a charm, even when the dose is insufficient in itself. In melancholia this combination is very successful and very speedy in bringing about a calm condition of mind, quickly followed by sound sleep. Tincture of cannabis Indica in small doses (♏xx. to xxx.) is a useful supplement to an insufficient or delayed dose of morphia. Chloral, likewise, acts well with morphia, but has the grave disadvantage of depressing the heart's action, just as the latter narcotic frequently does. Cannabis Indica, on the other hand, raises the pulse, while acting as a soporific and sedative, and this counteracts the most objectionable, while aiding the desirable properties, of morphia.† When any patient has an idosyncracy to vomit after the injection of morphia, or suffers from a weak heart, a safe plan is to give a small dose subcutaneously, and then to administer a small dose of cannabis.

In a continuance of the hypodermic treatment, just as when opiates are given by the mouth, it is necessary steadily to increase the dose, as the nervous system becomes habituated. From observing the doses which proved sufficient and then watching how long each remained so, I am inclined to estimate the rate of habituation to be between $\frac{1}{50}$ and $\frac{1}{60}$ gr. of

* The trophic centres may also be in an anæsthetic condition during the paroxysms of excitement of general paralysis and acute mania, and the depression of melancholia; and the absorptive processes may thus, for a time, be in abeyance or retarded.

† Tea and coffee aid the action of cannabis and are antagonistic to that of morphia on the heart.

morphia daily, that is, in the generality of individuals. The loss of tolerance or habituation (during intermissions of the opiate) in the cases observed seemed to be at the same rate as the acquiring. Hence it is always necessary to increase the dose gradually during a continuance of the drug, and to diminish it to a very considerable extent (to avoid narcotism) when recommencing it, even after a lapse of only a few days.

It is alleged by some as a grave objection to the hypodermic administration of morphia in insanity, that it causes constipation. After a close observation of the effects of 289* injections in 37 persons, comprising three general paralytics, eight melancholics, three cases of recurrent mania, eight of acute mania, five of chronic mania, three of dementia, three of epilepsy, treated for excitement or loss of sleep, and four dements treated for filthy habits, it may not be presumptuous in me to deny the assertion that morphia, employed subcutaneously, induces constipation. While, from the little experience I have had, I am unable to confirm Dr. Bucknill's statement that in some cases of melancholia opium "not only does not tend to constipate the bowels, but that it regulates and promotes their evacuation," I can affirm that in no one patient, where the bowels were regularly moved previous to injection, was this condition interfered with by the hypodermic treatment. Indeed, in two cases, one of melancholia, and one of general paralysis, smart diarrhœa occurred during the time they were under the subcutaneous administration of morphia, and did not seem the least influenced by it. Strange as it may seem, severe purging may even be caused by morphia introduced into the body by the cellular tissues. In the experiments on the antagonism of drugs, carried on under Professor Bennett's directions, it was observed, after one of the dogs had 1 gr. of meconate of morphia injected subcutaneously, that "restlessness, nausea, vomiting, diuresis and diarrhœa followed." A somewhat similar series of phenomena came under my observation. A stout, hirsute female, of 30 years of age, weighing about 9½ stones, suffering from chronic dementia, with paroxysms of excitement, had, for violence, at 11.30 a.m., one day, about ⅔ gr. of morphia injected. At 12.30 p.m. she had nausea and slight vomiting, which were checked by strong coffee. She, however, became quiet, instead of being

* The paper is based on a record of 413 injections, of which 124 were performed by Drs. McIntosh, Cruickshanks, and Gunn. To the last-named gentleman I am much indebted for a careful description of 118 injections. All the 37 patients who were under treatment came under my own observation.

excited, like the dog. At 6 p.m., immediately after taking supper, she vomited violently, and half-an-hour later suffered from profuse purging. Such coincidences are curious.*

Vomiting is the most unpleasant sequence of administering morphia by this method. If vomiting occurs, it generally takes place within the first two hours after injection; but, at times, it may be delayed for six or seven hours, and then may happen immediately after food is taken. From a consideration of the comparative frequency, it would appear that general paralytics are least liable to suffer from vomiting, 84 injections in this class of patients never once causing it.† Melancholics rank next in rarity of vomiting, five instances having occurred in 122 injections. One female, who once vomited after a subcutaneous injection of $\frac{1}{4}$ gr., frequently vomited independently of morphia, being of a very bilious habit, and subject to alternating constipation and diarrhœa. Three vomitings happened in a man who had frequently borne $\frac{1}{2}$ gr. with impunity, but was upset by $\frac{1}{4}$ gr. after an interval of time during which the treatment was discontinued. The remaining occurrence was caused by $\frac{1}{6}$ gr. in a tall, stout woman, weighing nearly 12 stone. In acute mania seven vomitings occurred in 72 injections; and, if we exclude five, which were evidently due to idiosyncracy, there were only two instances, each of which was due to rather a strong dose.

In recurrent mania there were three vomitings in 45 injections; in chronic mania, six in 42 injections; in dementia, 14 in 43 injections; and in epilepsy, two in five injections.‡ In a total of 413 injections there were 37 instances of vomiting. Those patients were taken at random, without any selection, except that they required a hypnotic for restless nights, or a calmative for excitement or disturbances. Hence, the number of vomitings which occurred may be taken as the maximum

* The violent purging may have been due to hypersecretion from the intestines, caused by irritation of the nerve-centres of secretion, followed by paralysis of the intestinal walls. Certainly it was not caused (in the lunatic's case) by dietetic conditions, for during a period of 12 months (two before, and ten after the occurrence) with an unvaried dietary, she never once has had a loose stool.

† In a patient (G. P.) at present under treatment, there was great impairment of deglutition, with constant regurgitation of food after each meal, on admission. After the injection of morphia his power of swallowing was much improved, and he did not regurgitate. The same improvement occurred after sound sleep by other means (cannabis Indica and bromide of potash combined), and was due to the recuperation of the reflex nerve-arcs of the æsophagus and stomach by cerebral rest.

‡ The vomitings in epilepsy occurred in a young man who is subject to almost daily regurgitation of food, and to occasional attacks of hæmatemesis.

which may happen with ordinary attention to the doses given.

Vomiting most commonly occurred when the drug was administered in the morning,* about an hour after breakfast; and a dose which had no unpleasant effect when given an hour after supper, frequently caused vomiting in an hour-and-half or two hours when injected at 9 a.m. This difference of effect is, no doubt, due to the diurnal changes in the state of the nervous system, and also to the varying conditions of the stomach in the forenoon and evening. The stomach must be more active, and, therefore, more irritable in the early part of the day, when the patient is walking about, than at night when the body is at rest in bed.

Any disordered condition of the stomach, more especially any hypersecretion, invariably caused vomiting with morphia. All in whom vomiting occurred, except two suffering from acute mania, one from recurrent mania, and one from chronic mania, who had irregular appetities, were gross eaters. An exception must also be made in the case of a melancholic female, already referred to, whose appetite was very capricious. More than once, when vomiting occurred after a dose which usually had no such action, it was discovered that the patient had got hold of a quantity of scraps of broken meat.

Vomiting occurred six times out of 222 injections in males; 31 times in 191 injections in females. Of the four men who vomited, three were gross feeders—one being in the habit of taking all kinds of odds and ends from the refuse barrels; another ate grass, leaves, coals, etc.; while the third was seen by the writer taking a plateful of soup, a slice of bread, and two platefuls of gooseberry tart (he had $\frac{1}{4}$gr. injected four hours before), and in three-quarters of an hour was found regurgitating his dinner, but without nausea or depression.

In experiments on the lower animals, it has been found that the action of morphia is in proportion to the weight of the animal. Such is not the case in the insane; for a dement of 12st. weight will vomit after a dose which has no such effect on an acute maniac or acute melancholic of 8 or 9st. It would seem that the tendency to vomit is in proportion to the deterioration of cerebral tissue—for the more the loss of intelligence,

* Of the 37 vomitings, 23 occurred in the morning. Of the 23, 22 occurred in patients who were injected in the morning or evening, as required. Of the 14 which happened in the evening, 13 were in patients who were injected only in the evening, and, therefore, their behaviour under morning administration is unknown.

generally, the more apt is this unpleasant symptom to occur. In only one case who has been discharged recovered was there vomiting; and that was once in a young woman of 18, weighing 8st., after a two-thirds grain dose in the morning. The same dose was borne well next day, when given in the evening; and on the second evening after, $\frac{5}{6}$ gr. had no depressing influence. Of the 37 persons experimented with, ten have recovered, or are convalescent; six of these have been discharged recovered. In all, the ten have been injected eighty-six times, and have vomited on seven occasions. Five vomitings occurred in rather an idiosyncratic case, who had twenty-two injections. In the remaining sixty-four injections, there were only two vomitings in nine cured or convalescent patients. Excluding the eighty-four injections of general paralysis, we have 243 injections of incurable or doubtful chronic maniacs, melancholics, dements, and recurrent maniacs. Of these, 30 caused vomiting. The total ratio of vomitings to injections in curable cases of acute mania and melancholia was about 1 to 12; in incurable cases, it was (including dements and epileptics) 1 to 8; excluding dements and epileptics, it was about 1 to 11; in ordinary curable cases, it was 1 to 32.

The more acute and curable a case, the less tendency to vomit. In recent cases where vomiting occurred, it was manifested (except once) as the disease began to merge into the chronic state. Thus one man who tolerated $\frac{1}{2}$ gr. of morphia on admission in acute mania, vomited after $\frac{1}{4}$ gr. nine months later; and a melancholic, who was not affected unpleasantly by $\frac{1}{3}$ gr. (as a first dose) in the first month of his malady, was much depressed and vomited after $\frac{1}{4}$ gr. six months later.

Vomiting does not hold any definite relation to excitement; for not unfrequently does it occur in the most excited individuals, and sometimes has no material influence in subduing this condition. Indeed, the condition of the nervous system which causes vomiting occasionally seems to counteract the sedative properties of morphia; nor does vomiting necessarily indicate general depression of the system, for the pulse and countenance remained unchanged during its occurrence in some idiosyncratic cases. We may, then, conclude that where there is no organic brain disease, as in acute curable cases, there is very little irritation of the pneumogastric centres by the narcotic; or that the depressing influence is too slight to induce vomiting. In dements (not congenital), and in chronic maniacs where the disease has been of long standing, and, consequently, where there must be considerable cerebral degenera-

tion, morphia seems to act with peculiar power on the vagus.* The anæsthetic condition of the nerve-centres in general paralysis prevents vomiting, even although the brain may be largely diseased. Conversely, it might almost be laid down as a principle that freedom from vomiting after a moderate dose of morphia is one of the most hopeful symptoms in the cases of patients suffering from acute mania.

Dr. Hunter attributed vomiting to a peculiar constitution—to a highly nervous diathesis, especially in females. My experience has been that temperament has very little to do with it; and that excitable females are not more liable to vomit than the saturnine, and are, perhaps, less so, as being less given to gross eating.

Of the means employed to check vomiting, strong coffee was found the most useful. Its effects are, however, but transient; for although vomiting was always stopped immediately after coffee was given, it sometimes recurred some hours afterwards.

Some observers recommend the combining of atropia with morphia for subcutaneous injection, and aver that thereby all the sedative without any of the depressing effects of the latter drug result. Indeed, it has been stated with a fair show of proof that atropia is an antidote in opium poisoning.† By Dr. McIntosh's advice I combined both drugs for injection in some cases who vomited after morphia. Two cases of melancholia—one of which had vomited after $\frac{1}{4}$ gr., and the other after $\frac{1}{6}$ gr.—were injected with $\frac{1}{4}$ gr. and $\frac{2}{9}$ gr. of morphia combined with $\frac{1}{60}$ gr. of atropia. Vomiting occurred after this administration in neither case. The atropia and morphia together were given in the evening, whilst the doses of the opiate which caused vomiting were given in the morning. According to the researches of the Committee of the British Medical Association on the Antagonism of Drugs, the sulphate of atropia seems to counteract the action of morphia within a "limited area;" but this circumscribed power may be sufficient to check the disagreeable effects of medicinal doses.

An examination of the diet-rolls of the asylum shows that the kind of food which a patient takes while being treated hypodermically has no appreciable influence in inducing or pre-

* One of the males who vomited when morphia was administered six months ago is dying at present, apparently from brain disease.

† Assistant-Surgeon G. C. Ray describes two cases of opium poisoning—one a lad of 14, who had swallowed about 40 grs.; the other, a child of $2\frac{1}{2}$ years, who had taken 10 grs., in which, after the ordinary remedies failed, injections of $\frac{1}{16}$ gr. sulphate of atropia seemed to counteract the coma, and to have been the means of recovery.—"Indian Med. Gaz.," July 1st, 1875.

venting vomiting. Those on tea and bread vomited just as frequently and as readily as those taking porridge and milk.

Even although morphia does cause vomiting, it is not to be condemned; but only on that account to be given with every possible precaution to prevent such a contingency. Castor oil frequently leads to vomiting, and elaterium ($\frac{1}{2}$ gr.) acts as an emetic far more frequently and more severely than morphia; but the use of either in insanity is not, for this cause, to be decried.

When vomiting is caused, no interference with the appetite, as a rule, follows; and often when a disturbed digestion causes irritability of temper, a good clearing out is frequently most beneficial to the stomach, and disposes to mental equanimity. In some cases of paroxysmal destructiveness where vomiting was an almost constant sequence of the hypodermic treatment, elaterium, or blue pill, was found to act most satisfactorily in leading to improvement of conduct.

In many patients vomiting was succeeded in an hour or two by great increase of appetite, as might perhaps be expected.

To prevent vomiting—which although, in my experience, not hurtful, is certainly disagreeable—I would recommend that morphia should always, where possible, be given at bedtime. If necessity requires—as in an outrageous patient—its administration during waking hours, the period immediately after or before a meal should be avoided.

Drs. McIntosh and Ward each had a case in which dangerous narcotic depression was produced by $\frac{2}{3}$ and $\frac{1}{6}$ gr. of morphia in a woman and man respectively. The woman had heart disease ("systolic bellows' sound"), the man was 74 years of age. Both recovered by stimulating treatment. Disagreeable but not dangerous narcotism occurred in three of the cases which came under treatment during my experiments. One—a female labouring under chronic mania, with paroxysmal excitement—had $\frac{5}{12}$ gr. of morphia injected at 9.20 a.m. About 11 a.m. she "became sick and vomited; her face was blanched, her pulse very small, and her hands cold and slightly moist." Strong coffee was given, and she speedily rallied.

The second case is a melancholic male, who frequently had $\frac{4}{9}$ gr., and several times $\frac{5}{9}$, without any depression. A month later, after an interval without morphia, less than $\frac{1}{3}$ gr., given at 9.30 a.m., caused narcotic depression about 11.20 a.m. The face was pallid and bedewed with sweat, the lips cyanotic, the pulse small, but there was no vomiting. Three ounces of sherry were given, and at 1 p.m. he took his dinner as usual.

The third was a female, subject to recurrent attacks of maniacal excitement. In August, 1874, she frequently had $\frac{1}{2}$ to $\frac{5}{9}$ gr. of morphia subcutaneously during a paroxysm, and $\frac{2}{9}$ gr. were never known to have a depressing influence. On the 18th of November of the same year, she had $\frac{2}{9}$ gr. injected at 9.20 a.m. for obstreperous conduct. At 11.40 a.m. she was found with contracted pupils, livid lips, pallid face, and almost unperceptible pulse. She had three ounces of sherry; and by 2 p.m. was able to take a walk of a mile.

What I would wish to direct attention to is that all three suffered from attacks of syncope, during which they were as much depressed as by the morphia. One has an enlarged heart, with mitral disease; one died of heart disease (syncope), and the third has a weak heart. Those cases show how unsuitable individuals suffering from cardiac disease are for hypodermic injections on account of the depressing effect of morphia on the heart, and because a death from syncope might be attributed to the drug. It would thus appear that the use of morphia hypodermically for alleviating the severe pain caused by aortic aneurism (*vide* "British Medical Journal," p. 745) is rather hazardous. The relief afforded by $\frac{1}{6}$ gr. in this disease, and for such a length of time as eighteen hours, shows the high value of the subcutaneous use of morphia in relieving pain.

In the insane, I would most decidedly advise that morphia should not be employed hypodermically in persons labouring under heart disease, or exhibiting any symptom which indicates serious brain disease, general paralytics excepted.

In melancholic females, I have found it best to begin with $\frac{1}{9}$ gr. of the acetate of morphia (equivalent to about 14 minims of the liq. morph. acet. B.P.), not oftener than once in every 24 hours, and have never found it necessary to increase the dose beyond $\frac{1}{4}$ gr. In melancholic males, the dose generally begun with is $\frac{1}{6}$ gr. once a day, and all the sedative advantages of the remedy are usually gained without going beyond $\frac{1}{4}$ or $\frac{1}{3}$ gr. In acute mania $\frac{1}{4}$ to $\frac{1}{3}$ gr. may be given for a first dose, and in robust individuals $\frac{1}{2}$ gr. may be administered with safety. In recurrent mania $\frac{1}{3}$ to $\frac{1}{4}$ gr. is all that is necessary to secure quiet and sleep. In the paroxysms of chronic mania $\frac{1}{6}$ to $\frac{1}{4}$ gr. has the requisite calmative influence. General paralytics require and bear the largest doses; and in one case I had gradually to increase the daily amount given to $\frac{5}{6}$th of a grain; while Dr. McIntosh has given $1\frac{1}{6}$ gr. in a similar case.

It must be remembered that it is very rarely necessary to give the morphia hypodermically oftener than three or four

times consecutively, and only once did I require to give it on more than nine successive evenings. In one melancholic I have given an injection on nine consecutive days, and in a general paralytic on fourteen days running. Those are very exceptionable cases. In melancholics, one injection every twenty-four, thirty-six, or even forty-eight hours frequently secures sleep at night, and rest of mind during the day.

From a comparison of the results obtained with the various sedatives and soporifics employed, it would appear that $\frac{1}{9}$ to $\frac{1}{6}$ grain of morphia given subcutaneously is a more potent hypnotic, and has a more prolonged calmative influence than ♏xxx of tincture of cannabis Indica administered by the mouth. $\frac{1}{4}$ of a gr. of morphia gave 8 to 10 hours' sleep in some cases where 20 grs. of chloral, or 45 grs. of bromide of potash failed to give more than 2 or 3.* In a melancholic female a draught containing 40 ♏ of tr. of cannabis Indica and 30 grs. of bromide of potash procured sound sleep; but was invariably followed next morning by headache, a tendency to stupor, and numbness, and weakness in the inferior extremities. Morphia (1 gr.) subcutaneously had equally marked hypnotic and sedative effects, but had no such disagreeable sequelæ. To the same patient $\frac{1}{16}$ tr. was administered thrice, with much greater calmative and soporific action than the combination of cannabis and bromide had. In a case of acute mania, where doses of 40 ♏ of gr. can. Ind. had no appreciable action, $\frac{1}{3}$ gr. of morphia secured sound sleep and quiet behaviour. The addition of 15 grs. of bromide of potash to a similar dose of cannabis, insured a sedative influence for some hours. In another case of acute mania, in which 45 minims and 60 minims given on two successive nights, had no apparent power whatsoever to calm excitement, $\frac{1}{3}$ gr. of morphia, administered subcutaneously at 11·30 a.m., was followed by a day of quiet, with sound sleep at night. On a previous admission, after ʒi doses of tincture of cannabis Indica had failed in alleviating her restless condition, $\frac{1}{2}$ gr. of morphia (subcutaneously) gave sound sleep, with quietness on the subsequent day. In general paralysis, ʒi. doses of cannabis had no effect whatever; while $\frac{1}{3}$ to $\frac{2}{3}$ grs. of morphia almost invariably secured sound sleep. In one individual, after potash bromide 30 grs., and tr. can. Ind. 40♏ combined failed in checking an attack of furious excitement in $2\frac{1}{2}$ hours after administration, $\frac{5}{6}$ gr. of morphia calmed the excitement and sent the patient to sleep in less than half-an-

* Of the 17 unsuccessful injections in acute mania, 4 were insufficient from a faulty syringe, which allowed part of the intended dose to escape.

hour. A similar attack of excitement was overcome, and the patient sent to sleep in about 20 minutes by $\frac{2}{3}$ gr. of morphia.

According to Dr. Hunter's experience, one-half the stomachic dose in males, and one-third in females, suffice subcutaneously. Dr. Bucknill states that he has found $\frac{1}{2}$ gr. subcutaneously act more powerfully than double the quantity by the stomach.* My own experience of the effects of comparative stomachic and hypodermic doses is, that the latter are far more potent.

Morphia in doses of $\frac{1}{9}$ to $\frac{5}{9}$ gr., was given, subcutaneously, 122 times in melancholia (2 males and 6 females), and was successful as a hypnotic (5 to 10 hours' sleep) and sedative 109 times. In recurrent mania (2 females and 1 male) morphia was injected to subdue excitement and aid sleep 45 times, in doses of $\frac{1}{3}$ to $\frac{2}{3}$ gr., and secured the desired end 36 times. In acute mania (2 males and 6 females) the opiate was administered in $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{2}{3}$ gr. doses 72 times—successfully 55 times; chronic mania, 42 (2 males and 3 females)—failures 9; dementia 24—failure 1. In the paroxysms of chronic mania and dementia, calmative and hypnotic action resulted 56 times in 66 injections of $\frac{1}{4}$ to $\frac{1}{2}$ gr., the latter quantity being rarely required. In the excitement of epileptic mania, 4 of 5 injections (gr. $\frac{1}{6}$ to $\frac{1}{4}$) were efficacious. In general paralysis, 69 of 84 administrations of $\frac{1}{4}$ to $\frac{5}{6}$ gr. doses were successful soporifics and calmatives.

In the same cases, chloral was given 15 times (by the mouth) in 20 to 30 doses, and failed 4 times as a hypnotic. It was given 7 times in acute mania, and failed once; thrice in recurrent mania, and was successful twice; twice in general paralysis, once without effect; and thrice with success in melancholia.

Tr. of cannabis Indica (♏xx. to ♏lx.) failed 9 in 24 times in melancholia; 4 in 7 (♏xl. to ♏lx.) in recurrent mania; 2 in 4 (♏xl. to l.) in chronic mania; and 13 in 30 times (♏xxx. to lx.) in acute mania. It was of none effect in 40 to 60 minim doses 4 in 5 times in general paralysis. In all, the failures were 32 in 70 administrations.

To the same persons, bromide of potash was given 15 times, and was successful 9 times. It was given once in puerperal mania (60 grs.), and had a soothing effect; 7 times in melancholia (15 to 55 grs.) and failed 5 times; twice as a successful sedative (40 and 50 grs.) in recurrent mania; thrice ineffectually (30 to 45 grs) in chronic mania; twice in general paralysis (40 grs.) with one failure.

* Psychological Medicine, p. 727.

Of all the narcotics used for comparison with morphia, hyoscyamus was the most unsatisfactory, as it failed 14 in 15 times, administered twice daily in ♏xv. doses of the tincture to a melancholic female in whom $\frac{1}{9}$ to $\frac{1}{6}$ gr. morphia (subcutaneously), once daily, acted like a charm. In acute mania, hyoscyamus seemed to act better, securing sleep thrice, in 30 to 50 minim doses. But although it acted as a hypnotic, it was followed on each occasion by most furious excitement when the patient awakened.

Of all the hypnotics and sedatives employed, morphia, hypodermically administered, was found the most certain and speedy, being successful 329 times in 394 injections, the proportion of failures being about 16 per cent.* Chloral comes next as by far the most potent soporific, the failures being 26 per cent. Although an invaluable hypnotic, chloral has the great disadvantage of exercising no sedative action. It was, however, found to procure sleep without fail in a case of puerperal mania where morphia seemed to have no sleep-compelling action, this being the only instance of such results.† Tr. of cannabis Indica was a much better sedative than chloral, but exhibited very little soporific tendency in ordinary doses. Where there was excitement (except of the mildest) it seemed to have little or no calmative influence whatever. It acted best in melancholia, and showed itself to (in moderate doses) be a safe and pleasant sedative. Bromide of potash is too unreliable a sedative to be used, with much benefit, in insanity.‡ Occasionally it seemed to do well in excitement connected with menstruation, but the trials were too few to warrant any precise conclusions.

The smallest proportion of failures with the hypodermic treatment was in dementia (1 in 24); but this can be accounted for by morphia being given for the most part to subdue excitement, to secure which end much smaller doses are required than to cause sleep.§ Besides, morphia acts very powerfully on the weak brains of dements. If we are to estimate a mode of

* The majority of the failures were due to the rapid habituation of the system to the doses employed.

† I have more than once observed furious excitement succeed sleep secured by chloral, and recently have observed a great diminution follow its use.

‡ Dr. Clouston's favourite combination, Tr. of can. Ind. (♏40), and bromide of potash (30 to 40 grs.) was given 11 times successfully—twice it failed. It is no doubt a very certain form of sedative, but unfortunately causes so much stupor, confusion of ideas, and such paresis of the motor nerve centres (after sleep is over) that it is a very dubious remedy in frequent doses.

§ It is not usual for dements, even when excited, to suffer much from loss of sleep.

treatment by its success in aiding the restoration of the brain to a healthy condition, then the hypodermic method was most valuable in acute mania. As a sedative, its benefits were, perhaps, felt most in melancholia. Its calmative properties were strikingly exhibited in alleviating the paroxysms of chronic mania and dementia, and in checking the attacks of recurrent mania. In general paralysis it was the "*dernier resort*," the indispensable hypnotic, "the sheet anchor of the physician."

The injection of morphia has sometimes led to the formation of small abscesses. My experiments were made with a solution of acetate of morphia in distilled water, acidulated with a few drops of glacial acetic acid, and having any excess of acid neutralized by liq. potas. The strength of the solution was 1 gr. to every 12 minims. The site of puncture was over either deltoid, from convenience of access, and as being free from veins. I never had more than a few drops of blood issue, and that on very rare occasions; nor did an abscess ever form in consequence of the operation.

The conclusions which seem to me to have evolved themselves from those experiments and observations are the following:—

1. Of all single drugs, opium, or its alkaloid morphia, is the most potent and reliable hypnotic and sedative in the treatment of insanity.

2. Morphia, administered subcutaneously, is more rapid in its action and more powerful in its effects than when given by the mouth.

3. By hypodermic injection, not only irregularity in action dependent on gastric conditions, but digestive disorders incident to the stomachic exhibition of morphia are avoided.

4. The subcutaneous is the easiest method of giving opiates when a patient refuses to take medicine, and always the most exact.

5. Of various adjuncts to opiates, warm baths are the most useful.

6. Attacks of acute and recurrent mania, and paroxysms of excitement in chronic mania and dementia, may be cut short in the outset, or beneficially controlled, by morphia subcutaneously administered.

7. In such cases (*i.e.*, acute mania, &c.), the tongue becomes clearer, and the appetite, as a rule, improved by this treatment.

8. Morphia so administered has no marked tendency to cause constipation; and even in melancholia by allieviating the

misery, and thus lessening the waste of nervous force, it predisposes to improvement in appetite and digestion.

9. Vomiting, the only unpleasant symptom apt to occur with the hypodermic treatment, is generally due to over-eating or digestive disorders existing previous to injection, and may, by care as to the time of administration, be avoided; and when it happens, is frequently beneficial rather than otherwise.

It must, however, be borne in mind, that many of the phenomena referred to are still *sub judice,* and that the opinions enunciated may require considerable modification as the result of further inquiries.

On the Past and Present Provision for the Insane in the United States. By Daniel Hack Tuke, F.R.C.P.

As the Hospitals for the Insane in the United States of America have recently been prominently brought before the medical profession in England, it may not be uninteresting to the readers of this Journal to have a slight historical sketch of what may be called the past asylum movement in the States. I am not aware that this has been given before in any journal or work published in Great Britian. The peculiar difficulties of a new country, peopled by different races, and the constantly disturbing influence of immigration, ought to be borne in mind in this narrative. These difficulties are too frequently overlooked. In a letter I received from Miss Dix two years ago, she writes—"We have an amazing burden in all our charitable institutions of every class of disabled foreigners of all ages and in all stages of feeble or quite broken down conditions of health."

As in England, so, no doubt, in America, frightful abuses have existed—more than that, much remains to be done. The insane have been subjected to the same barbarous neglect and treatment as with us. Puritanism, in the first instance, was only too likely to treat some forms of madness as instances of witchcraft, and their subjects would be punished or put to death accordingly. Other cases would be simply referred to the cruel action of Satan upon the mind, and proper medical treatment would be the last thing thought of. A good illustration of the belief in such diabolical influence in mental depression occurs in Cotton Mather's "Life of William Thompson." "Satan," he says, "who had been often in an extraordinary manner irritated by the evangelic labours

of this holy man, obtained the liberty to sift him; and hence, after this worthy man had served the Lord Jesus Christ in the church of our New English Braintree, he fell into that *balneum diaboli*—a black melancholy, which for divers years almost wholly disabled him for the exercise of his ministry." . . . . "New England, a country where splenetic maladies are prevailing and pernicious—perhaps, above any other—hath afforded numberless instances of even pious people, who have contracted those *melancholy indispositions*, which have unhinged them from all service or comfort. Yea, not a few persons have been hurried thereby to lay violent hands upon themselves at the last. These are among the unsearchable judgments of God." When they were really regarded as madmen, the care and treatment of the insane were probably neither better nor worse than in the mother countries from which the early settlers came. Humanity and Science, however, attacked and at last broke through the strongholds of superstition, ignorance, and prejudice; and benevolent men (and women, too) exerted themselves to mitigate the unhappy condition of those who were confined as lunatics, and to provide for them suitable accommodation and kinder treatment.

It appears that it was from the Province of Pennsylvania that the first humane impulse proceeded. It was fitting that the State, founded by the humane and enlightened Penn, should take the lead in this work of mercy. From Philadelphia there went a petition to the House of Representatives, in which it is stated that with the increase of the population the number of the insane has greatly increased; "that some of them going at large are a terror to their neighbours, who are daily apprehensive of the violence they may commit; and others are continually wasting their substance, to the great injury of themselves and families—ill-disposed persons wickedly taking advantage of their unhappy condition, and drawing them into unreasonable bargains—that few of them are so sensible of their condition as to submit voluntarily to the treatment their respective cases require, and therefore continue in the same deplorable state during their lives." The House is requested to aid in founding a small provincial hospital for these and other persons labouring under disease; for it seems that in the first instance it was not designed exclusively for the insane. This, the petitioners affirm, will be "a good work acceptable to God and to all the good people they represent." This was in 1751. The consequence was

that the Legislature passed the necessary Act; a sum of money was voted, subject to an equal amount being raised by private means, and the new hospital was opened at Philadelphia in the following year. Although anticipating the course of events it should be added that in 1841 the patients were transferred to the new "Pennsylvania Hospital for the Insane," near Philadelphia, of which Dr. Kirkbride was appointed Superintendent, and still holds that post.

It is pointed out by Dr. Ray (to whom we are indebted for these and other particulars*) that this Pennsylvania Hospital has an additional claim on our gratitude, inasmuch as it was here that the celebrated Dr. Rush obtained the materials for his work on "Diseases of the Mind," published in 1812. We cordially respond to the tribute Dr. Ray pays to his memory, and this not only for the work here alluded to, but for the admirable essays contained in his "Medical Inquiries and Observations."

Twenty-one years later (1773) Virginia established at Williamsburg an asylum, or, as the Americans very properly call such institutions, a "hospital," which provided for the insane only. "Many years elapsed," Dr. Ray states, "before this worthy example was followed; nor was the great want supplied by associations like that which founded the Pennsylvania Hospital, nor by individuals, as in the private asylums of England. The latter class of enterprises was almost unknown in this country until the beginning of the present century; for they required a knowledge of insanity not easily obtained by our physicians, an outlay of capital which few of them possessed, and a rate of prices greatly beyond the means of our people. In process of time they made their appearance, few and far between, but their benefits were confined to the affluent classes."

In 1817 the Friends established an asylum at Frankfort, near Philadelphia, with the object of carrying out the system of treatment pursued at the York Retreat. In the following year the McLean Asylum, at Somerville, Mass., was opened. Dr. Wyman, the first physician, appears to have devoted himself warmly to the interests of the patients. He opposed the indiscriminate use of bleeding, purging, and low diet. The Bloomingdale Asylum (the lunatic department of the New York City Hospital) was opened in 1821. At one period Dr. Pliny Earle, now the physician-in-chief of the

* See his "Contributions to Mental Pathology. Address at Danville, 1869."

Northampton Hospital for the Insane, Mass., superintended this asylum. The Hartford Retreat, Connecticut, opened in 1824, was first superintended by Dr. Todd. He, like Dr. Wyman, objected to depletion, and employed tonics, sedatives, and a generous diet. Dr. Brigham was superintendent from 1839 to 1843. He was succeeded by Dr. Butler. In 1821 an appropriation was made by the South Carolina Legislature towards an asylum at Columbia, which was completed in 1827.

It is worthy of remark that in no State in America, Virginia excepted, did the Legislature undertake wholly to provide for the insane until 1832. In that year Massachusetts erected an asylum at Worcester (the first Superintendent being Dr. Samuel B. Woodward), and from this time it was regarded as a duty for the States not merely to aid—as in the instance of Pennsylvania—the efforts of others, but to provide the *whole* amount required for the erection of hospitals for the insane. The just dictum of Horace Mann that insane paupers are the wards of the State, is regarded by Ray as having "taught the people, now and for ever, the exact nature of their relations to this class of their fellow creatures. . . . . The example of Massachusetts, executed as well as conceived in a most generous manner, was followed by other States, one after another."

There appear to have been several causes for the movement which now happily commenced. One was that the experience already gained in the hospitals where the insane were judiciously and kindly treated, had proved that they might and ought to be removed from jails and poorhouses, and placed under proper care and treatment. For this State aid was indispensable. Another cause was that with the Hour, there came fortunately the Man, or rather the Woman; for at this juncture, a lady whose attention was directed to the condition of the insane, resolved to devote herself to their service, and from that day to the present time, the insane, if neglected or ill-treated, have had in Miss Dix a powerful and untiring advocate. From his personal knowledge of this philanthropic lady's character, the writer can well believe the statement made by the physician already cited, that "no place was so distant, no circumstances so repulsive, no lack of welcome so obvious, as to deter her from the thorough performance of her mission. Neither the storms of winter, nor the heats of summer, could diminish the ardour of her zeal, and no kind of discouragement could prevent her from gaug-

ing exactly the dimensions of this particular form of human misery;" and he adds, that "favoured by that exquisite tact and happy address peculiar to her sex, she overcame obstacles that would have defied the ruder efforts of the other sex, and thus brought to light a mass of suffering that seemed more like an extravagant fiction than real unexaggerated truth." Miss Dix appealed to the Legislatures of the various States to pass enactments calculated to remedy this state of things, and terminate "practices that would shock even a barbarous people." Her efforts were generally rewarded by the desired action being taken to provide hospitals for the insane. But even in the "go-ahead" land across the Atlantic, the interval which elapsed between the decision to act and the act itself, was provokingly long, and it required the watchful eye of the promoter of these benevolent measures, aided by a few medical men, to ensure their being really carried into execution. Thus, I observe that while the idea of founding a State asylum in Pennsylvania was projected in 1838, and an Act was obtained, the project fell through, and it was not till 1845 that a successful attempt was made to obtain another Act, which, strange to say, was itself not carried into effect for years, and the asylum (at Harrisburg) was not opened before 1851. An insane hospital, the funds necessary for which were partly provided by private individuals and partly by the State, was also opened in 1861, for Western Pennsylvania, and called the Dixmount Hospital.

In 1836, or a little later, "the attention of certain philanthropic and enlightened citizens of New Hampshire began to be turned towards some better provision, or rather towards some provision, for its insane. The success of the State Lunatic Hospital at Worcester, in the adjoining State, was rapidly being recognised, and the enquiries, set on foot by Dr. Bell and his associates, developed an amount of suffering before unsuspected. Among those who devoted themselves to this thankless and unpopular effort to induce the community to awake from its guilty lethargy, deserve to be enumerated the names of General Peaslee, President Pierce, S. E. Cones (now of Washington), the late Charles J. Fox, and a few others. Time after time the Legislature refused the necessary sanction for an asylum. Eventually, however, these efforts proved successful, and resulted in the establishment, by private subscriptions and State aid, of that excellent institution, the New Hampshire Asylum for the Insane."*

* "American Journal of Insanity."

Dr. Bell reported the number and condition of the insane in the State, and the means of providing for them; and his Report was not only ordered to be published for distribution by the Legislature, but was reprinted in the Journals of both Houses as worth perpetuation in the governmental history of New Hampshire. Shortly after he was appointed physician-superintendent of the McLean Asylum, Massachusetts. The New Hampshire Asylum was opened in 1842, Dr. Chandler being appointed Superintendent. In 1845, Bell visited Europe, and found, as he said he had expected to find, that great progress had been made in the construction of asylums in Great Britain. Of this he availed himself, and prepared plans for the erection of the Butler Hospital for the Insane, at Providence, Rhode Island, of which institution Dr. Ray was appointed the first superintendent. He had previously superintended the Maine Island Asylum, opened in 1840. The New York State Lunatic Asylum, Utica, was opened in 1843. The well-known Dr. Brigham was superintendent from its opening until his death in 1849. Dr. Gray now fills that office. In 1844 Miss Dix induced the Legislature of New Jersey to take up the question of provision for the insane in that State, and to appoint a committee to select a suitable site for a building. Dr. Buttolph was appointed medical superintendent.

From the well-known and admirable Report on the insane in Massachusetts, drawn up by Dr. Jarvis, and presented in 1855, we learn that there were at that time 1 lunatic in every 427, and 1 idiot in every 1034 of the population, or 1 of either class in 302. There were 2632 lunatics, 1087 idiots; of the former, 1284 were at their homes or in town or city poorhouses; 1141 in hospitals; 207 in receptacles for the insane, in houses of correction, jails and state almshouses. Of the latter, 670 were supported by friends, and 417 by the public treasury. The pauper class of lunatics, it is stated, furnished in ratio of its numbers sixty-four times as many cases of insanity as the independent class.

In 1856 Dr. Bell said in his Report, "The number of hospitals for the insane in the United States has increased during the last 19 years from 6 to between 40 and 50, and the accommodations for patients have risen from about 500 to between 10 and 11,000. Even the four larger British provinces adjoining us have caught the influence of our zeal, and each of them has, during that period, provided itself with a large and well-furnished institution, essentially upon our models."

(Dr. Bell wrote very strongly, I may remark, in parenthesis, against the association of the sexes, against the frequent visits of relatives to patients, and against giving up all mechanical restraint.)

We must not, however, enter into further detail. Suffice it to say that sooner or later buildings were erected in the States, adapted for the purpose, and what is still more important, were provided with medical superintendents, devoted to their work. Among these are not a few who have distinguished themselves in this specialty, and have exerted an important influence upon medical psychology and the jurisprudence of insanity, beyond their own immediate circle. There have been features of the American asylums, I do not hesitate to say, which have been well deserving of the attention of English physicians. The Reports of their superintendents have been and are valued by alienists in the mother country.

Dr. Woodward, so long ago as 1833, urged that with many, intemperance was a disease requiring special care, and the American psychologists worked at this subject until an Act was passed in 1855 by the New York Legislature incorporating an association, with powers to carry out this view in a definite form.* They have also taken a prominent place in the education of idiots. The late Dr. Howe, known everywhere as the enlightened friend of the idiot, was a member of a commission appointed by the Legislature, in 1846, to enquire into the condition of the idiots of Massachusetts, and ascertain whether anything could be done for their relief. Dr. Wilbur's labours in the education of idiots, are also well known. He was appointed superintendent of the New York State Institution for Idiots, in 1852.

It is admitted that the provision made for the insane, in at least some of the States of America, was recently and probably still is far from complete. We have referred to Massachusetts. In 1869 it was estimated that there were in this State about 2000 insane or idiotic persons unprovided for. The number of lunatics unprovided for in the State of New York, some years ago, and placed in workhouses and gaols, in a deplorable condition, attracted much attention and just criticism. In 1856 there were 900 insane poor in the poorhouses and gaols of this State, 300 of whom were in cells and me-

* *Vide* "American Journal of Insanity," July, 1856.

chanical restraint, from one end of the year to the other. My authority is the *American Journal of Insanity.*

In 1868 the Pennsylvania Medical Society memorialised the General Assembly, alleging the insufficient accommodation which existed in that State, and asserting that "a large proportion of insane persons are kept under conditions shocking to the dullest sense of propriety, or even of common humanity, suffering from cold or heat, from bad air, or indecent exposure; chained to the floor, perhaps deprived of every means of recreation or employment, and dying by that process of decay which physicians call dementia." They urged the immediate establishment of a hospital for the district, composed of the counties of Wayne, Sesquehanna, Wyoming, Luzerne, Columbia, Montour, Sullivan, Bradford, Lycoming, Tioga, Clinton, Centre, Clearfield, Elk, Cameron, McKean, Potter, and Forest; and nine others, should the finances of Pennsylvania allow of it. The result was the erection of the Hospital for the Insane at Danville, Penn., the corner stone of which was laid in 1869, and was the occasion of the excellent address delivered by Dr. Ray, from which we have quoted. The proper persons, we would here remark, deserving of blame for the deplorable condition of the insane, wherever it has existed or still exists in America, are not the body of alienist physicians, but the mass of the people themselves —these largely composed of Irish and Germans. The alienist physicians have, by their "Association," promulgated sound principles at their annual meetings, and petitioned the Legislature repeatedly.

In 1873 were published a "Report of Public Charities in Penn.," "A Plea for the Insane in Prisons and Poorhouses in Penn.," and subsequently "Addenda," wherein evidence is given, apparently conclusive, that some at least of the insane inmates were often greatly neglected and ill-treated. The condition of these, in fact, recalls that of the insane, before any reforms were introduced; but then the proportion to the whole number may be small. One old man is described as starved to death, medicine being forced into him, but food thought unnecessary; a young lady, for the last two years occupying a filthy cell, resting like a beast upon her haunches, and so permanently cramped as to be only capable of frog-like movements; a "splendid old man" in chains for 40 years, &c., &c. The Report of the Board of Public Charities gives many deplorable cases of a similar or even worse character. In one almshouse we read, "We found the

female insane department in a shocking condition; so bad that it would be impossible to give a description of the place on paper. In some cells there were two or more women confined; some without any clothing, lying on the floor without mattress, carpet, or anything else, except an old government blanket. The place had a horrible putrid odour." Of another establishment, the report is made, "Insane totally neglected, morally, physically, and medically; less attention is given to them than would be given to the lowest animals." We reproduce a few of these descriptions, not from any wish to throw odium upon the people of Pennsylvania for past errors, but as historical facts which we are bound to chronicle, and also as forming an instructive lesson for the future, showing, as it does, how possible it is in the midst of an enlightened community for a fearful state of things like this to remain for so long unremedied, in spite of the protests of medical men and others, and how absolutely necessary unremitting attention is to the condition of a class unable to make their own wants and sufferings known. We doubt not much remains to be done, for at the time of which we speak (1873) it was stated that there were twice as many of the insane poor languishing in the poorhouses and prisons of Pennsylvania, as there were when Miss Dix made her appeal for their relief, in consequence of which the Harrisburg Hospital was built. Still, the Report of the Board of Public Charities for 1874, published in 1875, says—"We do not propose to detail again the sickening minutiæ of our investigations. Some of these, we thankfully believe, are buried in the dead past."

The same Report states that the number of indigent insane in the State Hospitals, established primarily for this class, "was, on 30th September, 1874, 764; the number of the same class in the poorhouses of the State and other county provision being 1,352, exclusive of 1,075 in the Philadelphia Almshouse."

The obvious remedy would seem to be the provision of a larger number of State Hospitals for the insane. Probably the obtuseness of the German element of the population has rendered Pennsylvania slower than she otherwise would have been to recognise her duties to the insane. Many of the citizens of Philadelphia (including Dr. Ray and Dr. Kirkbride) petitioned the Legislature in 1874, that "hospitals enough for the care and treatment of all the insane in Pennsylvania be prepared at the earliest possible time," and represented that "the course proposed will relieve the

Commonwealth of the reproach of having insane men and women confined in almshouses, gaols, penitentiaries, or, what is worse often than either, put out of observation, neglected and inhumanly treated at their own homes, or in detached buildings near them."

We regret that in the observations of the Board of Public Charities this is not insisted upon. If, indeed, the hospitals already in existence were built for the indigent insane alone, they are right in their complaint that they are now partly occupied by those whose friends can pay for them, however moderately; or if, built for both classes, the State designed the poor to have the first claim for admission, *irrespective of curability*. The law appears on this point somewhat vague; for while it provides that the poor are to have precedence of the rich, it requires also that recent cases shall have precedence over those of long standing. That it admits of the construction put upon it—that a recent case, although not a pauper, shall be admitted before a chronic pauper case—seems clear from the fact that the Board of Public Charities urges upon the Legislature a more definite law on the subject. The mixture of different classes, however, in the same building would seem to be, so far, a recognised plan with the Americans; and granting this, we imagine that the question the Medical Superintendent has supposed himself bound to consider is—Which of two cases who apply for admission is the most likely to be benefited by treatment? The Medical Superintendents would seem the last persons to blame; yet, unfortunately, the tendency on the part of the Board of Public Charities appears to be to cast the odium of the state of things we have described upon them. And, further, is not some weight to be allowed to the consideration that many who are admitted on moderate terms would become paupers in a short time if not so admitted? If the Medical Superintendents are to be blamed, should not some blame be attached also to the Board of Public Charities for allowing the poorhouses to be in so bad a condition? Could not their visitation have been made more effective sooner? Ought not the Board to have done long ago what they did in 1873? Be this, however, as it may, if their proceedings have in the end been productive of good, we rejoice, although they may in some respects have erred in judgment. We in England, with our love of centralisation, commissioners, and so forth, would be apt to think that a distinct Lunacy Board would have been found helpful in America in this and perhaps other

instances. We are well aware, however, that our psychological friends on the other side of the water rejoice in their freedom from official interference in the form which it takes in our English Commission.

In a letter I received from Dr. Ray in the summer of 1873, he states that at that time every state in the Union, excepting Delaware, and one or two of the newest States, had one or more hospitals for the insane, and they were all liberally supported in most respects. "Some of the officers think they themselves are meanly paid; and I suppose they are in some Western and in all the Southern States. The Western—Ohio, Iowa, Illinois, Indiana—are steadily increasing their hospital capacity by building new hospitals, or adding to the old ones. In them the essential objects of such institutions, I think, are pretty well obtained, though an Englishman would probably observe some laxity in the service. In the Atlantic States, excepting New England, it is impossible to obtain good attendants, and this evil seems to be increasing every year, and the consequences are an increase of suicides, elopements, and other casualties."

And a year later the same correspondent informed me that another asylum had been commenced at Warren, in the north-west part of Pennsylvania; that in New England the hospital capacity was nearly up to the demand, and when hospitals in building were completed, no patient need be left in the poorhouse; that New York, hitherto delinquent, had five hospitals in course of construction, which, with additions to old asylums then projected, would provide for all pauper insane; New Jersey had added to her hospital at Trenton, making provision for between five and six hundred, and was building one of equal capacity at Maristown. Maryland had hospital capacity enough. In the hospital at Washington, the national government provides for about five hundred insane from the army, navy, and the district. All the Western States have, at least, one hospital; many of them more. One of the first things provided by the new States, after coming into the Union, has been a hospital for the insane. All the Southern States have, at least, one hospital, but they became so impoverished by the war that they are hardly able to maintain them, much less to meet the increasing demands for new ones. On the whole, therefore, there is an onward movement, and it looks as if public opinion, enlightened by the writings of American psychologists—especially the Annual Reports of the Hospitals for the Insane, and the manifestoes of the "Association"—would demand,

and be willing to support the further extension of hospital accommodation which doubtless is called for, although it may only be gradually effected. "I can at once state two facts," writes Miss Dix to me, "concerning the state of communities in the United States, an acknowledged obligation to *provide suitably* for *all* insane persons, whether chronic or recent cases—for the former *permanently*, for the latter, till cure is advanced, or recovery established. Much is said on the supposed rapid increase of insanity in the United States. I do not think this a sound proposition. Of course, the number of insane persons is vastly larger than ten years since, but the amazing increase of population by a continually inflowing immigration from Europe, with the natural increase of native inhabitants, will create imperative need for a multiplication of hospitals for care and treatment."

A few words on the attitude of American physicians towards the vexed question of non-restraint.

In the treatment of violent and suicidal patients they have, without exception, I believe, carefully avoided committing themselves to the doctrine of non-restraint, as the term is understood in England. Their views have been again and again distinctly stated by Bell, Ray, Kirkbride, and others. Their position, succinctly expressed, is simply this —Restraint, in some form or other must be employed—whether by bricks and mortar, manual tension, or fastenings on the person, or "chemical restraint." Whichever be adopted, *physical* and not moral means are resorted to. To declare any one of these to be wrong, and say it shall never be made use of, is, they maintain, uncalled for, and unwise. They admit that it should only be resorted to after much consideration. At the same time they believe that there are, and always may be, cases in which not only the most effectual, but the kindest method of repression consists in the imposition of certain mechanical and personal forms of restraint. After the subject has been for years so thoroughly canvassed and debated, it is unnecessary to dwell at any length upon the arguments *pro* and *con.*, but so much seems due to the American alienists. It will, indeed, be said that the difference after all between American and English asylum practice, in this particular, is only one of degree—the latter resorting to it in certain cases, chiefly surgical, of dire and absolute necessity. Yet it must be affirmed on the English side, that the adoption of the non-restraint principle of treatment, broken, as it confessedly is, in a small number of instances, in the course of years, sets

forth a high standard at which ever to aim before all the officers of the institution, and as a matter of fact does induce so considerable a difference in the resort to mechanical means of restraint, that though it may be represented as one only of degree, it ends in a marked disparity in practice, when the condition of the patients in all the asylums in the two countries is considered and compared. And in truth, it is more than probable that the decision, arrived at by any independent medical superintendent to adopt the non-restraint principle as the *rule* in his asylum, will always be the result of a practical conviction that by this course, however open to the theoretical objections already mentioned, the largest amount of personal care and attention will, other things being equal, be secured in general to the patient; and the temptation to restrain his movements, by painful bodily coercion, reduced to a minimum. Indeed, Dr. Earle, in 1857, at an annual meeting of the American Association of Superintendents of Hospitals for the Insane, said (what constitutes a powerful defence of the non-restraint system) that "while it is occasionally necessary to employ mechanical restraint, yet he believed that this admission is calculated to favour a tendency to its excessive use."

I cannot conclude this paper without a brief reference to an article which appeared in the "Lancet," Nov. 13, 1875, in which the writer brought very serious charges against the customary treatment of the inmates of the American asylums by their medical superintendents. It is due to these gentlemen to reproduce here a defence, in the form of a letter addressed by my friend Dr. Bucknill to the "Lancet," Feb. 12, 1876. I deeply regret that so unqualified an attack should have been made upon a body of honourable and humane men, and I am sure that the members of the Medico-psychological Association in this country will share in the regret. If the writer had spoken strongly in reference to the condition of the insane in workhouses and jails, or in *some* of the asylums, the case would have been entirely different; the language in regard to such is not too strong I dare say; but surely the only justification for a wholesale onslaught on the medical superintendents of the asylums in the United States would have been conclusive evidence of the alleged facts as a general rule in these institutions. On the contrary, Dr. Bucknill, in the several particulars specially mentioned by the "Lancet," entirely denies the correctness of the statements. To those familiar with the names, writings, and deeds of Ray, Jarvis, Kirkbride, Earle, Butler, and others among living, and

Brigham, Beck, Woodward, and Bell among dead medical psychologists in America, it sounds strange to read that "we are almost forced to the conclusion that our friends across the Atlantic have not yet mastered the fundamental principles of the remedial system." And stranger still (so far as regards the men of the first class) to hear that "they adhere to the old terrorism, tempered by petty tyranny." Can we be surprised that the feelings of men engaged in a noble and arduous work—the work of their lives—should be hurt when they read such charges made by members of the same profession? With what feelings, *mutatis mutandis*, should *we* read them? In the rejoinder made in the "Lancet" to Dr. Bucknill's letter, it is said, "We do not say *all* American asylums are bad." Certainly, it is to be regretted that this qualification, or rather a much larger and more generous one, was not made in the original article. Neither, on the other hand, do we say that all American asylums are good. We simply maintain that the sins of some asylum authorities, and these, as a rule, municipal rather than medical, should not be indiscriminately visited upon the whole body of medical superintendents of hospitals for the insane. An American physician, visiting St. Luke's subsequently to 1840, found chains in use. Had he in consequence stigmatised the English superintendents of asylums, as a body, as being in the custom of employing manacles, he would have committed a gross injustice, which they would have instantly resented. In the same way the American superintendents naturally feel aggrieved when a leading medical journal represents them, without (in the first instance) any exception whatever being made, as adhering to the old terrorism, &c.; as resorting to contrivances of compulsion; as using the shower-bath as a hideous torture; and as leaving their patients to the care of attendants, while they devote their own energies to beautifying their asylums.

Let us give credit where credit is due, and not involve in indiscriminate censure, worthy and unworthy superintendents, good and bad asylums, but if we denounce, confine our denunciation to those institutions in which ill-treatment is known to prevail.

AMERICAN LUNATIC ASYLUMS.

To the Editor of The Lancet.

Sir,—I have received letters and journals from several medical superintendents of asylums for the insane in the United States, calling my attention to a leader in "The Lancet" of November 13th last.

My correspondents feel much aggrieved with that article, and have asked me to publish the truth as I have recently observed it as to the treatment of the insane in their country. I had hoped before this time to have published some notes on this interesting and important matter, but ill-health has prevented me from doing so, and I feel that no further delay should occur in my asking you to do justice to a class of highly honourable and meritorious medical men.

With the general principles of your leader regarding the proper treatment of the insane, it is well-known that I entirely concur. I had the honour to serve under the non-restraint flag more than thirty years ago, when the fight was hot and undecided, and I am not likely to desert it now when the peace which follows victory has been so long established among ourselves. I think, moreover, that we have a task of duty and obligation before us in converting our American brethren to our views and practice; but in order to succeed in this, it is essential that we should clearly understand and appreciate their position.

The use of mechanical restraint in the excellent State asylums of America, and in the admirable hospitals for the insane there, is no part of a system of negligence and inhumanity, and therein it differs *toto cœlo* from its use in our country in former times, and in some foreign countries at the present time.

On this ground, therefore, I have no doubt that the adherence of the Americans to mechanical restraint in the treatment of the insane is solely an error of judgment, and, as you so forcibly express it, "an imputation on their professional acumen and social sagacity." But merely to asseverate this would be purely a *petitio principii.* We must prove it; and to do so, to change their opinions and assimilate them to ours, will, I see, be all the more difficult because the error stands so much alone, and because their opinions on all collateral questions are so enlightened and so much like our own; as it is notorious that in the propaganda of religious creeds conversions are most rare where the theological opinions and moral practices are least removed.

The statement in your leader by which the American superintendents feel themselves most aggrieved is the following one:—"They adhere to the old terrorism tempered by petty tyranny. They resort to contrivances of compulsion; they use at least the hideous torture of the shower-bath *as a punishment* in their asylums, although it has been eliminated from the discipline of their gaols. And, worse than all, if the reports which reach us may be trusted, their medical superintendents leave the care of patients, practically, to mere attendants, while devoting their own energies principally to the beautifying of their colossal establishments."

I have no hesitation, sir, in assuring you from my own knowledge and observation that, in all the above respects, the reports which have reached you are not to be trusted. I visited in the spring of last year ten of the public asylums in the United States, and enjoyed the most ample opportunities of observing the treatment of their inmates;

and I say, most unreservedly, that I never saw the slightest indication of "terrorism tempered with petty tyranny." The fault of the Americans does not lie in the direction of harshness, but rather in that of timidity and fear of responsibility.

It is my constant habit, when I go over an asylum, carefully to examine all closets, bath-rooms, and out-of-the-way conveniences; and it is a singular fact that I never once found a shower-bath in any one of the asylums which I visited in the States. In some of them I made inquiry as to the absence of this means of treatment so common with us, and formerly so much abused; and I was assured that it did not exist. As an instance, Dr. John Gray assured me that, in the New York State Asylum under his charge, there had been no shower-bath in existence for eight or ten years. Of course I cannot answer for what may be the practice in each of the numerous asylums scattered over a vast continent, but I can affirm that, in the asylums of the old settled States which I visited from Boston to Washington, the shower-bath is not used as a punishment, and, perhaps, too little used as a remedy.

On that count of the indictment which is "worse than all," your information has been certainly erroneous. So far from the medical superintendents of asylums in the States leaving the care of their patients to mere attendants, the reality for which I vouch is that the American superintendents bring themselves more constantly and intimately into personal relation with their patients than it is the custom to do in our public asylums, and, moreover, they are assisted in the care of their patients by a much larger medical staff than our institutions usually possess. I could easily name large English asylums in which the medical care of the patients devolves entirely upon the medical superintendent and one solitary medical assistant who is also the dispenser; while in asylums of the same size in the States the medical superintendent would have at least two, but more generally three or four, resident medical men to aid him in his professional duties. Here, again, I shall cite the example of the asylum for the State of New York at Utica, where the resident medical staff consists of the medical superintendent, four assistant physicians, and a special pathologist—in all, six medical men to about 850 insane patients. In the Washington Asylum, with 750 patients, the resident medical staff consists of four physicians and, I think, a dispenser. In the Pennsylvania Hospital for the Insane, containing 416 patients, the resident medical staff consists of four physicians. Even in asylums in which the management is far more open to criticism than in those I have named, I observed this large amount of medical element on the staff, and in this most important matter it seems to me that we in this country may well take a leaf out of the book of example which we may find in the States.

I fully admit that there are asylums in the States, the condition of which is grievously bad, and I have no hesitation in stating, from

what I saw, that the large asylums for New York and Philadelphia are disgraceful to the municipal authorities of those cities. But this is not the fault of the medical superintendents, further than it may be said to be their fault to hold office and discharge duties under circumstances which give them no fair play. I pity the patients in these asylums from my heart, but I have some pity also for conscientious and laborious medical men, who painfully endeavour to discharge their duties to the best of their ability under the vulgar rule of a municipality moved only by motives of party politics and unintelligent economy.

I remain, Sir, your obedient servant,

JOHN CHARLES BUCKNILL.

Hillmorton Hall, Rugby, Jan. 28th, 1876.

On the Use of Analogy in the Study and Treatment of Mental Disease. By J. R. GASQUET, M.B., Lond., Physician to St. George's Retreat.

The disheartening aphorism, in which Hippocrates summed up the experience of his life—"Art is long and life is short, the occasion is fleeting, experiment is dangerous, and judgment is difficult"—is more true of the study of insanity than of any other department of medicine. Were any proof needed of this, it would be sufficient to point to the classification of mental diseases, the symptomatological plan adopted until recently corresponding to the earliest nosology of ordinary medicine, while the schemes which task the ingenuity of a Skae or a Bucknill have a great likeness to the "Phthisiologia" of Morton, or to the nosologies of Sauvages and Cullen.

But, if it be granted that our specialty is much behind the other branches of medicine, it follows that one of our principal means of advancing it will be to argue from the analogy of the better known phenomena of other diseases to the more obscure symptoms with which we have to deal. As Mill remarked, the great value of analogy in science, even when faint, is to suggest observations and experiments with a view to establishing positive scientific truths. We are all of us continually doing this; but it appears to me that much of its advantage is lost, from our having no systematic plan on which to work; and I have, therefore, ventured to note down, somewhat roughly and disconnectedly, such ideas as have occurred to me on the subject, hoping rather to lead some more competent person to undertake it, than to bring forward

anything very valuable myself. I shall deal, in this paper, only with ordinary insanity, excluding all mental disturbances produced by general paralysis, syphilis, and all other forms of ascertainable brain-disease. I do so, not because analogy is here inapplicable, but because it requires to be applied in a different manner, and should, therefore, be dealt with separately. Having said so much, it will be evident that we shall have to search for analogies chiefly among the "neuroses" which are most akin to insanity. Indeed, this is a truism, so long as we use the term to include all those affections of the nervous system which can be connected as yet with no special anatomical lesions.

To begin with *Melancholia:* Leidesdorf has remarked that "the most superficial observer cannot miss seeing the analogy between this painful uneasiness of the mind, and hyperæsthesia of a sensory nerve. In both there is an exaggerated sensibility, due to the condition of the nervous tissue itself; in both every kind of excitement is followed by a feeling of pain, and even sensations, which would naturally be pleasureable, are changed into the reverse." In spite of this close similarity, the analogy between melancholia and neuralgia is perhaps less suggestive than others I shall have to refer to. The conditions under which they arise are very similar; Romberg's often-quoted remark—"pain is the prayer of the nerve for pure blood"—being as true of the one as of the other. They also occur under much the same circumstances at different periods of life; the melancholia as well as the neuralgia of the young being frequently due to disturbance of the genital organs, and being far more curable than the same affections in later life, which, no doubt, point to some permanent alteration of the nervous centres. I am afraid that little is to be gained towards a better knowledge of the intimate nature of the state of the nervous centres in melancholia by a comparison with neuralgia, for the latest authorities on the subject, as Erb and Eulenburg, confess that we have not sufficient materials to come to any conclusion upon it. But some interesting points may be noticed; for instance, the absorption in self, and utter indifference to the ordinary duties and pleasures of life, so characteristic of melancholia, find their parallel in the anæsthesia frequently observed in neuralgia. Nothnagel, who has carefully examined for this, finds that in the early stages of neuralgia, there is generally hyperæsthesia, loss of sensibility being a later symptom. I am inclined to think that the same holds good of melan-

cholia, but it would be interesting to have the point further investigated. Again, without being too fanciful, I think one can compare the restlessness of melancholia with the spasms, tremors, and other motor troubles which may affect a nerve under the influence of pain. We shall gain more practical information by placing the results of treatment in both diseases side by side—thus, although the use of opium is as well known in one as in the other, it is worth considering whether we might not more speedily and decidedly relieve melancholia as well as neuralgia by its hypodermic administration. The nervine tonics and stimulants, which are so frequently useful in neuralgia, are less employed in melancholia, and yet probably as much benefit would follow their use. I would particularly refer to phosphorus, which Dr. S. W. D. Williams found curative in certain cases of melancholia, and which I have also seen to produce an undoubted and speedy recovery; and to arsenic, the analogue of phosphorus, which is slower in its action, but sometimes succeeds when phosphorus fails. Cod-liver-oil is useful (as Anstie has already noted, for neuralgia) in patients who have long rejected all fatty articles of food—a circumstance as frequent in the one disease as in the other. As to the preparations of iron, it is worth remembering that Anstie found the sesquichloride the most useful in neuralgia, and believed it to have a specifically beneficial effect on the nerve-centres, often combining it with strychnia. Bromide of potassium he recommends, particularly in cases where there is a good deal of restlessness, and where the neuralgia is of uterine origin; precisely the circumstances in which we find it so beneficial for climacteric melancholia.

As the resemblance between melancholia and neuralgia has long been obvious, so a similar likeness has been recognized between states of mental exaltation and the motor disturbances of the nervous system. But it seems to me very unfortunate that epilepsy, from its intimate connection with mental imbecility, and with sudden explosions of violence, should have obscured the clinical kinship which exists between mania and the other motor neuroses. Among these, *chorea* appears to have the greatest likeness to mania, and, indeed, has been called "an insanity of the muscles," "folie musculaire," by many writers, and by Dr. Broadbent more recently, "a delirium of the sensori-motor ganglia."* It is impossible, in the present apparent conflict of evidence, to determine the

* I refer, in what I am going to say, exclusively to the chorea of childhood; that of pregnancy being distinguished from it by several important characters.

seat of this neurosis, the clinical phenomena hemichorea, choreic hemiplegia, and the like, pointing to an intra-cranial origin of the disease, while experiments* and many autopsies seem to imply that the spinal cord rather is in fault. We may probably conclude that any cause which increases the excitability of the motor centres in the spinal portion of the nervous *system* (viz., from the corpora quadrigemina downwards)† may produce chorea, which would be further greatly assisted by the removal of the inhibitory power of the cerebral hemispheres. What this change is, we cannot yet know; but may plausibly conjecture that the vasomotor ganglion which regulates the supply of blood to the nervous centres, under some direct or reflex stimulus, causes the vessels of the part to *dilate*, and the blood to flow through it more rapidly than usual. This would account for the increased activity of one or more divisions of the nerve-centres, which (as Jacoud has shown, in his masterly exposition of chorea) would be sufficient to disturb the harmony and co-ordination of the whole spinal system, and so to produce that functional motor ataxia which we call chorea. A similar condition in the cerebral hemispheres would break in upon the still more complicated and highly co-ordinated system of the convolutions, and would produce the symptoms of mania. This would, then, be a *functional* ataxia of the cerebral hemispheres, corresponding, in point of symptoms, to the *organic* ataxia produced by extensive disease of the convolutions in general paralysis and other diseases, just as sclerosis of the posterior columns of the spinal cord is related to chorea.

I can only dwell upon some of the points of resemblance between chorea and ordinary mania, which lead to the conclusion that they depend upon the same process affecting different parts of the nerve-centres. It will be remarked that the usual age for the occurrence of chorea is about the time of the second dentition, while acute mania is most common between 20 and 30—in both cases that is, when the portion of the nervous system affected has begun to be in full work, but before its complete co-ordination has had time to be established. The exciting causes of both affections are the same, and both are arrested by the intercurrence of any pyrexial disease. They also correspond in their varying in-

* Chauveau found that in choreic dogs division of the spinal cord at the level of the atlas did not check the twitchings as long as life lasted.

† Even Dr. Broadbent and Dr. Hughlings Jackson do not localize chorea any higher than the corpora striata and optic thalami.

tensity; for, just as chorea in its earlier stages, and even in slight cases throughout, is only manifested during some voluntary movement, but gradually becomes continuous; so mania may only show itself by violence and excitement, which will subside when all external stimulus is withdrawn.

I cannot lay much stress on the fact that maniacal symptoms sometimes break out in the course of chorea, for the commoner mental condition seems to be one of depression and of weakness, probably because the inhibitory action of the convolutions is usually weakened before the disease can occur.

If I am correct in this view, it will evidently have an important bearing on treatment. In the first place, chorea runs usually a favourable and tolerably definite course, and, without at all denying the usefulness of treatment, it is notoriously one of those affections in which remedies have obtained a reputation for recoveries which are due to the natural progress of the disease. I believe the same to be true also of acute mania, where all violent attempts to cut short the excitement do much more harm than good. And, in particular, if the intimate cause of the disease be a hyperæmia of the nervous centres, we can understand how, by the use of chloral (which when taken habitually, we know, renders the arterioles more easily dilatable) a brief repose is too often purchased at the price of making the disease incurable. However, there are some remedies which appear to have an undoubted effect in shortening the duration, and lessening the severity of an attack of chorea. Some of these (for instance bromide of potassium) are as well recognised in the treatment of acute mania, but others are not employed in the latter disease. The most decidedly beneficial results of treatment in chorea that I have seen, have been obtained by the use of ether-spray to the spine: this method is often so rapidly beneficial in chorea* that a similar application to the head seems to deserve a more extensive trial than it has yet had in maniacal patients. The wet pack, which, according to the latest experiments, produces first dilatation, and then contraction of the cerebral arterioles, probably acts in the same way, but less decidedly.

* Lubelski and Jaccoud, who suggest this mode of treatment, state that cure is effected in some ten days. I have had the advantage of seeing it tested by my friend Dr. Withers Moore, in the Sussex County Hospital, who finds their statements correct if the chorea be purely spinal, but if the cranial nerves also are affected, it seems to be less useful. The spray is applied to the whole of the vertebral column for three or four minutes, once a day.

Arsenic has been long recommended in the treatment of chorea, and possibly the disfavour into which it has at different times fallen may be explained by Von Ziemssen's remark, that it should be given in very much larger doses than usual. In the account which he has just published of chorea, he states that he has for many years ordered 8 to 12 drops of Fowler's solution three times a day for adults, without ever observing any serious results. Those who have observed the very different effects of phosphorus in large and in small doses will be quite prepared to believe that the same may be true of arsenic; and the tastelessness of this remedy makes it easy for any one to try it in cases of mania.

The salts of zinc and copper have enjoyed a more uncertain reputation in chorea. At the present day we seldom or never hear of their employment in mania, though they were recommended by a physician of no less eminence than Van der Kolk.

I must now pass from the comparatively well-defined types of ordinary mania and melancholia to the more confused forms of chronic insanity. It might be supposed that these are too imperfectly understood to afford any foundation for analogies which must, at any rate, be of no practical utility, as chronic insanity is, on the whole, incurable. And, although I fear this is only too true, yet it should be the very reason to lead us to search the more earnestly for fresh clues to new and more successful treatment. I need hardly remind my readers that there are good reasons for believing that many cases of chronic insanity, which now are hopeless, might be temporarily improved, or permanently cured, if we only knew how. The recoveries from insanity of long standing, which now and again surprise us, and the temporary improvement which will sometimes take place in the most apparently desperate cases under the influence of pyrexia, of a mental shock, and of other causes unknown to us, and at the approach of death, practically testify to us that the highest praise of the physician, as of the Roman general of old, is that he should never despair.

And, although I can produce nothing promising much immediate utility, I cannot but hope I may be able to suggest the cases which we should select for treatment, and the direction in which we should look for our remedies.

I think it will be admitted by everyone that such cases of chronic insanity as are still curable at all, must be due to some local change which stops short of destruction of nerve-

tissue. The only change of this kind with which, in the present state of our knowledge, we are acquainted, is perverted vaso-motor action; and we have, therefore, to look for analogues among the vaso-motor neuroses. The pathology of these is unfortunately very imperfectly understood, owing to the crude and provisional state of our acquaintance with vaso-motor action in general; but far more is known about them than about most of the chronic forms of insanity. One of the most instructive vaso-motor neuroses for my purpose is *exophthalmic gôitre* (Graves' or Basedow's disease). It will be remembered that, however diversely the details may be explained, the symptoms of this affection are admittedly due to vaso-motor dilatation in the various parts concerned. Its non-intermittent and chronic character separates it from most of the other neuroses, and, so far, resemble chronic mania with incoherence, to which it has another feature of similarity in the persistent quickening of the pulse, which is such a prominent symptom. Brück and Geigel have seen maniacal symptoms break out in the course of this disease, which Jaccoud attributes to an extension of the original disturbance from the cilio-spinal centre to the neighbouring vaso-motor centre which governs the intra-cranial circulation.

There is, at any rate, sufficient *primâ facie* evidence of a likeness between the two diseases to make it worth while to try, in chronic mania, the remedies which have been found successful in Graves' disease. Quinine, in the dose of some five grains a day, has cured, or greatly benefitted, Friedreich's and Traube's patients; the latter combined it with the alternative use of iron. Digitalis seems to have little or no effect, but the bromide of potassium has benefitted many cases, and some cures are ascribed to belladonna. But the use of the continuous galvanic current has, so far, been attended with the most striking results. This treatment, first employed by Von Dresch, has been carried out more systematically by Eulenburg, who applies the cathode of a very weak current (six or eight elements) to the sympathetic in the neck, which produces a gradual falling of the pulse, almost to its normal rate, and a great relief to the mental symptoms which previously existed.

Another vaso-motor neurosis, which is worth considering from our point of view, is *hemicrania,* which, since du Bois-Reymond's observations in his own case, is recognised as dependent on a tonic contraction of the unstriped muscular

fibres in the part. The latest writer on the subject, Eulenburg, considers that there is an entirely opposite form of hemicrania, due to abnormal dilatation of the vessels. He would distinguish these two forms by the amount of blood noticeable in the skin of the face, and by the state of the pupil, which would be dilated in the tonic, contracted in the paretic, variety. He regulates his treatment according to these two varieties, giving particularly ergot, quinine and caffein where the sympathetic seems to be paralysed, but employing inhalation of amyl nitrite where the vessels are in a state of tonic contraction. Ergot is already known to us in the treatment of insanity, through Dr. Crichton Browne's recommendation, although it has somewhat disappointed in practice the expectations which were justly entertained of its usefulness; but I do not know that quinine in rather large doses, or caffein, have ever been tried in cases of chronic mania where there is reason to believe the cerebral vessels are dilated. Indian hemp, which is undoubtedly one of the most useful remedies in such circumstances, is also frequently beneficial (it will be remembered) in hemicrania. In one case of extremely violent chronic mania, with rapid pulse and dilated pupils, I have seen more marked relief from the use of physostigma than from any other remedy.

The nitrite of amyl, which relieves the opposite pathological condition, should be tried in those cases of acute dementia which seem to depend upon tonic spasm of the cerebral arterioles; probably belladonna, or the subcutaneous injection of atropia would be less speedily, but more permanently useful.

The auditory hallucinations, which are so common and unfavourable a symptom in insanity, are probably analogous to the convulsive spasm of the face, neck, and tongue, produced by centric irritation of the facial, spinal accessory and hypoglossal nerves. Like these they are chronic, intermittent, and very rarely recovered from, either spontaneously or as the result of treatment, and probably they are usually produced under the direct influence of affection of the hemispheres, which seems occasionally to be the cause of convulsive tic, and of spasm of the spinal accessory.* But, unfortunately, there is little to be gathered from the treatment of these affections, for they are most relieved by the use of

* Erb records a case in which spasm of the tongue occurred in a person who had become insane, and apparently he considered them to stand in the relation of cause and effect.

galvanism, and the auditory nerves seem to be too deeply seated for a weak current to have much effect.

There is one form of insanity which seems to find its affinities not with the neuroses, but with a very different class of diseases. I mean the affection called "typhomania," or Bell's disease, the "délire aigu" of the French, which, as its name implies, has been repeatedly recognised as resembling the typhoid condition of the continued fevers. As far as I know, there are only two explanations of this state: Liebermeister considers it to be produced by a high temperature acting upon the nerve-centres; while Dr. Murchison gives conclusive reasons for rejecting this view, and for supposing that the non-elimination of the products of tissue-change poisons the blood, and brings about a condition of the nervous system much akin to that caused by uræmia or acute atrophy of the liver. It is probable, then, that typhomania is due to some such state of blood-poisoning, and, at any rate, it is worth while to try, in such a very critical and difficult disease, the remedies which have been found most useful in the typhoid states of the continued fevers. Of these, digitalis has seemed to me more beneficial than any others my limited experience has enabled me to try; it might also be well to see whether belladonna was as great a specific as Dr. J. Harley's study of it would lead us to believe.

I fear I have more than fulfilled my promise that my remarks would be very unsystematic and fragmentary, but my purpose will be amply served if anything I have said should relieve any one else (as it does myself) from the feeling of helplessness which our specialty, above all others, produces.

A Visit to an Insane Colony. By P. Maury Deas, M.B. Lond., Medical Superintendent, Cheshire County Asylum, Macclesfield.

(Read at a Meeting of the East Cheshire Medical Association, Oct. 1st, 1875.)

In thinking over a subject on which to write a short paper for this meeting, it seemed to me that it would be better to select one connected with my own specialty, as more likely to possess elements of interest and novelty to the members, than if I chose one out of the ordinary domain of Medicine or Surgery, in which they have a much wider field of observation than I can have.

With that view, it occurred to me that some account, derived from personal observation, of a curious and unique

establishment for the care of the insane, which exists in a remote district of Belgium, might not be devoid of interest.

At the present day, there is perhaps no more pressing social problem than to find out the best means of dealing with the enormous and ever increasing numbers of our insane population; and we may derive useful hints, and have our ideas on the subject much modified, by studying a system of dealing with the insane which is totally at variance with those which, through long habit, prevail in this country.

A holiday run upon the Continent, in the summer of 1873, afforded me the opportunity, which I had long looked for, of paying a visit to the insane community or colony which has been in existence at Gheel for many centuries.

The leading principle of the system so long practised there is, that the patients, instead of being confined in a large asylum, under more or less unnatural conditions, are boarded out with the inhabitants of the district. They live in their houses, are, in fact, members of the family in every way, and are free to go out and in without any restraint. A great deal has been written about this colony, and very opposite opinions expressed, some maintaining that it was a sort of earthly paradise of the insane, where, under a rule of love and kindness, they enjoyed perfect freedom and the pleasures of family life; while others have denounced it as a sham, asserting that the liberty was more apparent than real, and was accompanied by great abuses—such as the extensive employment of mechanical restraint, and the exercise of tyrannical authority, if not positive cruelty. The existence of preconceived opinions and prejudices could alone account for such differences of opinion. In the account which follows, I shall simply state the results of my own observations, without any bias whatever.

The first question which suggests itself to any one who knows the instinctive aversion and prejudice with which, in all countries, the insane have been regarded, is how did this colony originate? how did such a system first come into operation? From time immemorial, the insane have been regarded as outcasts—to be shunned and avoided, or treated with gross cruelty and neglect. How does it come to pass that for centuries in this district the insane have been housed and cared for in the homes of the people? The answer is a striking instance of the power which tradition possesses among a simple and primitive people, and also of the force of hereditary instincts, and of early custom and example.

Nearly 1000 years ago, tradition says, an Irish princess, called Dymphne, was converted to Christianity, and, to escape her father's anger, fled to Gheel, whither, however, he pursued her, and where he beheaded her with his own hand. In time she was canonised as Saint Dymphne, and in some way her shrine acquired a reputation for curing the insane, who were consequently brought on a pilgrimage from all parts. Some, it may be, were cured by the priests' prayers, the intervention of the saint, or change of air; but many, it may be believed, remained unaltered.

Loth to believe their maladies hopeless, and strong in faith, cases were left behind, boarded at first in a small building near the church, afterwards in neighbouring cottages. Those who had charge of them would thus look on it as a religious duty to be kind and attentive to those who were under the special protection of their patron saint; and when we add to this the intimate knowledge of the peculiarities of the insane, which, in the course of years, would thus be acquired and handed down, we can understand the way in which the great essentials of the system grew up, viz., kindness and sympathy, with confidence and want of fear.

Begun in this accidental way, the colony, in course of centuries, became greatly expanded, and acquired a wide reputation. Of late years it has been taken in hand by Government, and placed under the control of a Commission or Board of Governors.

Gheel itself, which forms the centre of the colony, is a small country town, of about 2000 inhabitants, situated in a district called the Campine, in the province of Antwerp, from which town it is reached by train to Herrenthals, thence by a primitive, old-fashioned diligence, for about nine miles.

The town is situated in the midst of a moor, from which the cultivated land has been reclaimed; but in the outlying districts there is much waste, unproductive land. This is divided into small plots of two to six acres, owned by cotter farmers, living in scattered cottages of the poorest class, similar to what are found in some parts of Scotland and Ireland. The whole colony comprises about 30,000 acres, with a population of 11,000; and among this population are scattered about the large number of 1,300 insane, who are boarded out in about 800 houses.

In the centre of the town there is a small hospital or central asylum, erected a few years ago, containing about 50 beds. The medical director of the colony resides here; and

here all cases are received in the first instance, to be drafted off in a few days to some portion or other of the colony, at his discretion. Here, also, serious cases of illness may be sent, as well as cases which, from temporary excitement, may have become unsuitable to be at large. It should be added that only the milder forms of insanity are under treatment, as a rule, at Gheel; those decidedly dangerous to themselves or others not being sent there.

The keynote, as it were, of the system is struck in the names given to the patient and his guardian. The latter is termed "nourricier," a nourisher or foster-father; the former, "pensionnaire," or boarder. These terms are invariably and naturally used, and strictly express the relationship. No half-veiled aversion or dread finds expression in such terms as "lunatic," "madman," "keeper," "warder," so common, I am sorry to say, still in this country.

A register of "nourriciers" is kept, on which is inscribed all householders willing to receive "pensionnaires," and who can satisfy the direction as to their respectability. They must also be able to provide the accommodation prescribed, which is a room containing 500 cubic feet for each patient, with iron or wood bedstead, wool or hair mattress, straw palliasse, bedding, &c. This is for the poor who are paid for by their commune; but there are in the colony about 100 patients, paid for by their friends, who are boarded in a similar way in the families of well-to-do people; in some cases the accommodation being very superior, and the patients of a high class.

The colony is divided into four sections, and to each of these there is a physician and an inspector.

With one of the inspectors, or "garde de sections," I made a tour of a portion of the colony. He was a most intelligent and superior man, understanding his work thoroughly, and possessing a good knowledge of insanity generally. Yet this man only had 600 francs a year, just about half what we pay for ordinary attendants, who know little or nothing.

He had under his care 300 patients in 160 houses, all of whom he visited every week, having to go as far as four miles to visit some of them.

The first day, we confined ourselves to the town itself. Here the quieter of the patients are boarded; also epileptics and idiots, as well as most of the private patients. The town is a rambling, irregular place, composed mainly of small cot-

tages, white and clean looking, and most of them clean and fairly comfortable inside. We entered a large number of the houses, inspecting the accommodation, and conversing with the "pensionnaires" and their "nourriciers" where practicable, but many knew little French, and spoke only Flemish, or the peculiar Walloon dialect. There were mostly two pensionnaires in each house, seldom or never more, and in many cases only one.

The time of our visit was very favourable for observing the confidence placed in the patients. The great annual festival of the Kermesse was going on, and in many houses we found that the patients had been left in charge of the establishment, while the nourriciers were away at the *fête*. One man, a shoemaker, was thus left in charge. He was extremely voluble, and in a state of sub-acute mania. He showed us his bedroom, which was up a break-neck stair, which would undoubtedly not be up to the requirements of official inspection in this country, but had the advantage of being homely and what he was used to. It was very clean, and contained a good bed and ample clean bedding. When we went in he was in his shirt-sleeves, and working at his trade. Others whom we saw were engaged in various domestic offices. One woman showed us some lace made by herself, the proceeds of which would be her own property. It was beautifully fine and well made. But the favourite occupation of the women patients was nursing the children. Nothing was more interesting in the whole place than to watch the care and interest shown for the children; and, on the other hand, the affection and confidence which they exhibited towards the patients. In one or two instances I asked the mothers if they were not afraid. They did not seem to comprehend at first, then quite laughed at the idea, the pensionnaire herself even appearing to enjoy the joke. Watching this, it was easy to see how the system here perpetuates itself, and remains always successful. The children, from their earliest years, are brought up among the patients, are taught to look upon them as members of the family, and thus not only have no fear of or aversion from them, but grow up looking on them as their best friends. Constant familiarity with their ways and peculiarities takes away the temptation to idle curiosity, or to ridicule. Brought up in this atmosphere, they are thus admirably qualified in time to become "nourriciers" in their turn, and to hand down the art to their children. I was particularly struck with the naturalness of their manner to their

charges; no sign in it, or in their way of speaking, showed that they had charge or authority over them. Hence the obvious confidence and mutual sympathy. Hence also, to a great extent, the secret of their confidence being so seldom misplaced, or the liberty taken advantage of. There is, as it were, no temptation to do things which, being never forbidden, probably never occur to them. It is the old saying, that there must be a law before there can be a transgression.

What I have said may seem highly coloured, and no doubt there must be exceptions; but from many examples it was quite plain that it was exactly as I have stated; and that the confidence and the liberty were both great and undoubted.

We met and spoke with many walking alone in the streets; some displaying in their manner and gestures evidence of their malady; others presenting nothing noticeable, but all alike moving about at "their own sweet will," no one noticing them any more than other passers-by; indeed, not attracting a tenth part of the curiosity which the sight of an English lady and gentleman evidently aroused.

One man whom we thus met, intelligent looking, and a watchmaker by trade, had lived in England for some time, and spoke English a little. He did not present anything amiss at first, till he said he had lived near Brighton in the Palace of the Devil; that the English wanted to make him Emperor of France; that he was specially charged to arrange intermarriages among the English, Germans, and French; and that he was the best watchmaker in the world. He became very voluble and excited, as he went on. Another said he was anxious to go home; when asked where it was, replied, "au ciel." He had been eleven years at Brussels and four here, but he was going "home" very soon now. He added, that all the people in the world, including ourselves, would ultimately be at his disposal.

I mention these instances to show that those who were going about at large were not merely imbecile or demented, but suffering from active insanity. We visited one of the Pensions for high-class patients, with accommodation for three or four. There were all the appointments of a good modern house; large, handsome rooms, almost luxuriously furnished; a fine garden, &c. There was not a sign anywhere of anything special. The owner of the honse was a most superior, intelligent man, by business a china merchant. I had a good deal of conversation with him. He told us of a Russian prince who had been there. For nearly a year before he

came, he had been almost constantly restrained by the camisole, or in seclusion, and he was brought under the care of four attendants. Within a month he was living as one of the family; his own doctor came to see him, and was astounded to see him dining at the family table. Before long he became well enough to return home.

This is a striking example of the beneficial effects of the "free" system, as contrasted with the excessive use of mechanical restraint, still so much practised abroad. Even at Gheel mechanical restraint is freely used in the Central Asylum, and in spite of the striking evidence of the freedom which may be accorded to the insane, as shown in the colony, views of medical treatment quite at variance with this prevail in the asylum, as they do in others on the Continent, showing that there are bad traditions as well as good traditions, and that both are very powerful. In the asylum, containing only some 40 patients, I found four women and one man fastened in what are called "chaises de force;" strapped down in chairs of peculiar construction. Two of these had also their ankles strapped, and one was fastened by a belt round his waist. There were besides two in seclusion. The man was a case of general paralysis of two years' standing. He seemed very quiet. The women seemed more helpless than violent. There was no nurse to be seen near them, and one of the many evils of such restraint is that it relieves the nurses from the necessity for constant watchfulness. In the colony the "nourriciers" are not allowed to use restraint except by medical order; but it is used at times under this restriction. The chief mode is a leather band round the ankles, to prevent those who have a tendency to escape from going far. It allows of walking, but slowly—like a horse, when hobbled; I only saw one man in the course of my visit thus fastened.

We visited the church, which is a fine old building, dating back to the 12th century. We saw the cells which used to be occupied by those brought to be cured by exorcism, and the intervention of Saint Dymphne. This is still done some few times a year, and two of the cells are still used, and what is more, the old chains and gyves, by which their feet are bound together, and then fixed by a chain to a staple in the wall. They are then prayed over by a priest, who, in spite of all the precautions, is still perched up at a safe distance in a small gallery! They are received for nine days, then for nine more, if wished. It seems that at the end of this time they

usually find their way to the asylum considerably worse than when they came; but occasionally they do recover rather suddenly; then, "a miracle, a miracle" is the cry. My intelligent guide, who gave me these particulars, was evidently not one of the "devout," and not at all a believer in the efficacy of St. Dymphne.

The shrine, said to contain her relics, is of silver, and very beautiful. The altar piece is a fine piece of sculpture in white marble, representing full-size figures of the insane appealing to the Virgin, and having gilt manacles on their legs, showing how common the idea of restraint must have been when it could be seized upon by art to indicate the person intended to be represented.

The following day I went on a tour, still accompanied by my intelligent *garde de section*, through some of the more outlying portions of the colony. In these, as a rule, the more troublesome, noisy, and violent cases are boarded. They have the great advantage of plenty of space for exercise on the open moor, which everywhere encroaches on the cultivated patches round the cottages, and find healthy and useful occupation in assisting the nourricier to derive a scanty and hardly-earned subsistence from the poor soil, or in helping the wife with the cow, pigs, or in domestic work. The cottages are very poor; many of them built of clay and osiers, and thatched with heather. Not much can be said for their cleanliness, but they were homely, and what the patients had been used to. The room for the pensionnaire was always the best and most comfortable, provided with a good bed, &c., and clean. This may be partly, no doubt, due to the fact that the cottagers are very anxious to have boarders, as the sum, small as it is, which is paid for them, and the value of their labour, are a material assistance to them in the struggle for existence. Although the patients, as a rule, were of a lower and more troublesome class than those in the town, the same salient features were observed. The patients were treated as integral members of the family; they appeared to be well cared for; there was the same freedom to go out and in as they liked; there was no trace of any harshness or ill-treatment, and they seemed, as a rule, happy and contented. Many of the cases which I saw would be considered bad cases, even in an asylum. Several exhibited a good deal of excitement, but there was no restraint put upon them; they were free to come and go as they liked. Outside one cottage there were two women considerably

excited. They were walking about; one singing and dancing; the other gesticulating and shaking her fist, and brandishing a stick, but there was plenty of room; no one to notice her, and no one to fight with her. The nourricier and family in this case had gone to the Kermesse, and a *patient* from an adjoining cottage, who was convalescent, was in temporary charge of the establishment and the two patients. A number who were said to be at times much excited were employed in various ways; churning butter, peeling potatoes, attending to the cows, or to domestic matters. One man, a chronic melancholic, had just got up, and the woman of the house was dressing him. In another, a young woman was completing her toilette in her own room; and conversed affably and laughingly with us through the small window. Everywhere my guide seemed to be a favourite, and to be received as a friend. As we walked along he gave me much general information as to the working of the colony.

The payment made to the nourriciers is about 3s. per week; and for the more troublesome cases about sevenpence a week extra. Clothes are provided by the administration, and a list kept in a small book.

The dietary is usually as follows:—There are four meals a day. For breakfast coffee, with bread and butter. At noon soup, with potatoes, or other vegetables, and a little bacon. At four, buttermilk and cakes. At night coffee again. The bread is chiefly rye, and very black and coarse.

Enquiring as to accidents and escapes, I was informed that there had been three or four suicides in 18 years, that serious accidents were very rare, and that the attempts at escape were not frequent. The locality being remote, there is not much temptation; and the police of the neighbouring communes, as a rule, recognise them and bring them back at once. After making due allowance for the fact that the cases sent are selected to a certain extent, the freedom from serious accidents among such a large number of insane cannot but be regarded as remarkable. From my personal observation the selection of cases is by no means a very narrow one.

As to the number of recoveries, I could not get very definite information, but they do not seem to be very numerous. My guide estimated that there were only six in his section, containing 300 patients, who might be regarded as probably curable. On the whole the system seems better suited for chronic cases than for acute cases where there is

hope of cure. There is a monotony in the life—a want of the variety of interest and amusement which exists in a well-managed asylum; and above all, there is the want of immediate and constant watching of the cases, and of direction of the treatment by a medical man. This last seems the great blot on the Gheel system. The china merchant, whom I mentioned before, stated most strongly that the great evil in Gheel was the want of efficient medical supervision. It seems that the medical men in charge of the sections only visit their patients, as a rule, once in three months. But for the intelligence and judgment of the gardes de sections, who visit them every week, this evil would be more felt than it is; and the person before referred to, said indeed, in answer to a remark on this subject, that the inspector was, in fact, the doctor. Even for chronic cases, if they are at all of a superior class, and have much mind left, life in such a place must be dreary and monotonous. We had a striking instance of this in the case of a lady patient, whose acquaintance we made, and who spent some time with us. She had lived 10 years in England, spoke English perfectly, and in the intervals of attacks of periodic mania was to all appearance quite well. She was highly accomplished; and played and sang most beautifully. It was easy to gather from her conversation, and the wistful way in which she spoke, how dull her life was, and how cut off she felt herself from the world.

These considerations, however, cannot blind us to the great fact which faces us at Gheel, viz., that it is possible to have upwards of 1,000 insane persons living in a community as part of it, enjoying the advantages and freedom of family life; happy, contented, well-cared for, and yet under little or no restraint, controlled only by kindness and the mutual confidence which exists between them and their guardians. This is the great lesson which Gheel teaches, and which all in this country who have to do with the insane should lay well to heart. To found anything like a Gheel in this country would be utopian, impossible—such a system could only *grow up*, and that under most exceptional circumstances. But it is a great and important fact to know, and one which might be turned easily to practical advantage, that a vast number of the chronic insane might, under favourable circumstances, enjoy much greater freedom, and live a more natural, homely life than is possible for them in any close asylum. In a carefully arranged and supervised system of boarding out, is, I believe, a solution to be looked for ulti-

mately for that deadlock which at present only leads to the building of one huge asylum after another, with elaborate machinery and arrangements, well adapted for recent, curable cases, or for those with strongly marked insanity; but quite unnecessary for the majority of cases of chronic insanity. But before this can be done, public opinion needs a great deal of education. Many old prejudices must be done away with; a state of things must be brought about in which an insane person should not be, in a special sense, merely an object for idle curiosity and remark, but treated as one possessed of any other infirmity, such as blindness or deafness, would be, with pity and consideration; and, above all, with a manner showing no fear or aversion; treating them, in fact, as much as possible on an equal footing, as far as their faculties go. This may seem very utopian, and perhaps it is so; but I believe that a visit to Gheel would convince any unprejudiced mind that it is, at any rate, possible; as I think it would also show them how utterly mistaken and cruel is the mental attitude which the majority of people adopt in reference to the insane, not intentionally, but from habit and prejudice. Until, however, this attitude is very much altered, progress in the direction which I have indicated is quite impossible, and any attempt would probably end in failure. I have faith, however, myself, that a time will come when our present ordinary ideas as to the insane will become as obsolete and seem as strange as their treatment by chains and fetters, or the attempt to cure them by the exorcising of a priest and the intervention of St. Dymphne.

Notes on Lunacy in British Guiana. By JAMES S. DONALD, M. B., Edin. Resident Surgeon, Lunatic Asylum, Berbice.

Few countries, if any, afford better opportunities for the study of insanity, as exhibited among different races, than British Guiana. Here, gathered together in one asylum, are West Indians, Coolies* from India, Chinese, Portuguese, and Africans; and, although the types of insanity are very similar in all, yet there are some distinctive features, worthy, I think, of being noted. Many difficulties arise in investigating

* "Coolie" in this country is a term exclusively applied to labourers imported from the East Indies, and their descendants. Labourers from China are always spoken of as Chinese.

the subject, owing, principally, to an inability to converse personally with some of the patients, more especially with Chinese. Consequently, a refinement in classification is unattainable; the strongly-marked features of the case alone giving an index to the form of mental disorder.

To institute any comparison between this country and England in the proportion of insane relatively to the population is difficult, owing, mainly, to the fact that in many cases national peculiarity is mistaken for mental derangement, and also because of our ignorance of the condition of the inhabitants in districts not under mental observation. Taking, however, the population of England and Wales in 1871 as 22,704,108, and of British Guiana in the same year at 193,491, and comparing the number of patients in asylums of both countries, we find that, whereas in England and Wales there was one insane person in every 388 of population, in British Guiana there is only one in every 1200, or thereabouts. In the year mentioned the ratio of lunatics to population (1000) was 2·49, while in this colony it was only ·91. Among Creoles of the West Indies the ratio was ·41, Coolies ·82, Portuguese, principally from Madeira, 1·00, and Chinese 1·59. I am unable to give the ratio per 1000 of Africans, as I have no statistics of their population. These figures, although giving some idea of the comparative extent of insanity in England and this country, cannot be relied upon as strictly correct, owing to the difficulties I have mentioned.

About 25 per cent. of the inmates in this asylum are Creoles of the Colony and of Barbados, and are principally of black parentage. Among these mania prevails more than any other form of insanity, and in a large proportion of cases is complicated with delusions of a religious character. This may be accounted for from the fact that times of religious excitement are of frequent occurrence among the black population, and an increase in our inmates is no uncommon sequence to a so-called "revival" of religion. A strong religious sentiment (to use the expression in its widest significance) exists in the mind of the negro, and it is not, therefore, a matter of surprise that when reason is unseated the previous prominent feelings should sway the wanderings of the "mind diseased." In some cases religious melancholia follows the attacks of mania, the mind of the patient becoming depressed from gloomy ideas, as, *e.g.*, that his soul is eternally lost, thus rendering him one of the most miserable

of men. Very much akin to this religious melancholia in the black Creole is that of the African when the mind is haunted, and the imagination excited, by the terrors of the mysterious Obeah. The extreme depths of despondency into which the victim of the dread power of this malignant superstition is thrown, entirely subverts the normal condition of the mind, and drives, in some cases, the unhappy sufferer to attempt suicide. Some years back Obeahism or witchcraft was no uncommon practice, especially in Berbice, but of recent years it has happily decreased, and it is to be hoped that as education among the black population advances, it will become gradually extinct. There is a statute in the laws of British Guiana, by which it is enacted that "every person practising, or pretending to practice, Obeah or Witchcraft, shall be held guilty of a misdemeanour," and shall be punished accordingly. The law is now, however, practically a dead letter, owing to the difficulty in defining the meaning of the term "Obeah." A great barrier to the diagnosis of insanity among Africans exists in the fact that we have frequently to deal with a mind uneducated; and thus in many cases natural stupidity borders so closely on imbecility, dementia, and amentia, that it is difficult to say where a normal state ends and an abnormal one begins. The majority of Africans admitted suffer from senile dementia and general paralysis, and, consequently, anything but a hopeful prognosis can be recorded in these cases.

Over 50 per cent. of patients admitted into this asylum are Coolies, suffering principally from mania and dementia. The mania of the Coolie is generally characterised by great destructiveness and impulsiveness; consequently homicidal and suicidal propensities are of frequent occurrence among them. While, however, such cases are dangerous, they seldom last long in the acute stage, thus contrasting strongly with the form of acute mania met with in the black Creole. While the percentage of admissions of East Indian immigrants is greater than that of any other nationality represented, the number of recoveries is also relatively greater. I attribute this in a great measure to the improved dietary which they receive in asylums. On admission they are almost invariably very anæmic and half-starved, owing to the insufficient nourishment which they take prior to being admitted. Thus, when under a better diet the condition of the blood and nutrition of the brain improve and a corresponding mental amelioration frequently results. The disgusting practice of

dirt-eating is by no means uncommon among Indian immigrants. It generally exists among those suffering from dementia, but cases are met with among individuals not confined to lunatic asylums. Lime, clay, and burnt earth are often substituted for their proper diet. If the morbid appetite be not controlled, the patient soon sinks from exhaustion, anæmia, diarrhœa, and dropsy. Referring to this subject, Dr. Thomas Murray, jun., of Tacarigua, in a letter contained in Dr. Gavin Milroy's report on leprosy and yaws in the West Indies, remarks :—"There are two classes, I think, who eat dirt : 1st, those whose religion forbids them to eat meat (viz., parsons), and yet who crave for something more than rice ; and 2nd, lazy men who would rather starve than work. These latter generally acquire the habit in their own country."

It is difficult to break them of their filthy habit, and a strict watch is necessary to prevent them indulging in the practice.

Among the Chinese inmates I have been struck with the frequency of epilepsy and epileptic mania, and have been equally puzzled to account for it. It is more particularly noticeable in females, the attacks being in some cases periodic and generally very violent. It has been suggested that opium-eating might account for it, but were this the case it would be met with more commonly among Coolies, who are also addicted to the use of this drug. As a rule the characteristic stolidity and impassiveness of the Chinese is little altered during mental aberration. The cheerless, unhappy expression of countenance gives the patient the appearance of one suffering from profound melancholia, and totally indifferent to anything around him. The number of Chinese now in asylum is too small to warrant my giving any decided opinion as to what may be considered the more prominent features and nature of their mental disease. They are generally quiet docile patients, very amenable to treatment, and, except in the epileptic, violent symptoms are rare.

There is nothing particular to note in the insanity of the Portuguese. The majority of those admitted are old and feeble patients suffering from senile dementia and melancholia. Physically they are not robust, and very soon succumb to intercurrent diseases, especially diarrhœa and dysentery.

Of the bodily ailments which most frequently terminate fatally among the inmates of all classes may be mentioned phthisis, dysentery, and intermittent fever and its sequelæ.

With regard to the etiology of insanity in this colony, I cannot say that I find it in any way depending on, or modified by, the nature of the climate. One of the most fertile causes is intemperance. I have noticed this more particularly among Creoles and Portuguese, and in many cases I have been able to trace alcohol as the direct agent.

Among the lower classes rum is mostly used, and frequently in the form of "high wines," *i.e.*, rum 40 over proof. It can easily be understood that this in time seriously interferes with the bodily health, and, acting as a poison, eventually produces cerebral lesions.

The practice of opium smoking and eating is frequently met with among Coolies and Chinese here, but it is by no means so common as in the East. It is laid down by all writers on the subject as inducing in time insanity; but as I find it difficult to gather from the patients any previous history of opium-eating, I cannot venture any opinion on the subject. The history of an insane person is difficult to obtain here, as it is a rare thing to see any friends who can furnish information on the subject, and the particulars sent with the patient are generally very meagre. In malarious and tropical countries three causes have been especially assigned as often inducing cerebral derangement resulting in insanity, these being sun-stroke, leprosy, and intermittent fever. The first-mentioned cause, insolation, is not of frequent occurrence; and although well-marked cases do occasionally come under notice, I have not seen any resulting in insanity. With regard to leprosy, my experience is too limited to speak positively of its effects on the mental functions, for as yet only one case of true leprosy associated with insanity has come under my observation; and in this case the form of the disorder is intermittent mania, the person being during the intermissions very intelligent.

From the time of Sydenham intermittent fever has been attributed as a cause of insanity, and several cases have been recorded by Baillarger and Hoffman. In Sydenham's opinion lunacy thus induced is a mania peculiar to itself, and incurable. No doubt intermittent fever is closely connected with nervous disorders and, by producing anæmia, interferes with the circulation and due nutrition of the brain; but that agues are pre-eminently productive of insanity, I do not admit. It has been argued that, were intermittent fever a frequent precursor of insanity, in malarious countries the proportion of insane would be greater than in countries

free from marsh miasm. This, however, is scarcely a fair argument, as in non-malarious localities other fevers from which we do not suffer here, such as typhus, exist, and cause probably a larger number of admissions into lunatic asylums than intermittent fevers. It would be difficult to find a place better adapted for the production of intermittent fever than the situation of the General Hospital and Lunatic Asylum in Berbice; for, situated at the confluence of two rivers, about a mile to windward of the town of New Amsterdam, and unprotected by any forest or belt of trees (which, as Sir Thomas Watson states, preserves the inhabitants of the town in health), every facility is given for the free development and access to the patients of malaria, according to the generally recognised idea of chill of Drs. Oldham and Inman, and of the "certain electrical conditions of heat acting on moisture," which Surgeon-General Munro considers as the hostile element in the production of intermittent fevers, cholera, yellow-fever, and heat apoplexy. Yet although intermittent fever is of frequent occurrence among the patients, especially at spring and neap tides, and severe head symptoms frequently supervene, I have not been able to connect together the lunacy of any patient with this as a cause. Possibly it is because I have not had sufficient opportunity of observing quartan ague, which is uncommon here, and which, according to Sydenham, is peculiarly obnoxious in producing mania; but should I come across any cases, I will be particular in my observation of their subsequent history. One more remark on this subject I would make, namely, that by far the greater proportion of lunatics admitted into the asylum here are from the healthier localities; while it is a rare occurrence to receive one from the river districts, which, although in many cases having large populations, are, as a rule, the most unhealty, malarious, and fever-stricken of the colony.

Some Observations on General Paralysis. By Isaac Ashe, M.D., T.C.D., Medical Superintendent of the Londonderry District Asylum.

(*Read at the Annual Meeting of the Medico-Psychological Association, held at Dublin, August,* 1875.)

Although we have, for some time past, begun to emancipate ourselves from the idea that insanity is a disease of the mind, and admit, in theory at least, that it is strictly a disease of the body, as much so as typhus, or any other disease involving perturbed mental phenomena, yet we have scarcely hitherto begun to investigate the pathology of insanity from this point of view. Even yet we classify the forms of the disease by the mental manifestations it presents, and speak of mania, melancholia, dementia, &c., when our aim ought to be to differentiate the physical or chemico-vital somatic conditions; we describe the insanity of fear, of pride, of exaltation, &c., much as if we should classify ulcers as those of the hand, the arm, the leg, and the trunk, instead of attending to the more important characters of ulcers in general with their true specific differences. For, I venture to think, that Professor Ferrier's researches point strongly to the view that the differences in direction, so to speak, taken by the mental phenomena depend to a great extent upon the differences in the portion of brain-tissue principally affected. The investigation of the physical causation and conditions of insanity will doubtless be laborious and tedious work, but there can be no doubt that the results to be obtained will more than repay the labour which must be expended in the investigation.

It seems to me that in General Paralysis we have, as it were, a portal to such an investigation—a sort of basis of operations from which our future explorations of unknown territory may with advantage be commenced; in fact, that the key of the unknown region lies in a knowledge of this disease, its causes, pathology, and conditions.

As regards the causes of this disease, two are usually assigned, and have almost been accepted, namely—1st, Excessive use of alcoholic liquors; and 2ndly, Immoderate sexual indulgence.

But as regards the first of these assigned causes, I have to call attention to a very remarkable fact regarding the distribution and statistics of the disease which bears very strongly

on this point, and is perhaps very little known. It is this: that General Paralysis is scarcely to be found in Ireland, though so common in England and Scotland. The remarkable absence of the disease in the Irish asylums with which I am acquainted, as contrasted with those of Great Britain, has long since pressed itself on my mind; but I have recently endeavoured to procure as far as I could some exact statistics on this point. As an illustration of the vast differences existing between England and Ireland in this matter, I may direct your attention to one or two particular instances. Thus, in the Twenty-ninth Report of the English Commissioners in Lunacy, just published, at p. 207 we find the inmates of the West Riding Asylum put down as numbering 1404; and on the next page, the deaths from General Paralysis during the year are—males, 26; females, 9—total 35, which will probably give 70, or 5 per cent., as the number of cases at any given date. Per contra, my friend Dr. Merrick, having charge of the Belfast Asylum, containing 400 patients, writes to me—"We have no case of General Paralysis in the Belfast Asylum at present." Dr. McCabe, of the Central Criminal Asylum, with 163 patients, writes—"I regret that there are no materials here; I have not had a case of General Paralysis since I took charge, three years ago." Dr. Atkins, the Assistant Physician of Cork, with 700 inmates, writes—"One spurious case at present in the asylum." In my own asylum at Londonderry, with 250 inmates, I have at present only one case; but I was fortunate enough to have another well-marked case some time ago, and I have also met the disease in private practice.

I cannot but think that such a disproportion in the frequency of the disease in the two countries must be held at once and entirely to negative the theory that its development is due to excess in the use of ardent spirits; indeed, I might add that it equally negatives the view that it is due to venereal excesses either; for, certainly, neither in the one direction nor in the other can it be asserted that the Irish peasant is more abstemious than his English neighbour. And, moreover, as regards the use of ardent spirits, any one of us in Ireland could at once count up 10 per cent. of our asylum population whose insanity has been caused by the abuse of distilled liquors; but the disease does not take the form of General Paralysis.

But it seems to me that there is a form of alcoholic indulgence in which the Englishman and Scotchman markedly

distance the Irishman, and this is the consumption of malt liquors, of which the Irishman uses but very little, but the Englishman and Scotchman a great deal, particularly those whose occupations compel them to undergo severe and continuous bodily labour, such as the colliers and ironworkers; and it is, I believe, the experience of those who have seen most of General Paralysis that it is especially among these hardworking operatives that this disease is to be found. Whether such a result should be regarded as due to the use of pure and unadulterated malt liquors, or is rather to be considered as the effect of some adulteration thereof, is an open question. I should be strongly inclined to think that the latter is more likely to be the case; and of the various adulterants, I should think that Cocculus Indicus is the one that should most probably be credited with this dire result, since observation has shown its power of producing paralysis when administered in too large quantity. It seems to affect both the nervous and muscular systems. Pereira says that it causes staggering, trembling, tetanic convulsions, and insensibility, and that it appears to act on the voluntary muscles. I need not remind you how frequently convulsions, though rather of an epileptoid character, are found in the disease under consideration. Pereira states that it seems to be frequently added to malt liquors, and refers to a book containing trade directions for so doing.

I think the remarkable absence of the disease in Ireland is quite sufficient to prove further, that even immoderate sexual indulgence is not a *vera causa* of the disease. Were it so, we should undoubtedly have our share of it here. But the presence of strong sexual proclivity during the course of the disease is undoubted, and I have myself observed it in every instance. If, then, statistics forbid us to regard it as a cause, it is clear that we are bound to regard it as a consequence of the disease; and this is a matter of importance to be borne in mind in our investigation of the physiological conditions and causation of the disease, a matter to be distinctly separated from the toxic causation already referred to.

I have recently sent a circular containing queries regarding the statistics and distribution of General Paralysis to nearly every physician superintendent of an asylum in the three kingdoms, whether private or public, asking for information regarding the disease as found at present in his asylum. I had hoped by means of the answers to these queries to be able to draw contrasts based upon large averages

between—1. The inhabitants of each of the three kingdoms as such. 2. Between the Celtic population of these islands and the Saxon. 3. Between the upper classes and the lower. 4. Between the town populations and the country. 5. Between the artisan and operative classes, miners, ironworkers, &c., and the purely agricultural classes. The value of such an analysis in investigating the causes of General Paralysis will, I think, be obvious. I regret to say, however, that only about 25 out of 200 of these circulars have been returned to me. I am thus only able to give you statistics based upon illustrative cases rather than on a complete average. I have, however, to thank several gentlemen for their kind assistance, and particularly those who were not deterred from replying to any queries by the fact that they had no information to give me, since this was the very point that I wished to elicit with regard to their asylums, namely, that General Paralysis was almost unknown therein. The returns which I have actually obtained shew that Ireland is almost entirely free from this disease, whether in its public or private asylums; while in the private asylums of England it is as rife as in the public. Thus, one gentleman, a high authority on the disease, writes to me that in his private asylum eight cases out of the last fifty admitted have been cases of General Paralysis. Another gentleman returns me three out of fifty-five; another one out of fifteen. I am sorry that I have no returns from the Scotch private asylums, but we have here sufficient proof that social position has nothing to say to it. Again, its absence in the large town of Belfast, numbering 200,000 inhabitants, and by far the most industrial town in Ireland, proves that town life as such is not a cause, not even when accompanied by excessive use of spirits, for which Belfast is notorious. Again, its absence in the country district belonging to the Belfast Asylum, namely, the County of Antrim, proves that it does not depend on any difference between the Saxon and the Celtic race; for Antrim is as purely Saxon as Lanarkshire, and much more so than Cornwall or Glamorganshire, both of which are indeed Celtic counties of Great Britain, and exhibit rather a proclivity towards the disease. The non-manufacturing districts of Scotland are pretty free from the disease, if we may judge from the return of the Inverness Asylum, where Dr. Aitken gives one doubtful case out of an asylum population of 337, and the counties of Argyll and Bute, which give us three out of 300. Perth, again, gives two out of 232. I have no reason to believe that these

districts of Scotland are specially abstemious as regards the use of whiskey, which seems to be pretty freely used everywhere throughout Scotland. In Cambridgeshire, again, a rural population, there are but three cases out of 275. We may compare this with the North Riding, where out of 230 males we have fifteen cases; or Lincoln, where we have four out of thirty.

Altogether, therefore, these statistics seem to point out that as regards the lower classes the disease is principally developed among the manufacturing and operative classes, particularly among those who undergo severe bodily labour, and that the agricultural populations are comparatively exempt; but though I think that this points very distinctly to the use of malt liquors rather than to that of spirits as a cause, yet there seems to be still a residuum of unexplained causation behind, which I shall endeavour to reach from other considerations farther on.

I have referred above to the presence of strong sexual proclivity during the progress of the disease—a fact which everyone has probably observed in general paresis, though it would seem to be absent in locomotor ataxy, according to some observations with which Dr. W. H. O. Sankey has favoured me. I think we are fairly entitled from the above statistics to regard this as a consequence rather than as a cause of the disease. Another well-known consequence is the marked tendency to fatty degeneration of all the tissues. Several of my correspondents—in fact, I think all who seem to have been in the habit of making post-mortem examinations—bear testimony to this. In a case of which I recently made a post-mortem, and of which I am able to shew you some sections, microscopical examination shewed distinct evidence of this everywhere.

The post-mortem was made eighteen hours after death. There was no rigor mortis, probably, in part at least, owing to the amount of destruction of muscular tissue that had taken place; a layer of fat an inch and a-half thick existed over the whole chest and abdomen; the liver was a mass of oil globules; the muscular fibrillæ of the gastrocnemius pale and fatty; the heart similarly affected; in the bony structure of the ribs the Haversian canals seemed almost obliterated by a mass of degenerate deposit containing oil. There were gangrenous spots on the toes and heels; these had appeared a couple of days before death. The brain was in a very soft and almost creamy or diffluent condition.

This is, of course, no new observation with regard to the fatty degeneration of the tissues in cases of general paresis. Thus Dr. E. L. Ormerod, in a paper published in the "Journal of Mental Science" for January, 1871, writes on his examination of the bones of a patient who died of this disease under Dr. Williams' care :—"The bones were dark, singularly wet and greasy, and, considering the short time that had elapsed since death, unusually advanced in decomposition. On any pressure of the ribs dark blood oozed from the comparatively large vessels on their surface. A section of the right thickness to display the structure of a healthy bone shewed nothing at all, the field was so clouded. By one means or other, at last, the oil was removed. Then . . . there were minute oil globules floating all about the field. The process was essentially one of absorption of the internal structures of the bone; the osseous tissue being replaced by an excessive deposit of the fatty matter normally existing in its interior. Besides, a change seemed to have crept over the whole bone, shewing itself in the loosening of the mutual connections of the laminæ, and in an obscure disintegration of the osseous structure itself. And this was accompanied by a general infiltration of oily matter into the substance which had intruded itself within the Haversian canals."

You are all familiar with the alternations of excitement and depression in this disease, and with the epileptoid convulsions so often present. In seeking, therefore, the pathological cause or condition of general paresis, we have the following indications of causation :—

1. Fatty degeneration of all the tissues, the voluntary and involuntary muscles, the bones, glands, and brain alike giving evidence of this condition.
2. A considerable removal of the earthy constituents of the bones, to which, along with the above-mentioned fatty degeneration, the great tendency to fracture of the bones in this disease is due.
3. Considerable increase of sexual proclivity.
4. Epileptoid convulsions.
5. Alternations of excitement and depression.

Now, I suppose, there are few persons accustomed to the investigation of the inductive sciences who would be disposed to deny that if there be any toxic agent whose presence in the system is known to produce these effects, the presence

of that agent may, with the utmost probability, be set down as the immediate cause and pathological antecedent of general paresis. Now it appears to me that in the above summary we have an exact picture of the effects of an excess of phosphorus in the system.

Thus, Pereira mentions its tendency to cause gangrene and convulsive affections. Its aphrodisiac properties are well known, and also its effect in causing temporary stimulation with subsequent depression of the entire nervous system. The well-known caries of the jaw which is found in the workers in phosphorus very well illustrates its power of removing the earthy constituents of bone; it probably finds access, as Pereira suggests, to the jaw during life through carious teeth; to the bones in general paralysis it would, of course, have universal access if diffused through the blood.

Cases of poisoning by phosphorus in a diffused form are very rare; in general it is taken in a concentrated form, and causes death by its irritant properties before its general effects have had time to develope themselves; but I believe that experiments on animals have proved that when its administration is so managed as not to kill rapidly, but after the course of a few days, universal fatty degeneration of the tissues, both muscular and glandular, is found.

A remarkable illustrative case occurred about three years ago in the practice of M. le Prof. Crocq of Brussels, and was published by him in the "Presse Medicale Belge." I shall give some extracts from a translation of this paper which appeared in the "Medical Press and Circular" for May 8th, 1872. The case was that of a girl, æt. 23, who stated that she had drunk the phosphorus of an entire box of matches diluted in an infusion of coffee; the fatty degeneration of muscles, heart, and liver was well marked. M. Crocq says—"The liver was of a pale yellow, well marked on the exterior as on the interior; the kidneys were yellowish, slightly red; the heart's muscular tissue was marbled of a yellowish tint; the right heart was evidently fatty; the diaphragm presented a yellowish colouration. I examined with the microscope the tissue of the liver and the heart, in order to know if they were really fatty; the heart presented a great quantity of fatty granulations in the muscular canaliculi themselves—this is fatty degeneration of the second degree; the liver cells were very much altered, going plainly to destruction—this, again, contained at the same time a great quantity of fat; in the peripheral muscles was also a certain degree of fatty

degeneration, but much less advanced than in the tissue of the heart."

As regards the condition in which the phosphorus in this case existed in the system, M. Crocq says—"I believe it passes into the circulation in the state of phosphorus; first, because of the neutral reaction of the liver tissue, and the alkalinity of the liquids contained in the pleura and the meninges of the brain; secondly, because of the slight effect of lime water in its treatment. This poison," he says, "had not determined any lesion before its absorption which could cause death. These two considerations," he continues, "make me consider that phosphorus thus absorbed is not transformed into phosphoric acid." As a parallel to this, in general paralysis, we have Dr. Merson's analyses of several cases, in the West Riding Reports of 1874, who finds that phosphoric acid is decidedly diminished in quantity in the urine of the insane.

The brain in M. Crocq's case is reported as slightly injected; similarly it is found somewhat congested and vascular in cases of general paralysis. I was not able to investigate this point in the case of which I have shewn sections of the other organs, but may refer to Dr. Franz Meschede's paper in the "Quarterly Journal of Mental Science," No. 59, who finds the brain congested, vascular, and even violet in colour, with fatty degeneration of the nerve cells.

M. Crocq considers that poisoning by phosphorus induces fatty degeneration by means of de-oxidation of the tissues; in fact, he says, "if the albuminous substances of the economy suffer, by whatever cause, an arrest in their process of oxidation, or a deoxidation, they will be transformed into fat and not into fibrin." Without offering an opinion on this point, I may, perhaps, suggest that the actual deposit of fat, which has been well marked in all my own cases, may possibly be due to the fact that the muscular tissue, in consequence of its structural disorganisation and degeneration, is no longer able to discharge its function of a furnace—an apparatus for combustion of the hydrocarbons of the body in the development of muscular force—a function of muscle which is, I believe, tolerably well recognised in these days—and hence the unburnt fat is simply deposited as such on the surface of the body. This is, of course, to be distinguished from the tissue degeneration spoken of above. The temperature is reported as somewhat higher than normal in cases of

poisoning by phosphorus, and the same thing is also observed in general paralysis. In the case I have referred to of my own it was 100° to 101°; and this is a marked difference between this disease and the more usual forms of insanity, in which the temperature is very seldom more than normal, sometimes much less—indeed, the lowest temperatures on record are probably those given by Lowenhardt (*vide* "Journal of Mental Science," January, 1870), who has recorded 74·75° F. in an insane patient.

Quite in accordance with this view of the pathological causation of general paresis is the well-known fact that its victims—in the better classes, at least—are generally men of more than average mental endowments; that is to say, according to the views generally adopted, men of more highly phosphorised brains than usual. It is found, I believe, usually in men who have spent a life of active brain exertion in a narrow and limited direction, men of intense application rather than wide culture and numerous interests; and among such persons it is found after their withdrawal and retirement from the interests that have perhaps too completely engrossed them. The merchant retired from business is, perhaps, the type of this class; and the explanation of the phenomenon is, to my mind, of the following nature, namely, that during an active life of mental energy the phosphorus of the brain is oxidised, or burnt off into phosphoric acid, by volitional thought-processes; but that on retirement from business, when the intellect, not having a wide cultivation or broad range of interests, has but little to engage itself with, the phosphorus is discharged into the circulation in an unoxidised condition, and general paralysis is the result. It may be asked how do we account for its non-appearance in the urine in the shape of excessive phosphates? I reply that probably it passes off in the shape of hypophosphorous acid gas from the lungs, which is the method by which phosphorus when taken internally appears to be got rid of. The occurrence of the disease among persons of this class is, I believe, a common observation. Thus Griesinger says it is most frequent among the educated classes, and repeats that it is very frequent among mentally excitable persons, such as poets, musicians, and learned men.

I think we have got a hint as to that residuum of unexplained causation which I referred to above as being indicated by the difference of frequency of the disease in England and in Ireland. As a rule, England feeds on a more highly

phosphorised diet than Ireland. Where England consumes cereals, a phosphorised diet, Ireland consumes the potato, a non-phosphorised. Hence the sum total of the causation would stand as the product of a predisposing cause and a predisposed nervous system, in both of which elements of causation—if they are what I have here propounded—Ireland has the advantage of England. And I confess I am not able to discover, either by statistics or reflection, any other elements of causation in which the two countries differ.

CLINICAL NOTES AND CASES.

The Treatment of Hæmatoma Auris. By George J. Hearder, M.D., Medical Superintendent of Joint Counties Asylum, Carmarthen.

The "Insane Ear" has recently had a large share of attention accorded to it by various writers, who at least agree in this that they abstain from recommending any procedure whereby we may hope to check the disease, or prevent the withering and shrivelling which generally remain as a permanent local record of grave cerebral disturbance.

Five of the cases here recorded occurred in males; one, in a female who had both ears affected. In each case the tumour involved the left ear; and the right auricle became diseased in the woman after the left othæmatoma had terminated. The form of mental disease was:—

In 3 cases—Melancholia.
In 1 case—Mania chronic.
In 1 case—General paralysis.
In 1 case—Dementia.

In two instances the development of the tumour was probably assisted, or perhaps caused, by local injury.

1.—S. D., female, aged 33. Congenitally weak. For 12 months restless, violent, melancholic and suicidal. On the 27th August, 1874, a hæmatoma auris of the left side was observed; it increased steadily, became very tense and painful, and was evacuated by free incision eleven days after it was first noticed. Result—ear shrivelled, thickened, and its normal markings obliterated. On the 1st October, a hæmatoma on the right side was progressing rapidly, the effusion filling up the concha and fossa of antihelix. The inner surface of the pinna was painted over with a few drops of the acetum cantharidis.

The swelling was immediately checked, and by the 6th was subsiding markedly. Result—the auricle perfectly preserves its form, and appears unaltered from its healthy state; only by touch it is evident that the concha is permanently thickened to a small extent.

2.—D. J., male, aged 53. Mania chronic. Always merry and mischievous. On the 3rd October, 1874, an othæmatoma of the left side was noticed. The parts affected were the concha, the antihelix, and its fossa; the tumour was half an inch thick, and steadily growing. The blistering fluid was applied to the inner surface of the pinna. Result—the markings of the ear are well preserved without any shrinking; but with thickening and increased rigidity of the parts involved.

3.—D. S., male, aged 25. General paralytic, very restless and excitable. On the 10th October, 1874, an othæmatoma of the left side filled the concha and the fossæ of the helix and antihelix, the ear being quite half an inch in thickness. Acetum cantharidis was applied to its inner surface. Result—within three weeks, absorption of the fluid had taken place; the outline of ear and its markings were preserved; there was slight permanent thickening, noticeable only to the touch, and perfect opacity when placed between the eye and the light. The propriety of blistering this case was discussed and doubted, owing to the tendency to sloughing in general paralysis, and the local gangrenes the patient had already developed. The blister, however, acted effectually on the cuticle, without producing any unfavourable complication. The patient died on the 28th November, 1874.

4.—J. P., male, aged 56. Melancholic, acutely depressed, and incessantly and loudly bemoaning his lost condition; suffering also from cardiac and arterial disease. On the 6th November, 1874, he stated that he stumbled and fell, while getting out of bed during the night, and bruised his left ear. Two days later the ear was still discolored, and there was then evidently a layer of fluid within it, and a hæmatoma forming. The inner surface of the ear was blistered, as in the previous cases. Result—recovery, excepting slight thickening still observable on examination. The auricle preserves its size and shape.

5.—T. J., male, aged 25. Demented and scrofulous. On the 5th March, 1875, a left hæmatoma was forming, affecting the antihelix, its fossa, and helix. The swelling was about three-eighths of an inch in thickness. The inner surface of the pinna was blistered. On the 19th the fluid was not absorbed, though the morbid action was checked; and the blister was repeated. Result—size and markings of the ear well preserved; the parts which had been affected remaining slightly thickened. The hæmatoma in this case might have had a traumatic origin, as the patient was in the habit of beating his face with his fists.

6.—D. L., male, aged 54. Melancholic, quiet, intensely pre-

occupied; has abstained from food; suffers from cardiac disease. On the 1st February, 1876, a hæmatoma was noticed, affecting the upper portion of the left auricle. On the following day the tumour was much larger, involving the entire upper half of the pinna. The blistering fluid was applied to the inner surface of the diseased part. All morbid action was at once checked, and by the 16th the effused fluid had been ab sorbed, and, save for a slight thickening of the upper portion of the helix, no malformation remained. This patient has been able to leave his bed for only a few hours daily for several months past; he reposes invariably on his right side; he is under most careful supervision, and there is no suspicion of the ear having been in any way injured.

We have had records of six consecutive cases of othæmatoma similarly treated. In each the diseased action was arrested on the application of a blistering fluid to the inner surface of the pinna. In all, we can trace the results of the morbid agency in permanent thickening of those parts which had been subject to it; but there is none of the shrivelling and obtrusive distortion which ensues when the affection has run its course uncontrolled, as it did in the left ear of the first case.

Cases with Mental Symptoms following the Administration of Chloral Hydrate. By G. Hunter Mackenzie, M.B. Edin., Resident Medical Officer, District Infirmary, Ashton-under-Lyne.

Case I.—Mrs. A., æt. 55, married. Admitted into the Infirmary 14th April, 1875, suffering from aortic valvular disease, with sequelæ. Ordered iron, digitalis, and gin, generous diet, and an unstinted supply of fresh milk. On account of the sleeplessness and restlessness, on the 30th April, there was prescribed for her 15 grs. of choral hydrate, to be taken at bedtime. A week afterwards this was doubled. About the middle of May she was observed to be getting decidedly "strange;" the mental aberration gradually increased, and towards the end of the month culminated in subacute mania, with hallucinations and illusions of sight. No improvement took place in the physical symptoms.

Case II.—Mrs. B., married, æt. 25. Admitted 7th July, 1875, suffering from mitral valvular disease, chronic articular and muscular rheumatism, and sciatica. Treated by alkalies and a non-nitrogenous diet. Opium by the stomach and mouth being badly borne, on the evening of the 20th July she was ordered 20 grs. of chloral hydrate. This, she stated, made her feel "drunk." Two nights subsequently the dose was increased to 30 grs. with the following results:—The medicine was given at 9 p.m., and at 10.15 p.m. she was seen by re-

porter in general convulsions—the spasms being especially prevalent in arms and face. On recovering from this attack, which she commenced to do almost immediately, she complained of a choking sensation in throat. This quantity of the medicine was not again given, but 20 grain doses subsequently made her again feel "drunk." Patient affirmed she had never previously had convulsions.

Case III.—Mrs. C., widow, æt. 60. Admitted 8th September, 1875; suffering from violent choreic movements affecting whole system, particularly the face. Very emotional, and stupid, but tractable, on admission. Satisfactory cardiac auscultation could not be performed. Ordered bromide of potassium and chloral hydrate, 20 grs. each, thrice daily, and once during the night, if restless, which she frequently was. On the 29th of the same month she became violent and outrageous—shouting, getting out of bed, and otherwise conducting herself in an insane manner, so as to require mechanical restraint. These symptoms continued unabated until her removal on the 1st October. The motor phenomena had almost entirely subsided prior to the mental outbreak.

Case IV.—D. E., male, æt. 53. Admitted 6th October, 1875; suffering from capillary bronchitis. Treated by alcoholic and diffusible stimulants, and on the same evening was ordered 40 grains chloral hydrate, he having had no sleep to speak of for several nights. His behaviour under chloral can be best shewn by the following extracts from the records of the case:—

Oct. 9th—12th.—Has been restless at night, getting out of bed, and wandering about ward.

Oct. 13th, 14th.—No draught; very quiet at night.

Oct. 15th.—40 grs. chloral hydrate produced sleep with talkativeness.

Oct. 16th, 17th.—No chloral. Passed quiet nights.

Oct. 18th.—Had draught to-night; got out of bed, and went wandering about ward, talking to himself, &c.

Oct. 19th, 20th.—No draught; very quiet, and slept well.

Remarks.—The most interesting case was No. II. I had previously seen chloroform administered by inhalation with benefit in hysterical convulsions; and if the hydrate of chloral acts, as some affirm, by being converted into chloroform in the system, it seems remarkable that its exhibition in this case should have been so directly followed by the muscular and other manifestations of hysteria. In Case III. the only other points worthy of notice are the age of the choreic patient, and the coincident occurrences of the supervention of the mental, and almost complete suppression of the motor, symptoms. In Case IV. the relation between the chloral and nervous symptoms as cause and effect was very evident.

All the patients were of a well-marked rheumatic diathesis and nervous temperament. Two of them suffered from undoubted organic cardiac disease; in the third there was a strong suspicion of the same; and in the fourth the organ was weak, with most probably a dilated right side.

Suffocation by Food—Tracheotomy—Recovery. By EDMUND BANCKS WHITCOMBE, M.R.C.S., Assistant Medical Officer, Borough Lunatic Asylum, Birmingham.

F. J., an epileptic, 26 years of age, was reported by his attendant, on December 2nd, 1875, to have got a piece of crust in his throat while eating his dinner. He takes food ravenously, is in the habit of snatching it from other patients, and cramming it into his mouth, and on several occasions I have had to use a probang to remove food from the æsophagus. I went immediately, and found him lying on his back, on the floor, to all appearance dead; his face was cadaverous, lips livid, the lower jaw dropped; he was pulseless, and completely insensible; the mouth was surrounded with masticated food, there was no attempt at inspiration.

Having no other instrument at hand, with an ordinary penknife I made an incision into the trachea, half an inch below the cricoid cartilage, large enough to admit the little finger; and then, with my left hand, removed two large pieces of meat which were impacted in the larynx. Artificial respiration (Silvester's method) was immediately resorted to, and in a few seconds a faint gasp was the only indication of life.

As there was slight bleeding from the wound, and no satisfactory result from the foregoing proceedings, I put in a tracheotomy tube, continuing the artificial respiration, and in about twenty-five minutes respiration was fairly re-established, one pulse was just perceptible at the wrist, and the patient was able to drink a little brandy and water. The tube was now removed, the patient placed on his side in bed, and iced water applications were made to the wound. In the evening he had completely rallied, the edges of the wound were drawn together by strips of plaster, and he took milk freely.

On the 4th he was allowed to get up, the wound had nearly healed, he was bright and cheerful, and apparently unaffected by the operation.

He is now (December 31st) in his usual state of health, and it is noteworthy that the record of his fits shews an unusual diminution during the present month.

Remarks.—Cases of suffocation by food are not so uncommon, perhaps, as to justify special notice of a single one; but the great aim of the medical profession being to save life, and as cases of recovery after suffocation are rare, I have thought

this may be of much practical value, especially to those having care of the insane. The ravenous propensities of many of the insane, and the liability of epileptics to attacks of their malady during meals, render this class of patients peculiarly liable to suffocation by food; and such cases will occur in spite of the precautions taken in asylums, such as the careful cutting up or mincing of meat, &c., and the feeding of patients by attendants or nurses. When such a case does happen, it is obvious that every effort should be made to resuscitate the patient, of course within a reasonable time. The usual appearances of death (suspended respiration, imperceptibility of the heart's action, and the cadaveric hue) must not be taken as conclusive that death has actually taken place, nor must time be lost in endeavouring to find out that such is not the case; but means must be taken promptly to admit air into the lungs. This can only be accomplished in two ways, viz., by removing the obstruction by the fingers or forceps, or, by admitting air through an artificial opening, by tracheotomy or laryngotomy.

The latter I believe to be the safer and most efficient mode of procedure. When a mass of food is drawn into the larynx during an inspiration, a spasm of that organ holds it firmly and tightly, preventing the expulsive efforts of the lungs from ejecting it, and rendering removal by the fingers or forceps difficult and prolonged; but once let in more air by an opening in the larynx or trachea, the spasm ceases, and the removal is easy and complete. Immediately this is done artificial respiration should be resorted to, and continued uninterruptedly until respiration is restored, or until the case is proved hopeless. It is difficult to determine how long this should be kept up, with any chance of success, but in the foregoing case at least fifteen minutes elapsed before any good sign was visible.

Dr. Richardson, in an address before the Midland Medical Society, in November last, on "The Treatment of the Dying," mentioned a case of choking in which animation was suspended for a much longer period, and which was attended with such success that the patient revived, although only for a short time. It must not be forgotten that fainting may occur, and thus enable the patient to endure for a longer time the deprivation of air.

In my case I found much benefit from the tracheotomy tube, which I retained until respiration was re-established, and which had the effect, also, of checking the hæmorrhage

which took place. After its removal the bleeding returned, and I was fearful lest this should prove fatal by trickling into the trachea; however, by placing the patient on his side—a suggestion I am indebted for to my colleague Mr. Green—the blood flowed externally.

Suffocation by liquid food is fortunately of rarer occurrence than by solid, though, perhaps, not so immediately fatal. In such cases, however, I should now be disposed to open the trachea, and endeavour to remove the fluid by means of a syringe, as, I believe, by such a procedure life may occasionally be saved.

I have been asked why I did not treat this case on the principle enunciated by Dr. Marshall Hall for the relief of the epilepsy. My only reason for not attempting this experiment was that the case did not appear a fair one for trial, as the patient is hopelessly imbecile, and of such filthy habits that, had an artificial opening remained in his trachea, he would have been likely to suffocate himself through it.

Report of a Case of Acute Insanity ending fatally in eleven days, supposed to be due to Syphilis, and of the morbid appearances found. By CEDRIC HURFORD, B.A., M.D., Resident Medical Superintendent, Moorcroft House Asylum, Hillingdon, Middlesex.

In the "Journal of Mental Science," July 1st, 1875, is recorded an interesting case of acute insanity ending fatally in a week, by Dr. Ringrose Atkins, of Cork. The similarity of the case to mine has induced me to place the following before the profession, trusting it too may prove of some interest:—

W. M., aged 21, was admitted August 21st, 1874. Tall, dark complexion, thin, but body fairly nourished; is said to have always been weak-minded; fond of pleasure and extravagant habits, which he indulged in freely. Maternal aunt is said to have died insane. Had no employment, the Stock Exchange being his chief resort. Contracted syphilis about 12 months ago, for which he was treated by a medical man; latterly, however, he took large doses of iodide of potassium on his own responsibility. About two months ago he became very eccentric in manner, would sit gazing fixedly for some time without speaking, but making a peculiar grunting noise. About a month ago he was placed in charge of a medical man, but his manner continued strange and peculiar, finally culminating in an attack of mania, with refusal of food, within two days of his admis-

sion. On admission he was very absent in manner, and lethargic. Was with difficulty roused to answer any question, but would repeat the question put to him. Pulse 100; weak; tongue white and furred; skin moist. No indication of syphilis, with the exception of a copious rash on the back and chest only, and this I considered acne. Heart sounds normal; respiratory system healthy. Being late in the evening when admitted, was ordered 30 grs. of chloral, and some nourishment. These he took.

22nd.—Slept about three hours, after which he became very restless, jumped out of bed, made for the door, knocked his head violently, ram-fashion, and when restrained, threw himself violently on the floor, and rolled round and round. He was not violent to those about him, but, if unrestrained, endeavoured to injure himself. In his violent struggles he was severely bruised about the joints and prominent parts of the hips and sacrum. Refused his food, but after a great deal of persuasion he took some. At times he would stand in the following position:—Head thrown forward, arms drawn up and thrown back, whole body rigid, eyes staring, teeth clenched, and making a peculiar noise by drawing the air forcibly through them; he would stand thus for some time, and then suddenly try and rush away from his attendants.

23rd.—Passed a very bad night, being very restless and violent, knocking himself about the room. Pulse 108, weak. Refuses his food, and obliged to feed him with the stomach tube. This I found great difficulty in doing.

24th.—Passed a quieter night. Still refuses his food, and I am obliged to use the tube. Pulse weak and rapid. The joints are looking slightly inflamed.

25th.—Had another restless night; occasionally dosed for a short time; is perfectly conscious of all that is said or done. When asked to take his food refuses by shaking his head and clenching his teeth. If fed by the spoon, after the mouth has been opened with the gag, he spits out whatever he gets, so that the tube has to be resorted to. Can't be got to stay in bed, and even when on the floor on a mattress, endeavours to roll off it. Bowels act regularly; passes plenty of urine; pulse weak and rapid; bruises about the body becoming inflamed, especially those situated over the joints.

26th.—No change; continues restless, and refuses his food, and I again used the tube. Towards evening he became very much quieter, and took his food.

27th.—Spoke to-day for the first time since the 22nd. Asked whether he would get well; where he was; says he remembered his being violent and obstinate, and having to be fed with the tube. Now regrets it, and says that he will do anything he is asked. Pulse very weak and rapid; joints very much inflamed; ordered poultices.

28th.—Had a restless night; complains of thirst; pulse 120; joints looking very much inflamed, especially the left elbow. In the evening the pulse was 132, and temp. 101°.

29th.—Slept a little during the night; had a very severe attack of diarrhœa; pulse 142, very weak; temp. 102°; tongue dry and furred; left elbow joint very much inflamed; œdema extending down to the wrist. Evening pulse, 142; temp. 102°; respiration, 36.

30th.—Patient much worse; is conscious; pulse 142; temp. 102°. Evening, much weaker; pulse very rapid; temp. 105°; semi-conscious; respiration, 40.

31st.—Patient continued to get weaker and weaker during the night, and died quietly at 7.30 a.m.

P.M. ten hours after death. Body emaciated; rigor mortis complete; great ecchymosis of elbow joints; rash quite disappeared after death.

On removing the calvarium found dura mater very adherent, especially along the longitudinal sinus, and rather thickened, a good deal of effusion at base of brain. On making a section of the brain, nothing abnormal was seen to the naked eye. On laying open the chest, found heart rigidly contracted, and quite empty, healthy in substance. Anterior surface of lungs anæmic; posterior portions gorged with blood, and rather firm in consistence. Stomach distended, chiefly with gas.

The treatment consisted in allaying the excitement as far as practicable, and the administration of food by means of the tube. After five days of acute mania the patient became quiet, submissive, and rational. He was now in a low asthenic condition, almost approaching the typhoid type, and notwithstanding all the necessary remedies having been resorted to, he sank four days after the cessation of the mania.

Remarks.—The points worthy of note in this case are—the determination evinced in refusing food, and in the endeavours to injure himself; the absence of any desire to injure those about him; after the subsidence of the mania, the regret expressed at what he had done, the assurance that he would do anything he was told, the anxiety about himself, and finally the extreme exhaustion which was produced, and the rapidly fatal termination.

Case of Death from Undetected Injuries. By Dr. FRED. W. A. SKAE.

J. T., a cabinet-maker, was brought to the Asylum from Stirling by two policemen, on the 29th July, about 7 p.m. A certificate of emergency had alone been granted, and there was no further information regarding his case in the form of admission. He was about 30 years of age. He looked in bad health, exhausted, and miserable, and his head was bound up with a handkerchief. He asked the attendant to be careful in removing this, as there was a frightful gash underneath it. When it was undone, however, there was no wound to be

seen. There was a large black mark over the right side of his face and ear, which looked as if produced by gunpowder, mixed with a little blood. There was a drop of serous fluid in the ear. The patient answered questions intelligently, though in a languid, dejected manner. He put out his tongue freely when asked. It was foul. Pulse was about 80. The policemen stated that they had been informed he had attempted to shoot himself with a double-barrelled pistol, and that the police-surgeon who had seen him thought the pistol could only have been charged with powder. The patient denied this, however, and said that the pistol had been loaded with bullets. The policemen further stated that after apparently firing both barrels of the pistol at his head early on the morning of the 28th, he had attempted to drown himself in the river Forth. As there was no external wound, nor any symptoms of injury to the brain, and as it was about 40 hours since he had attempted to shoot himself, I concluded that he had missed his aim, and caused nothing more serious than a gunpowder mark on his face. He walked along with an attendant to one of the wards. He there conversed a little with the attendants, as he had been doing in the waiting-room before I saw him, and told them a little about his history. He mentioned that he was married; that he and his wife did not agree; that he had been living away from her for some time; and that he had been drinking pretty freely. He complained of thirst, and said he had a headache. He drank a good deal of water. I saw him again in about half-an-hour, and talked with him a little about himself. He looked ill and wretched, and complained of a tremendous headache. At eight o'clock he walked up stairs with the other patients, undressed himself, and went to bed in a dormitory. After going to bed he became very restless, kicked the clothes about, talked incoherently, and shouted for "John" (apparently his brother). About 10.30 he was removed to a single room. He walked quietly along, and got into his new bed. When visited about an hour afterwards, he was lying in bed, but talking nonsense. At six in the morning the attendant went into his room to waken him. He was lying dead on a mattress on the floor, with his face downwards, his mouth and nose being firmly pressed against the mattress. I saw him almost immediately. He had all the appearance of a person who had died from suffocation, and probably in a convulsion. The face and neck were livid and swollen. The tongue was protruded between the teeth; bloody mucus was on the sheet, and seemed to have come from his mouth and nose. A post-mortem examination was made at the instance of the Procurator Fiscal, by Dr. Moffat, of Falkirk, and myself, at 5 p.m., of which the following is a report:—

External Appearance.—The body was much swollen, and emphysematous. There was great post-mortem rigidity, and considerable hypostatic congestion. The face was very much swollen, and of a dark-purple colour, especially round the mouth, from which, as also from the nose, blood and frothy mucus were oozing. On the right

side of the face, and surrounding and involving the external ear, there was a black mark, as if produced by gunpowder.

Thorax.—The lungs were dark and congested, and crepitated under pressure between finger and thumb, and on being cut into, air and bloody mucus were emitted. The heart was healthy, and contained dark fluid blood in the right ventricle.

Abdomen.—The stomach and bowels were much distended with gas, and presented a congested appearance. The inner coat of the stomach was congested, and covered with air bubbles; it was nearly empty. The liver was soft and spongy, and of a light pinkish hue. The spleen was dark, congested, and slightly enlarged. The kidneys were much congested also.

Head.—The dura mater was congested. On reflecting the dura mater, the vessels of the pia mater were found very much injected. On removing the brain, the under surface of the middle lobe of the right hemisphere was found completely broken up, and infiltrated with blood, and this condition extended deeply into the cerebral substance.

An extensive comminuted fracture of the anterior and inner portion of the petrous portion of the right temporal bone was found, which fracture involved the condyle of the ascending ramus of the inferior maxillary bone; and imbedded among the débris was discovered what was evidently a piece of gun-wadding. Between the fracture and the external meatus of the right ears a direct communication was established.

(Signed), R. Moffat, M.D.
Fred. W. A. Skae, M.D.

I afterwards got the following brief particulars of his case: —A sister had been insane and recovered in Morningside Asylum. For nearly a year he had been depressed in spirits, unable to settle down to his work, and suspicious of his wife's fidelity and of her putting poison in his food. He had bought the pistol with which he shot himself, and kept it ready loaded about six months before he used it. He had left his bed very early in the morning on the 28th, and gone out of the house. When his friends went in search of him, they found his discharged pistol and a pool of blood, together with some of his clothes, on the bank of the river. They concluded that, having failed to take his life by shooting, he had afterwards drowned himself. But it turned out that he had gone home and got quietly into his bed, where they found him. He was afterwards visited and examined by three medical men, none of whom were led to suspect any fracture of the skull or jaw; and it was agreed to send him to the Asylum. It must have been between three and four in the morning at latest on the 28th when he shot himself—that is to say, at least 39 hours before he was admitted, and about 48 before he died. The

most interesting feature in the case is, that the patient should have survived such extensive injuries to the brain for so long a time; and that up to the time of his going to bed there were really no symptoms of it. As to the fractures, especially that of the jaw, I am happy to have been in good company in failing to detect them. When a man insists that he has fired a double-barrelled pistol, loaded with ball, at his head, and produced a frightful gash; and, when, at the same time, there is no wound to be seen, and no paralysis when he converses intelligently, though in a slow and dreary way, and puts out his tongue full length when asked—it is more natural to conclude that his pistol had missed fire, than that his skull and jaw-bone had been fractured.

The report of the post-mortem examination was drawn up by my friend, Dr. Moffat, who kindly gave me his permission to make what use of it I liked.

PART II.—REVIEWS.

Arthur Schopenhauer. His Life and his Philosophy. By HELEN ZIMMERN. London: Longmans, Green & Co., 1876.

The object of this book is, as its preface states, to portray for general English readers a German philosopher whose name is comparatively new amongst us, and to serve as an *avant-courier* for the translation of his capital work, "*Die Welt als Wille und Vorstellung.*" The memoir is by no means an exhaustive one, but well calculated to stimulate further curiosity concerning its subject; it has the merits of simplicity and clearness of style, and is throughout characterised by a moderate, judicial spirit. Schopenhauer stands before us as a representative of that school of philosophy "which finds rest in the conception of the universe as unity." As a metaphysician we may regard him as the direct descendant of Kant, but he is chiefly interesting as an exponent of the Indian intellect,—"a European Buddhist."

In England his name was first brought forward by an able article in the "Westminster Review" for April, 1853, entitled "Iconoclasm in German Philosophy," and understood to have proceeded from Mr. John Oxenford: an article which gave Schopenhauer himself unfeigned satisfaction and

pleasure. Since then allusions to his writings have not been unfrequent in English periodical literature. He has a peculiar claim to our attention, because, unlike the majority of German thinkers, he is a cosmopolitan, exempt from local and national trammels, and has thus deserved the dictum of the "Revue Contemporaine"— "*Ce n'est pas un philosophe comme les autres, c'est un philosophe qui a vu le monde.*"

Arthur Schopenhauer was born at Danzig, on the 22nd of February, 1788, his infant years being thus contemporaneous with the French Revolution. His family was of Dutch extraction, and his ancestors, as far back as we may trace them, seem to have been men of powerful and decisive character. In the days of Peter the Great, Arthur's great grandfather, Andreas Schopenhauer, was a rich and influential citizen, as is shown by the fact of the choice of his house for the reception of the Czar and the Empress Catherine, during their visit to Danzig. Arthur Schopenhauer's father, Heinrich Floris, was born in 1747; he was educated as a merchant, and spent a large portion of his youth in France and England. For the latter country he conceived an enthusiastic admiration, and we find him later in life imitating the English manner in the style of his country house and garden at Oliva, near Danzig. He was also a constant reader of "the Times," from which, he said, "one could learn everything." His rectitude, candour, and uncompromising love of truth were remarkable, and won the esteem of his fellow citizens. When thirty-eight, Heinrich married Johanna Trosiener, the daughter of a member of the Danzig Senate. Her education appears to have been meagre and incomplete; but, possessed of good natural abilities, and aided by an English clergyman, as well as by her husband, her mind was not slow to expand in the intellectual and æsthetic atmosphere of her new home. In youth she had a pleasant though not beautiful countenance, and a figure of *mignonne* proportions; through life she possessed a certain charm of bearing and conversation, which courted attention in society.

Shortly after their marriage, Heinrich took his young wife on a distant journey, visiting some of the chief German towns, Belgium, Paris and England. He strongly desired that the son he hoped for might be born on English ground, and thus obtain the rights of our citizenship. It was found necessary, however, to return to Danzig, where, in 1788, the great thinker and pessimist was born. We know nothing of the events of his child-life until the year 1793, when Danzig

was blockaded by the Prussians. As soon as their troops entered the city, determining its subjugation, Heinrich, rather than submit to foreign rule, fled with his wife and five-year-old son to Swedish Pomerania. Thence the self-exiled family migrated to Hamburg, where they formed a new home. Here, Heinrich was seized with his former passion for travel, and during a twelve years' residence at Hamburg, he and his wife accomplished several foreign journeys. In these Arthur always shared, his father wisely judging that the cosmopolitan culture thus gained would prove of invaluable service to him in mature life. He was thus brought into contact while yet a child with some of the most noted celebrities of the period, amongst whom were the Baroness Staël, Klopstock, Reimarus, Madame Chevalier, Nelson, and Lady Hamilton. In Arthur's ninth year his parents placed him at Havre, under the care of a M. Gregoire, with whose son he was educated. Here he remained two years, and gained so thorough a mastery of the French language that on his return to Hamburg it was found he had forgotten German, and he was obliged to relearn it. He was then sent to school, and being destined by his father for a mercantile career, received a commercial education, in which the classics were almost entirely neglected. Soon after his admission to this school, he evinced a marked bent towards the study of philosophy, and begged to be allowed a collegiate education. Heinrich Schopenhauer, however, had set his heart on his son becoming a merchant, and at first gave a decisive refusal; then, finding the lad in earnest, placed before him the alternative of entering a high school, or of accompanying his parents on a tour of some years' length in France, England, and Switzerland. Should he choose the latter, Arthur must renounce all thought of an academical career, and, on his return to Hamburg, enter a mercantile business.

It was not in the nature of a boy of fifteen to withstand the bait of foreign travel; we find him therefore deciding for the latter, and turning his back upon scholarship, finally, as he then deemed. During a portion of the two years' tour Arthur was placed at a school in Wimbledon, conducted by a clergyman. He appears to have been fretted by the strictness of his teacher's theology, and to have laid the foundation of a fierce hatred of English bigotry, apparent in his works. Here, however, he gained an accurate knowledge of the English language and literature, and learnt to play the flute, as a recreation. When the family visited Switzerland,

Arthur fell under the unique fascination excited by the Alps. Of Mount Blanc, his favourite, he never afterwards spoke without that certain tone of sadness and yearning which the Germans call *sehnsucht*. Let us quote his reference to this Alp in "*Die Welt als Wille und Vorstellung*."

The sad disposition so often remarked in highly gifted men has its emblem in this mountain with its cloud-capped summit. But when at times, perchance at dawn, the veil of mist is torn asunder, and the peak, glowing with the sun's reflection, looks down on Chamounix from its celestial height above the clouds, it is a spectacle which stirs every soul to its inmost depths. Thus the most melancholy genius will at times show signs of a peculiar cheerfulness of disposition, which springs from the complete objectiveness of his intellect, and is possible only to him. It hovers like a halo about his noble forehead, *in tristitiâ hilaris, in hilaritate tristis.*

In the autumn of this year (1804), Arthur received confirmation at the Marienkirche, Danzig, and with the following new year entered a merchant's office. A few months afterwards his father lost his life through a fall, accidental or intentional, and thus left young Schopenhauer, at seventeen, to his own resources. Between Johanna Schopenhauer and her son there had always existed a degree of mental estrangement, consequent upon intrinsic differences of temperament, and when, after Heinrich's death, they were naturally thrown more together, the rift quickly widened into a chasm. Frau Schopenhauer courted pleasure and brilliant society,—Arthur cherished morbid views of life, liked solitude, and abhorred the current small talk called conversation ; it is no wonder then that the two grated upon each other, and had little enjoyment in personal intercourse. Shortly after becoming a widow Johanna Schopenhauer established herself at Weimar, where she soon succeeded in surrounding herself with a constellation of genius, amongst which shone Göethe, the brothers Schlegel and Grimm, Prince Pückler, Fernow (whose biography she afterwards wrote), Wieland and Meyer. Meanwhile, Schopenhauer, much as he detested office work, continued it from reverence to his father's memory, yet could not check all hankerings after scholarship. His mother at last took alarm at the melancholy complaints of his "blighted fate" which pervaded his letters, and, more sympathetic than her wont, consulted her Weimar friends concerning him. Through their influence she advised Arthur to retrace his steps; he immediately threw up business, and hastened to Gotha, where, by

Fernow's advice, he began his academic career. Here he studied ardently, paying especial attention to the acquisition of ancient languages. His course at Gotha terminated abruptly, after a period of six months, through a quarrel with one of the professors. He left the Gymnasium in the autumn of 1807, and proceeded to Weimar, where he took lodgings, and continued his preparatory studies. "He laboured day and night at Greek, Latin, Mathematics and History, allowing nothing to divert his attention." In 1808 he visited Erfurt, and was present at the famous congress of kings and princes under the presidency of Napoleon, and also at the theatre when Talma played before a "*parterre* of kings." In 1809, Schopenhauer, then twenty-one, matriculated in the medical faculty at the Göttingen University. During the first year of residence he attended lectures on Constitutional History, the Crusades, Natural History, Mineralogy, Physics and Botany, besides concomitant reading at home. He then passed in the philosophical faculty, devoting his attention first to Plato and Kant, and later to Aristotle and Spinoza. He also found time to hear lectures on Astronomy, Meteorology, Physiology, Ethnography, and Jurisprudence.

It is interesting to note that one of Schopenhauer's constant companions at Göttingen was Bunsen, in whom, however, he afterwards failed to see more than a diplomatist, ignoring his friend's claims to literary distinction.

In 1811, Schopenhauer entered the University of Berlin, where he attended the lecture rooms of Fichte, Wolf, and Schleiermacher. Fichte's philosophical fame had drawn him to Berlin, but his reverence for this professor soon gave place to disparaging criticism of his empty and misty metaphysics. Schleiermacher, as a lecturer, fares scarcely better than Fichte at Schopenhauer's hands; but to Wolf, the great Homerist and classical critic, he seems to have accorded both admiration and regard.*

In 1813, after the battle of Lützen, the tumult of war approached Berlin, and Schopenhauer, who "hated interruptions" and cared little for politics, hastened to Saxony. After spending a few days at Weimar with his mother, he took refuge in Rudolstadt, a little town in the Thuringian

* Schopenhauer also attended classes on Experimental Chemistry, Magnetism and Electricity, Ornithology, Amphibiology, Ichthyology, Domestic Animals and Norse Poetry, and continued his Natural History studies, of Physics, Astronomy, General Physiology, Zoology and Geology.

forest, where he evolved his "Inaugural Dissertation" which obtained for him the title of Dr. of Philosophy from the University of Jena. Let us give Miss Zimmern's criticism of this essay :—"This little tractate, on the Quadruple Root of the Doctrine of Adequate Cause,"* is intended to show that the idea of causality is not grounded upon a single axiom or necessary truth, but upon four (truths), or rather perhaps upon one necessary truth contemplated in a four-fold aspect, according to its relation to any one in particular of the four classes comprising, in Schopenhauer's words, everything capable of being regarded by us as an object, *i.e.*, the entire compass of our ideas. These are respectively: Phenomena, or the objects of sensuous perception; Reason, or the objects of rational perception; Being, under the categories of space and time; and the Will. Hence it ensues that the necessity which accompanies a proposition conceived as demonstrable *à priori*, is not one and invariable, but as manifold as the sources of the proposition itself." This tractate won Göethe's attention, and led him to take a kindly interest in the young metaphysician. He proposed that Schopenhauer should investigate his own theory of colours, and lent him, for the purpose, the greater part of his optical apparatus. Schopenhauer undertook the task with the ardour of a proselyte, but soon diverged into an independent path which resulted in a pamphlet, entitled '*Ueber das Sehen und die Farben.*' The interest thus awakened in the science of colours continued with Schopenhauer, and years afterwards we find him sending the above-named treatise to Sir Charles Eastlake, with a characteristic letter, too long for quotation. Besides his friendship with Göethe, Schopenhauer became acquainted at Weimar with Frederick Mayer, to whom he was indebted for an introduction to Indian lore, the spirit of which infuses all his works. Schopenhauer, at this period, also, came under the fascinating influence of Caroline Jaegman, the Mrs. Siddons of the German stage, remarkable for beauty of form and voice, and histrionic talent. Being distracted by her charms, in combination with other sources of excitement, Schopenhauer wisely determined to quit Weimar, and continue his studies at Dresden, whither he removed in 1814. Now began 'the *Sturm und Drang* period of his life,' in which his mind gradually mellowed to ripeness, and he needed the world less because he had obtained '*un grand soi même.*' He did not absent

* *Die Vierfache Wurzel des Satzes vom zureichenden Grunde.*

himself from society, but frequented the art galleries, where he enjoyed above all the Sistine Madonna, and spent the evenings at the theatre, or with friends, amongst whom were the novelists, Heun, Schulze, and Schilling, and the art-critic Johann Gottlieb von Quandt, 'who remained devoted to him till death.' With Ludwig Tieck Schopenhauer was for sometime intimate, but their intercourse was ended through some disparaging remarks of Schopenhauer upon Schlegel, Tieck's close friend.

"Under such conditions," says our writer, "was Schopenhauer's *opus maximum*, '*Die Welt als Wille und Vorstellung*,'* brought to an end. It contains his entire system; in it he reached the apex of his intellectual life; all his later writings are mere brilliant commentaries and illustrations. In the spring of 1818 the work was published by Messrs. Brockhaus, at Leipzig, the author receiving a ducat per printed sheet (equivalent to 9s. 4¾d)." No sooner had Schopenhauer finished his book than he hastened on a journey in Italy. Miss Zimmern remarks with truth, that the fact of his retaining his pessimism in the sunny south, "is a convincing proof, were further needed, of its unaffected sincerity." He visited the principal towns of north Italy, enjoyed the art galleries and the theatre, carried on the study of Italian, in which he was already proficient, and delighted in Rossini's operas. He always recalled these years with peculiar pleasure, as far as he would admit pleasure in anything. He thoughtfully studied the Italians, and writes of their religion:—"The Catholic religion is an order to obtain heaven by begging, because it would be too troublesome to earn it. The priests are the brokers for this transaction."

It is curious, as showing the complexity of Schopenhauer's mind, to find him writing at this period of Petrarch as his favourite Italian poet. We should have thought a pessimist would naturally find something congenial in Dante's Divine Comedy, dealing, as it does, with some of the most terrible enigmas of human guilt and suffering; but Schopenhauer complains of Dante's "horrid distortions," stigmatises "the whole Inferno as an apotheosis of cruelty," and calls "the last Canto but one a glorification of want of honour and conscience." We are not surprised to find him speaking of "the phantastic follies of Ariosto." He liked Tasso, but

* Literally "The World as Will and Idea."

thought him unworthy of a fourth place amongst great Italian poets.

In December (1818) "Die Welt als Wille und Vorstellung" issued from the press. Schopenhauer sent a copy to Göethe, who appears to have been pleased with the book, although "the unwieldy size left him no peace," and he thought it would take a whole year to read. While Schopenhauer was at Rome, in 1819, he received tidings of the impending bankruptcy of the Danzig mercantile firm in which a large portion of his own and the whole of his mother's fortune were invested. Dreading lest the loss of fortune should compel him to abandon his intellectual labours, he hastened to Germany. Happily, however, he arrived in time to withdraw the bulk of his own investment; while Frau Schopenhauer, characteristically sanguine and self-confident, disregarded all warnings, and, with her daughter Adele, was rendered almost penniless by the final crash.* Schopenhauer now decided to seek some career, partly as a proviso against future pecuniary loss, partly to give play to his love of philosophic theorising. For this purpose he removed to Berlin, in the spring of 1820, hoping ere long to fill an academic chair. Schopenhauer's teaching, however, was not yet understood, and his lecture-room was deserted for those of Hegel and Schleiermacher. He speaks with caustic irony of their popularity, and goes so far as to say—"People like Fichte, Schelling, or Hegel should be shut out of the ranks of philosophers, as of yore the dealers and money-changers were cast out of the Temple." Again: "A fitting motto for Hegel's writings is Shakespeare's, 'Such stuff as madmen tongue, and brain not'" (Cymbeline, Act v., Scene iv.). In 1822 Schopenhauer, thoroughly wearied of Berlin, fled once more to Italy. Of this journey we have no records; he probably returned in 1823, and in the following year established himself for some time at Dresden. Mortified by the continued popular indifference to "Die Welt als Wille und Vorstellung," from which he had hoped so much, he turned his thought towards translation. He proposed rendering David Hume's works into German, and wrote a preface for the purpose, which, however, was finally abandoned. In 1825 he returned to Berlin, and inscribed his name for lectures; but, finding no ear for them, withdrew into solitude, studying and reading for private gratification.

* It is but just to Schopenhauer to add that he supported his impoverished mother and sister "for many years."

He learnt Spanish, and translated Gracian's "Oraculo Manual y Arte de Prudencia"—a translation which was posthumously published. At Berlin, Schopenhauer became acquainted with Alexander von Humboldt, of whom he writes—"I only found great talent where I looked for genius; *scientia* where I expected *sapientia*." An outbreak of cholera drove Schopenhauer from Berlin to Frankfort, where "he sunk into so sombre and saturnine a mood that for weeks he could not be induced to speak a word." By his doctor's advice he removed to the neighbouring town of Mannheim, where he spent a year. In 1833 he returned to Frankfort, and finally settled there for the remainder of life.

Gloomy and dissatisfied with the non-recognition of the book to which he had given so much earnest thought, Schopenhauer writes—"The entire neglect which my work has experienced proves that either I was unworthy my age, or my age of me. In both cases one can only say, 'the rest is silence.' I have lifted the veil of truth higher than any mortal before me. But I should like to see the man who could boast of a more miserable set of contemporaries than mine." Again: "He who stands alone on a height to which the others cannot ascend, must descend to them, if he does not wish to be alone."

Schopenhauer's routine of life at Frankfort was simple and methodical. He rose early, took a cold bath—at that time a phenomenon in Germany—and prepared his own coffee, considering interruption at that hour to be "dangerous to the brain, which he compared to a freshly-tuned instrument." He wrote for at least three hours in the morning, then received visitors, and on their departure unbent his mind over the flute. He dined at the mid-day *table-d'hôte* of the Hôtel d'Angleterre, for which he always dressed "with scrupulous care." In the afternoon he indulged in an hour's siesta, and allowed some time for literature of the lighter kind. Towards evening he took a walk, on the score of health, his companion being a white poodle, with the philosophic name of Atma (*i.e.*, Soul of the World). Occasionally, however, he suffered his disciples to accompany him on these promenades. Subjects for philosophy were furnished by any external incident; such as the gait of the people they met, which Schopenhauer would mimic to perfection. He hated an awkward carriage, and saw in it a connection with the functions of the brain. Schopenhauer, like his father, daily read the "Times," and some

English and French reviews, at the reading-room, and usually attended the concert or theatre. He had a scientific knowledge of music, and took such pleasure in Beethoven's Symphonies that if one of them were followed by a production of another master, he quitted the concert room rather than allow the impression to be disturbed. He did not appreciate Wagner's music; yet, curiously, this composer is one of his most ardent followers. Schopenhauer supped frugally at the Hôtel d'Angleterre, where, if he found congenial society, he would converse "far into the night." He enjoyed smoking, and it was one of his eccentricities to use a pipe, five feet in length, on the ground that as the smoke became cooled in this long transit, it was less noxious than in one of ordinary size. He was a diligent, though by no means "an omnivorous reader," and agreed with the maxim of Carlyle that a book is not worth reading at all unless it be worth reading twice. He always marked "passages that struck him, adding marginal annotations," and deprecated the reading of "ephemeral literature" to the neglect of the works of the "rarest minds" of all ages. Schopenhauer was familiar with the classic authors, especially Aristotle, Plato, and Seneca, besides the Septuagint version of the Old Testament and the Vedas. Of the Oupnekhat he read a portion every night, calling it his Bible. He liked Machiavelli's "Il Principe," Göethe and Schiller, the French moralists, Shakespeare, Byron, Burns, Shenstone's works, and Calderon. Of novels he esteemed best "Don Quixote," "Tristram Shandy," the "Nouvelle Héloise," and Göethe's "Wilhelm Meister."* Finding his principal work so little heeded, Schopenhauer published nothing for seventeen years, with the exception of a Latin version of his optical treatise "Uber das Sehen und die Farben" (published in the third vol. of "Scriptores Ophthalmologici Minores," by Justus Radius, 1831).

In 1836 he broke this silence by a treatise on the "Will in Nature;" and in 1839 competed for a prize offered by the Royal Norwegian Academy of Drontheim for the best Essay on the Freedom of the Will and the Doctrine of Philosophical Necessity. Schopenhauer obtained the premium, and in 1840 again competed for an analogous one, offered by the Royal Danish Academy for the best inquiry into the grounds

* The prominent characteristic of his room was a gilt statue of Buddha, that stood on his writing-table next to a bust of Kant. Over his sofa hung an oil portrait of Göethe, besides portraits of Kant, Shakespeare, Descartes, and Claudius, and innumerable engravings of dogs.

of Moral Obligation. Here he was unsuccessful, the Danish Academicians hinting that he spoke too disrespectfully of his philosophic brethren to deserve recognition among them. Schopenhauer, however, published both essays in 1841, under the title of "Die Beiden Grundprobleme der Ethik,"* insisting that the words, "Not crowned by the Royal Danish Academy" should be printed "in good fat letters" on the title-page. The first essay "is vigorous and perspicuous in the highest degree," the argument apparently being "that all action is the necessary product of character, but that man is responsible for his character notwithstanding." The second essay is more abstruse and original, though less brilliant. It endeavours to overthrow Kant's "categorical imperative as the basis of moral obligation," and to substitute the Buddhistic theory, that no action can be meritorious unless wholly disinterested.

In 1844, Schopenhauer published a second edition of "Die Welt als Wille und Vorstellung," in two volumes. It attracted little general attention, but was the means of introducing Schopenhauer to Dr. Frauenstädt, who became one of his most enthusiastic disciples. At their first interview Frauenstädt was charmed by Schopenhauer's "manner and appearance. The leonine head revealed the powerful intellect and the mental work it had compassed; though only fifty-eight, hair and beard were already snow-white, and harmonised with the idea of the sage, but the eyes flashed youthful fire, and the play of features was as lively as a boy's. A sarcastic line round the mouth alone revealed the misanthrope."†

During part of the years 1847 and 1848, Schopenhauer's labours were somewhat interrupted by the horrors of political revolution. In 1850, however, he completed a book "that should at last open all eyes to him"—the "‡Parerga et Paralipomena," published at Berlin in 1851. "The style of these two volumes of essays is in the highest degree attractive. They are neither so technical as to be abstruse, nor so long as to be wearisome; the subjects, moreover, are frequently of general interest. The first volume contains his most lively sallies, and some of his most virulent invectives against the salaried professors of philosophy at the Universities; speculations on apparitions and somnambulism," and piquant

* The two main problems of Ethical Science.

† Miss Zimmerns' Memoir has on its frontispiece a portrait of Schopenhauer, which well bears out this description.

‡ *I.e.*, "Supplements and Omissions."

maxims on the general conduct of life. The second volume "contains a large number of brief and animated disquisitions on a variety of subjects, including his favourite themes—the indestructibility of man's real being by death, suicide, study, authorship, criticism, and fame." The "Parerga et Paralipomena" heralded the dawn of Schopenhauer's renown, and the last ten years of his life proved the brightest. The "Westminster Review" article (April, 1853) was one of the first to draw general attention to his philosophy: it was translated by Dr. Lindner, one of Schopenhauer's disciples, into German. The press, the painter's brush, and the sculptor's chisel now combined to do him honour. "Die Welt als Wille und Vorstellung" went through a third edition, "Die Beiden Grundprobleme der Ethik" a second, for each of which Schopenhauer received an honorarium. As he touchingly said, fame "laid its wreath of roses upon his whitened hairs." He hoped to complete a hundred years; but in the spring of 1860 his vigorous health began to fail, and in September following he was attacked by inflammation of the lungs. Of this he died on the 21st of the same month, being alone at the final moment.—"Whoever had been alone all through life must understand that solitary business better than others," he had said. He was buried in the Frankfort cemetery, where his grave now exists, half hidden by evergreen shrubs, and bearing the simple inscription—"Arthur Schopenhauer." This was his own wish; when his friend Dr. Gwinner asked where he desired to be buried, he said, "No matter where; posterity will find me;"—a prediction which now seems likely to be realised.

Two chapters of the memoir before us are devoted to a consideration of Schopenhauer's philosophical teaching; the first referring to the leading principles of "Die Welt als Wille und Vorstellung;" the second, to his "Ethics and Æsthetics," as gathered from this and from his lesser writings.

Jean Paul Richter thus describes Schopenhauer's "opus maximum,"—"a bold, philosophic, many-sided work, full of genius, profoundness, and penetration, but with a depth often hopeless and bottomless, akin to the melancholy sunless lake in Norway, that is barred by a stern rampart of beetling crags, in whose depth only the starry day is reflected, whose surface no bird skims, no wave upheaves." Schopenhauer's system is fully contained in this remarkable book, on which indeed he based his philosophical reputation. "His

own claim" was to be regarded as the immediate successor of Kant, and such, no doubt, considered merely as a metaphysician, he was. Philosophically, however, he is chiefly interesting as a representative of Indian thought in the west, and may be described as helping to indicate that transition of the European mind from a monotheistic to a pantheistic view of the universe which began with Giordano Bruno, and of which the end is not yet. "My age," says Schopenhauer, "after the teaching of Bruno, Spinoza, and Schelling, had perfectly understood that all things are but one; but the nature of this unity, and the rationale of its appearance as plurality, were reserved for me to explain." He endeavours to determine the *substratum* or essence of existence lying within the phenomenal manifestation of the Universe, and defines it as a Will. "The world in itself," he declares, "is one enormous Will, constantly rushing into life." Will is, with Schopenhauer, "the condition of all existence, sentient and insentient." "Others," he says, "have asserted the Will's freedom, I prove its omnipotence." "He is not original in this doctrine," says our Memoir, "but has this peculiarity, that while other thinkers have usually assumed Intelligence as an attribute of Will, Intelligence is to him a mere phenomenon." We find, then, his philosophy to be a phase of Pantheism, a modification of the system represented in Europe by Bruno, Spinoza, and Schelling, though differentiated from their philosophies by a bisection of the Soul, Ego, or First Principle, into two factors described as Will and Intelligence—a separation capable, according to himself, of resolving the contradictions charged against pantheism in general.

The genesis of this theory may be defined with equal propriety as an engrafting of Indian pantheism upon Kant, or *vice versâ.* Kant, his first master, had taught him the illusiveness of space and time, and the unreality of the world of phenomena. In his researches in Indian lore Schopenhauer found the same ideas reiterated in a mystical form congenial to his imagination, and combined with that pessimistic view of life connate with his hypochondriacal temperament. The peculiar stress he was led to place upon the Will as the real cause of existence may be logically defensible, but was, no doubt, in the first instance subjective, the reflection of his own individuality. 'An enormous Will, constantly rushing into life,' would be no bad description of his own spiritual constitution. The Will, the blind instinctive im-

pulse, was with him continually getting the upper hand of the regulating faculty, the Reason. It was natural, therefore, that he should regard the former as the primary substance, the latter as the accident or phenomenon."

Warmly as the writer of our memoir appears to sympathise with Schopenhauer's views, she is not slow to acknowledge the practical disadvantages of his system, which she aptly contrasts with that of Spinoza. "Schopenhauer," she remarks, "has no foundation for his universe, but a blind unintelligent force, which could not reasonably be an object of reverence, even were its operation as beneficial as, according to him, it is the reverse. No religion consequently remains, except that of simple philanthropy and self-denial. To Spinoza, on the contrary, Will and Intelligence alike, along with the entire material and spiritual universe, are but the manifestations of an infinite substance, which, as infinite, must necessarily be manifested in an infinity of ways utterly beyond our comprehension. To Schopenhauer the universe has a centre, and that centre is a mere blind impulse. To Spinoza, as has been finely said, the centre is everywhere and the circumference nowhere. The one, therefore, fully provides for the religious reverence the other abolishes." . . . . But, "as Schopenhauer himself admits, the appreciation of phenomena varies greatly as the interpreter is by temperament *εὔκολος or δύσκολος. . . . Very few of his followers have consistently adopted his pessimism." . . . .

"It need hardly be added that, although Schopenhauer's cardinal principle is the omnipotence of Will, the freedom of the individual Will is strenuously denied by him. All phenomena being but manifestations of the one primary force, are necessarily conditioned by it. No man can change his character, for the character is the Will itself exhibited in a phenomenal form." . . . . "He laid the greatest stress upon scientific research as bringing the student into immediate contact with concrete reality. He especially venerated Bichat, who had, he considered, already expressed his own great principle of the duality of the Will and the Intelligence under a philosophical form; the anatomist's 'organic life' being the physiological equivalent of Schopenhauer's 'Will,' and his 'animal life' of the latter's 'Intelligence.' 'Schopenhauer's ethics are implied in the leading principles

* *I.e.*, genial or morose.

of his system. Everything hinges upon the affirmation or negation of 'the Will to live.' When this is affirmed, *i.e.*, when the individual's actions are directly or indirectly controlled by the wish to possess, enjoy, perpetuate, or embellish existence, 'the imaginations of the heart are corrupt and evil continually.' 'In proportion' (on the contrary) 'as individuality loses its value for the individual, as he recognises that it is in fact an illusion, and that he exists in others as much as in himself, he advances along the path of virtue. . .

Right moral action can spring only from the recognition of the essential evil of the phenomenal world, and the deliberate resolve to reduce it to a minimum. The secret of this lies in one word, abnegation. "The will to live" comprehends self assertion in every form and shape, and as every charitable action involves the denial of self in some respect, it follows that Schopenhauer's morality is in the main equivalent to the inculcation of universal philanthropy. "Wisdom," to quote his own definition, "is not merely theoretical, but also practical perfection; it is the ultimate true cognition of all things in mass and in detail, which has so penetrated man's being, that it appears as the guide of all his actions. The wisdom that imbues a man with mere theory not developed into practice, resembles the double rose, which pleases by its colour and fragrance, but drops, leaving no fruit. In its practical ethical aspect Schopenhauer's teaching differs in nothing from Buddhism. He maintains that the spirit of true religion is everywhere the same; he speaks with the greatest respect of Christianity, apart from what he deems its mythology, asserting that the spirit of the New Testament is wholly on his side. "Christianity," he says, "is composed of two heterogenous ingredients," an ethical view of life akin to Hindooism and a Jewish dogma. Its ethics are crippled by this latter foreign element, and cannot attain definite expression. Christian morality, but for the defect of ignoring the animal world, would manifest the utmost similarity to Brahminism and Buddhism, and is only less emphatically expressed, and deficient in logical consistency.* With Schopenhauer the intellectual conditions of salvation are more strongly accentuated than the moral.

* "Buddhism, the antithesis of Islam, holds to the absolute Freedom of man. The main article of Buddhism is, that neither in heaven nor on earth can a man escape from the consequences of his acts; that morals are, in their essence, productive causes, without the aid or intervention of any higher authority; hence, forgiveness and atonement are ideas unknown in the dogma of Buddhism."—(Miss F. Cobbe's "Essay on Intuitive Morals," p. 163, notes.)

He shows a marked coincidence with Buddha in the precept of kindness to animals, but the latter appears to build this upon the compassionate instinct, while Schopenhauer gives it a philosophical basis. With him animals are imperfect men, incarnations of the universal Will in a more primitive form. In 1857, a living orang-outang was exhibited at Frankfort, and Schopenhauer went almost daily to see "the probable ancestor of our race;" he considered the frontal bone and vertical arch better formed than those of the lowest human races, and thought that "the longing of the Will after cognition was personified in this strange and melancholy beast, whose mien he likened to that of the prophet gazing over into the promised land." He speaks emphatically in the "Parerga" against the horrors of vivisection, "and held it one of the glories of Englishmen to have organised a Society for the Prevention of Cruelty to Animals." He also gave practical expression to such views by leaving in his will a yearly income to his poodle, "to be made payable to whomsoever should take charge of him."

"We cannot feel," says the writer of our memoir, "that Schopenhauer has in any way aided us to bridge over the gulf between theory and practice." His great originality consists in his powerful assertion, contrary to the ordinary opinion, of the vast predominance of the instinctive element of human nature (the Will, in his vocabulary) over the reflective (the Intellect). "The passion of love and everything relating to the perpetuation of the species" necessarily attracted Schopenhauer's attention. He regarded love as but a means towards an end, "the composition of the next generation," saying, like Benedick, "the world must be peopled." This prosaic view of the ideal passion appears at first sight harsh and inconsistent with Schopenhauer's fondness for Petrarch's amatory sonnets. But he presently redeems it, "this yearning, and this pain of love, cannot take their substance from the needs of an ephemeral individual, but they are the sighs of the spirit of species, which here sees a never-to-be-recovered means of gaining or losing its ends, and therefore emits this groan. This, therefore, furnishes material for all the finest erotic poetry, which rises accordingly into transcendental metaphors surpassing everything earthly. This is the theme of Petrarch, the material for a *St. Preux, a Werther, and a Jacopo Ortis, which could otherwise be neither explained nor understood."

* The hero of Rousseau's "Héloise."

To the artist, the man of genius, Schopenhauer attributes a perfection second only to that of the ascetic who has attained entire negation of the will. The reason is that he accomplishes, though only in moments of ecstasy, the same end of self-annihilation which the other habitually achieves. Schopenhauer says, "Just because genius consists in the free service of the intellect, emancipated from the service of the will, its productions can serve no useful purposes, whether music, philosophy, painting or poetry; a work of genius is not a thing of utility. All other human works exist for the maintenance or convenience of existence, only not those in question. Thus we seldom see the beautiful and the useful combined; fine lofty trees bear no fruit; fruit trees are ugly little cripples; the double garden rose is barren—only the little wild scentless one is fruitful. A man, who has after many bitter combats conquered his own nature, remains only as a purely intellectual being, an untarnished mirror of the universe. Nothing has power to disturb or agitate him, for he has severed all the thousand threads of the will, which bind us to the world, and draw us hither and thither in constant pain, under the form of desire, fear, envy, anger. Life and its figures only pass before him like a fleeting apparition, a morning dream before one who is half awake; reality shimmers through, it can no longer deceive, and, like such a dream, without abrupt transition they disappear at last." Schopenhauer himself had no mean estimate of his "opus maximum." In a letter to Dr. Frauenstädt (Sept. 1850) he writes:—"For where, in the range of German literature, is there another book which, wherever it is opened, immediately reveals more thoughts than it is possible to grasp, like my second volume of 'Die Welt als Wille und Vorstellung?'" Schopenhauer certainly possessed self-esteem, if not egotism, in a considerable degree, but this was largely necessary to prevent his being crushed in spirit by years of popular neglect. It seems not improbable that he was at heart amiable, but was forced to steel himself against the world's rebuffs in an armour of misanthropic scorn, which at length fitted so closely that it became as a part of the man. He once owned to having "felt terribly lonely" throughout life, but that he had met none worthy of regard, save Göethe and a few others, much older than himself, and had learnt at last to love solitude, that heritage common to great minds.

We will leave Arthur Schopenhauer with Dr. Gwinner's words, spoken above his grave. "This profound, thoughtful

man, in whose breast a warm heart pulsated, ran through a whole lifetime like a child angered at play—solitary, misunderstood, but true to himself. His earthly goal was long veiled to him; the laurel that now crowns his brow was only bestowed in the evening of life, but firm as a rock was rooted in his soul belief in his mission. During long years of undeserved obscurity, he never swerved an inch from his solitary lofty way; he waxed grey in the hard service of the coy beloved he had chosen, mindful of the saying written in the Book of Esdras: 'Great is truth, and mighty above all things.'" W.

Vital Motion as a Mode of Physical Motion. By CHARLES BLAND RADCLIFFE, M.D., &c. Macmillan and Co., London. 1876.

Dr. Radcliffe has for many years given his attention to the consideration of vital action, and may therefore be presumed to be no mean authority on the subject. It is one, however, that is beset with difficulties on every hand, nor do we see that he has made the path very much smoother. In reference to his former observations, he acknowledges that they were, to a great extent, erroneous, and expresses the wish that much that he has "written on this subject at different times might be cancelled." Still he affirms that his views have not been altered, and that the argument in support of them is in all essential particulars the same.

Though the study of life must necessarily lie so far outside the reach of physical research as to render most of the observations as to it vague and uncertain, yet it is possible that, by a better understanding of the intangible forces operating in nature as light, heat, and electricity, especially the latter, we shall have a clearer perception of the nature of that phenomenon which we call life. That vital action is attended with, or is dependent on electrical action has long been acknowledged, but the subject is still involved in much obscurity, and certainly if Dr. Radcliffe's views be accepted, we shall have to modify many of our ideas in respect to the nature of nervous and muscular action.

Dr. Radcliffe endeavours to prove that contractility is not a vital process, but, on the contrary, is a state which is occasioned by the withdrawal of an inhibitory influence serving to keep up the state of muscular relaxation, therefore that life is not the occasion of motion, but is concerned in antago-

nizing it, at least in so far as it depends on muscular contraction: that this contraction is due to physical causes, and therefore that vital motion is a mode of physical motion.

This idea he endeavours to support by various experiments and physiological and pathological observations, both by himself and others. Experimenting on living and dead amœbæ, fresh-water sponges, myxomycetes, and also pus, mucus, and distilled water, he found that Thompson's electrometer failed to show any distinction between the living and dead state of protoplasmic substance, or between these substances, living and dead indifferently, and sculptor's clay. From this he argues that there is no difference between the electrical condition of living protoplasmic substances and lifeless bodies generally, but that any observed electric state in them is due to the electric state of the earth. He is also led to believe "that amœboid movements are the simple result of the action in amœboid bodies of the electricity belonging to these in common with all terrestrial bodies." He holds that the electric state of the earth is one not of zero, but of *charge*, and that this charge is subject to remarkable tides and wave-movements; that things so charged must be in a state of expansion, and that this state of expansion must vary with every variation in the charge; and that this expansion takes place more readily in bodies, or in parts of these bodies, which are less solid than in those which are more so. Hence, changes in expansion take place more readily in parts of amœboid bodies which remain in a state of nascent protoplasm, and not in the parts which have become granular; and thus the peculiar amœboid protrusions are produced in obedience to the oscillations of the earth's electric state, at least as far as the electrophysics of these organisms is concerned.

The Electrophysics of Simple Muscular Movement and Simple Nervous Action.—The actual condition of each muscular fibre and nerve cell, when alive and at rest, is the same as an electromotive element in the state of open circuit. The coats and contents are a voltaic pair, the former being *positive* and the latter *negative;* the arterial blood, or fresh air, is the fluid by which the electromotive action is set up. These fibres and cells are in a constant state of *charge*, which causes an expansion of their contents, by mutual repulsion among the molecules. When action takes place, this charge disappears, and "induced" currents and "extra" currents are developed, but the contraction which results is due to the disappearance of the *charge*, and not to the excitation produced by the

"induced" or "extra" currents. When muscle or nerve returns to a state of rest, the electric charge reappears.

He believes it is very probable, as Matteuci concluded, that muscular action is attended by a discharge of electricity analogous to that of a torpedo, and that, may be, it would be as powerful, were it not lost in great measure by being short circuited within the body; and that nerve acts on muscle by induction, or by a somewhat similar production of electric force, which inhibits the natural charge of the muscle.

The rhythmic action of the heart has been proved to depend upon the cardiac nerve-centres; the rhythm is occasioned, according to Dr. Radcliffe, on the electromotive action "running down" in the interval between any two fresh supplies of arterial blood to their nerve centres. He bases this theory on the fact that the heart of a frog will continue to beat if exposed to air or supplied with arterial blood, but will cease to do so if placed in a vacuum, or in an atmosphere of hydrogen, or carbonic dioxide, or nitrogen, and will resume its beatings when air is readmitted into the vacuum, or substituted for the gases.

In the same manner may be explained the movements of the chest in mammals (respiration), mouth in cuttle-fish, etc. The respiratory movements in mammals are slower than the cardiac, because the former depend on the medulla oblongata, which is supplied with blood later than the cardiac nerve centres, and also uses it up slower. In other words, he believes that an electromotive action is rythmically set up in the cardiac and respiratory centres respectively, from an intermitting supply of blood to these centres.

From the way in which muscle and nerve are affected by Franklinic and Faradaic electricity, he argues that during rest they are in a state of charge, and that the state of action is attended by discharge. There is, however, more to be learnt from the effects of the constant current, that is, voltaic electricity. The action of the *direct* and *inverse* current is nearly the same: there is relaxation while the circuit remains closed, and contraction upon opening and upon closing it. Contraction is connected with the production of instantaneous currents of high tension, the *extra* currents of Faraday.

By experiments on galvanoscopic frogs he shows that the duration of the state of contraction in the limb is due, not to the direction of the current, inverse or direct, but to the charges of free electricity, positive or negative, associated

with the current. That it makes no difference, as far as muscular action is concerned, whether the circuit is closed or open, the essential state being that of charge or discharge, the former counteracting, the latter causing action.

The experiments of Lehut, Bellingheri, and Matteucci, go to show that sensation, like motion, has to do, not with the constant current, but with the instantaneous *extra* currents; in fact, the action of electricity is the same on the sensory as on the motor nerves, and on the muscles.

The sum of the whole matter amounts to this, that the different forms of electricity, the voltaic, the Franklinic, the Faradaic, and that which is natural to living substances, all agree in acting, not by polarization, or by any other working of the constant current, but by the charge or discharge of free electricity, the charge (the negative as well as the positive, but not to the same degree) causing the state of rest, and with it more or less expansion, by keeping the charged molecules in a state of mutual repulsion, the discharge bringing about action, and with it the state opposed to expansion, by leaving the now chargeless molecules free to yield to simple molecular attraction.

Rigor Mortis is characterised by the disappearance of the muscle and nerve-current, and this disappearance is accomplished gradually as death gains mastery over life. "The fact, indeed, would seem to show that muscle may have passed into the state of cadaveric rigidity, because the attractive force which is inherent in the physical constitution of the muscular molecules is then no longer counteracted by the electricity which belongs specially to living muscle and nerve.

The Work of the Blood in Vital Motion.—Blood is not a stimulant to vital motion; on the contrary, bleeding is attended by violent convulsion, as is also strangulation. The experiments of Sir Astley Cooper, and of Drs. Kussmaul and Tenner, are quoted to show that the effect of tying or compressing the arteries supplying the head, is to produce convulsions, and the removal of the pressure or ligature is to suddenly and completely relax the muscles.

Dr. Harley has shewn that blood containing a small quantity of strychnia is less capable of aëration, and therefore the change produced in the blood in fatal cases of poisoning is equivalent to copious loss of blood.

Dr. Reid, of Aberdeen, and Professor Draper, of New York, have proved by experiments that in asphyxia black blood gets through the smaller vessels less readily than red blood, "and from which, for this reason, it may be inferred

that the state of vascular contraction is more effectually counteracted by red blood than by black blood."

Muscles which are less vascular are more prone to enter into, and remain in, the state of contraction than the muscles which are more vascular. Drs. Stannius and Brown-Séquard, by injecting blood into a criminal who had been decapitated, and into animals after *rigor mortis* had set in, found that it does away with this rigor mortis.

Therefore, Dr. Radcliffe feels justified in supposing that, as relaxation, not contraction, is associated with the presence, and contraction, not relaxation, with the absence of red blood, the action of the blood tells in preventing muscular action rather than in producing it. "That the action of the blood in vital motion may be really resolvable into that of electricity—that the blood may antagonize the state of action in nerve and muscle, because its oxygen has to do with the keeping up of that electro-motive condition in nerve and muscle which antagonizes the state of action in nerve and muscle, and which in muscle keeps up in addition the state of relaxation."

The Work of the Nervous System in Vital Motion.—Having briefly explained some of the chief centres of nervous action and their special function, and the effects of injury on them, Dr. Radcliffe passes on to the consideration of the causes of these phenomena.

He believes that a frog's legs contract more readily on section of the spinal cord, because the inhibiting influence of the electricity imparted to the muscles from the great cerebro-spinal nerve-centres has been removed.

The destruction of the spinal cord causes a loss of muscular tension, because the withdrawal of the electricity imparted to the muscles by the spinal cord must show itself not by contraction, but by a loss of muscular tension.

Spasm is due not to irritation, but to a lessening of the electrical tension, which leaves the muscles free to yield to the attractive force inherent in the physical constitution of the muscular molecules.

Trembling is substantially the same as spasm; some inhibitory influence is evidently withdrawn, which, while present, served to keep the muscles steady. There has been, as it would seem, a lessening of cerebellar action in particular—a change, perhaps, by which the cerebellum is made to take the lower level, so to speak, of the rhythmic nerve-centres which have to do with cardiac and respiratory movement.

Convulsion from injury to some parts of nervous system is thus explained :—

A given supply of arterial blood to an ordinary non-rhythmic nerve-centre is necessary to keep up electromotive action in that centre for a given time. Ordinarily, this supply of arterial blood to the centre is sufficient to keep up electromotive action in the centre all through the intervals which lie between the two moments when the centre receives fresh supplies of arterial blood, and hence it is that the electro-motive action of this centre is practically constant, and, because constant, unattended by the development of the instantaneous currents which give rise to the convulsion. But not so when the supply of arterial blood to the centre is insufficient to keep up electromotive action in the centre throughout the intervals between the moments when the centre receives fresh supplies of arterial blood, for then it is evident that the electromotive action will be inconstant, and, because inconstant, attended by the development of the instantaneous currents of high tension which may give rise to convulsion.

In fact, they are reduced to the lower level of rhythmic nerve-centres as before mentioned.

It does not seem that Dr. Radcliffe has quite appreciated or understood Professor Ferrier's experiments, or he would hardly be led to say—"in all probability the recent investigations of Dr. Ferrier only bring out the old facts in a new light by showing, not that the convolutions of the brain are mapped out into districts like certain underlying portions of the automatic cranio-spinal axis; but that these latter portions may be reached from a distance through the brain." He says very little else indeed about these important experiments, and this leads us to believe he has not studied them, or he might have adduced many as apparently confirmatory of his views, though we are inclined to think that Professor Ferrier would hardly agree with Dr. Radcliffe's ideas.

Voluntary Nerve-action.—The will may simply make the natural electricity and the natural molecular attractive force of the muscle do its work in this matter in their own way, without calling upon any vital force to render any assistance. Hence, there is no such thing as "nerve force" or "nervous influence" generated in the nerve-centres, in direct proportion to the functional activity of these centres.

Muscles act much in the same way as a piece of elastic does which is kept on the stretch. The fact that muscular action is attended by waste, which waste is in proportion to its activity, is accounted for by supposing that "the waste may have been incurred in restoring the state of *relaxation.*"

A muscle may cease to contract after a time, "because the electro-motive apparatus of the nerves and muscles has got out of gear by being kept in action too long."

The "stimulus" of a pin prick or a pinch is considered to depend on the pin or forceps accidentally closing electro-motive circles which were previously open; but how about a prick or pinch from non-conducting bodies?

Dr. Radcliffe does not wish to elevate the physical over the vital, but he believes that electricity is one modification of a great central cosmical law which rules over everything, and transfigures and spiritualizes matter, "a law which makes the old belief of multicity in unity and unity in multicity a sober fact."

Applying the theory he has enunciated to nervous diseases, Dr. Radcliffe endeavours to show that these depend not on an excited or hyperæmic state of the central nervous organs, but, on the contrary, on a loss of excitability, and on a deficiency of arterial blood.

Epilepsy.—The precursor of an epileptic paroxysm is a death-like pallor; this is often accompanied by sighing, and during the fit there is suffocation, both showing that it is due to some fault of respiration. The pulse is sometimes imperceptible, at others it rallies, and is hard and full, this is the *apnœal* pulse. Blood drawn from an artery during a fit is venous; therefore, there is no sign of any vascular over-action in convulsion, but the reverse.

In convulsion associated with *chorea* and hysteria, there is generally a sluggish circulation. In *fevers*, convulsions occur during the cold not the hot stage. In *Bright's* disease, Sir Thos. Watson thinks the stupor has more connection with a deficiency of red corpuscles than with uræmia. Dr. Radcliffe considers the convulsions are also connected with the poverty of the blood.

"And thus," he sums up, "convulsion, in all its forms, is found to be associated with a state in which the supply of *red* blood to the system is either arrested altogether or greatly interfered with." We have yet to learn that leucocythæmia is associated with convulsion, as in these cases we have always observed a relaxed, rather than a contracted, muscular condition.

The nervous state in convulsion is characterised by inaction in those parts which have to do the work of the mind, and are concerned in respiration. In *hysteria* and *chorea* the will is in abeyance, and there is a state of extreme nervous unrest.

Convulsions are not caused by inflammation of the nerve-centres; these are, in fact, starved for want of blood.

Convulsion is not a common symptom of inflammation of the brain or its membranes, nor of acute mania. In apoplexy it is probably due to the pressure or other damage caused by the extravasated blood. In "exalted or morbid irritability," so called, it may be still due to certain nerve-centres being starved for want of blood, rather than to their being over-fed with blood.

In *tetanus*, though the pulse may be hard and quick, there is no inflammation, but this state of the pulse is due to partial suffocation. The mind is depressed, the muscles have a tendency to go into a state of *rigor mortis*. The cord is not inflamed, but disintegrated. There is a general waste of innervation.

In *catalepsy*, cholera cramps, hydrophobia, and other forms of spasmodic disorder, there is no over-activity of the vascular system, but rather the reverse, and the mind is either in a deep sleep, fatuous, or prostrated.

In *dementia* there is often cramp in the calf of the legs, and mental depression is frequently accompanied by pain in the bowels. *Shivering* is evidently connected with a depressed state of the vascular system, caused by cold, and relieved by warmth. In *delirium tremens*, the tremor is also due to vascular depression; when inflammation or fever sets in the tremors cease. *Shivering* mostly affects timid people, and in *delirium tremens* the mind is dejected, in *subsultus* there is apathetic drowsiness. The condition of the nervous system is one of weakness.

In *neuralgia*, whether as a special affection or an accompaniment of rheumatism, gout, fevers, etc., it is associated with vascular and mental inactivity; in fact, inflammation relieves pain as in blistering, and lumbago is relieved by exercise.

In conclusion, Dr. Radcliffe believes he has established the following facts:—1. That the exaggeration of vital motion is not consequent on exalted vitality due to hyperæmia. 2. That vital motion is merely a mode of physical motion, for which the only key needed is that which is supplied in the natural workings of electricity and elasticity. 3. That amœboid movements are the simple result of terrestrial electricity. 4. That muscular fibres are analogous to amœboid bodies, and are in a state of relaxation from the action of electric "charge." 5. That nerves resemble muscles electrically, and that

muscles and nerves interact on one another. 6. That the work of circulation and nervous action is carried out by electricity. 7. That the due electromotive action of the nerve centres, and of all other parts of the nervous system, is dependent upon a due supply of arterial blood.

Such, briefly, are the views Dr. Radcliffe holds in respect to vital motion. There is certainly something to be said in favour of them, but the probabilities are that he has not yet discovered the secret of vital motion. It is no doubt true that contractility may, to some extent, result from a removal of an inhibiting influence, but it is hardly possible to assert that irritation does not produce or induce contraction by direct stimulation.

In cases of true hyperæmia, as in a healthy plethoric person, there is a greater tendency to contraction and a greater power; but passive hyperæmia has no resemblance to plethora, though Dr. Radcliffe seems to think it has; his views too of inflammation are hardly consistent with modern observations. Amœboid movements and muscular contraction must have a closer relation to nutritive changes than Dr. Radcliffe is inclined to believe; the electric disturbance, too, may be the result of these nutritive changes.

The state of the muscles in *rigor mortis* is very different from that of contraction in life, and, therefore, no analogy can be drawn between vital and post mortem muscular contraction. In life the contraction is due to a change in the shape of the sarcous elements, which become shortened in the direction of the fibres and lengthened laterally, hence there is a bulging of the muscles during contraction. After death, however, this bulging does not take place, or at least not to so great an extent as in life, and we believe that instead of the contracted muscles being shortened, they will be found to be actually lengthened; post-mortem rigidity is due, not to contraction, but to coagulation of the fibrinous matter contained in the interfibrillar juice of muscles.

It is no doubt a fact, and one that requires studying, that the secret of many of the changes both in the muscular and nervous system lies in the state of the red corpuscles; and that poisons and other abnormal influences act through these corpuscles, and cause changes to take place in various organs supplied by the blood, the particular seat of lesion being determined by other circumstances. Whether these are effected by some disturbance of the nutritive or electric condition, or of both, we are of course unable to say.

There is much in Dr. Radcliffe's book that will repay perusal, though it is written in a somewhat discursive manner, and pre-supposes rather more knowledge of electricity and its phenomena than most readers possess.

It is very possible that many of the experiments he quotes in support of his theory are fallacious, or, at any rate, do not warrant the interpretation he puts on them. For instance, in reference to electrotonous, he says :—" There is an outflow of free electricity from the voltaic pole into the galvanometer in the case where electrotonic movements of the needle are present; there is no such outflow in the case where such movements are absent; and so I am at liberty to suppose that the electrotonic movements of the needle * * * * may be nothing more than the natural consequence of the passage of free electricity into the coil from the voltaic pole which happens to be nearest to it." Now, this error is most carefully guarded against, and it has been demonstrated repeatedly that none of the battery current does escape to affect the galvanometer. Moreover there will be no electrotonous perceptible if the nerve be tightly constricted by a wet thread, which, of course, would not stop the battery current.

His theory, however, that muscular contraction is a sign of want of nerve force, and that consequently the violent exertions of lunatics are not due to an excess of this power, but the reverse, may be worth considering in the treatment of insanity, and may point to an application of galvanism even in acute mania.

A. H. N.

Leçons Cliniques sur les Maladies Mentales professées à la Salpêtrière. Par le Docteur AUGUSTE VOISIN. Paris: Baillière. 1876.

Dr. Voisin, the accomplished physician of the Salpêtrière, has published some of his clinical lectures delivered at various times since the year 1867. He commences by some remarks on classification, and condemns with a fervour which cannot fail to commend itself to some of his English readers the old classification by symptoms. Neither will he admit M. Morel's classification by ætiology. That which alone will satisfy him is one founded on ætiology, pathology, clinical examination, and pathological anatomy. Insanity he divides into six classes :—

I.—Acquired Insanity *(folie acquise)* which comes on in an individual hitherto sane.

Of this there are four varieties:—

(*a*) Folie primitive, or Idiopathic Insanity, which is divided into—
- That which is unaccompanied by an appreciable morbid lesion.
- That depending on morbid lesions, viz.:
  1. Active congestion. Hyperæmia.
  2. Passive congestion.
  3. Simple anæmia.
  4. Secondary anæmia.
  5. Atheroma.
  6. Tumours.

(*b*) Insanity following a nervous affection as epilepsy or hysteria.
(*c*) Sensorial Insanity.
(*d*) Sympathetic Insanity.

II.—Congenital Insanity *(folie native)* where the disorder has appeared at a very early age.
III.—Insanity from drink or poison.
IV.—Cretinism, idiocy, and imbecility.
V.—General Paralysis.
VI.—Senile Dementia.

Under the insanity which is unaccompanied by an appreciable morbid lesion, he places those cases where a moral cause has brought about the disorder. Such he believes to exist, but restricts them to a small number; he also thinks that cases of instantaneous insanity are very rare, and that a certain period of incubation is generally found. Insanity depending on *active congestion* is not to be confounded with the congestive stage of general paralysis. In the former the speech is perfect, the pupils are equal, the memory unimpaired. The patient's ideas may be exalted, but in a different way, and without absurdity. There is a vivacity and dignity in his mien and carriage. His conversation is rapid and curt. He may have hallucinations of general sensation and hearing, and the hallucinations often have reference to ideas of persecution. Microscopic examination reveals extravasation of blood both within and without the cerebrum. The meninges are not always vascular, and are never adherent to the grey matter. Both white and grey matter present capillary apoplexies, blood deposits, and crystals of various dates and in various stages; crystals of hematine are found in the walls of the vessels, but there is no hypertrophy of connective tissue. M. Voisin treats this congestive insanity

actively by antiphlogistic and derivative measures, blisters or cautery to the nape of the neck and small bleedings. As to drugs he gives digitalis and veratrum viride, and employs the wet sheet. He also advocates the use of the strait-waistcoat. Insanity depending on *passive congestion* occurs when the diminished tonicity of the arteries produces a stagnation of the blood in the capillaries. This he believes to be generally due to atheroma. *Simple anœmia* may produce insanity, especially in young women. It is characterised by depression—melancholia, or *melancholia cum stupore*. *Secondary anœmia* may also cause insanity, such as accompanies the tubercular or cancerous diathesis. Such patients are not violent, though they may be restless and agitated. Their malady is characterised by illusions and hallucinations of sight and hearing—such as are found in patients who have lost blood in other ways. The treatment should be tonic and supporting, and is attended with very favourable results. *Atheroma* of the heart and large vessels is apt to produce a form of insanity marked by hallucinations, and proceeding thence to general mania. Our diagnosis may be assisted by auscultation of the heart, by the sphygmograph and opthalmoscope. There is a tendency to fatty degeneration of the brain-substance: hence the malady frequently terminates in dementia. In two cases M. Voisin found tumours in the brain; in one there were two tumours, in the other six hydatids. Such, he tells us, are rare in France.

The next lecture he devotes to the consideration of a form of spinal meningitis localised in the posterior portion of the cord, which comes on in the course of general paralysis. This he believes to be an extension to the spinal membranes of the inflammation of the cerebral membranes in one of the congestive attacks which are peculiar to this chronic meningo-encephalitis. There is always to be found considerable local pain, a certain sign of spinal meningitis. There is also an ataxic affection of the extremities due to a sclerosis of the posterior columns. This condition often precedes the epileptiform attacks which occur in this disorder. Another symptom occasionally met with is sciatic pain. The patient complains of a sudden pain extending throughout the length of the nerve, accompanied by considerable tenderness when the spinal apophyses of the lower dorsal vertebræ are pressed. In one case these phenomena were preceded during four days by nausea and vomiting. The sciatic pain was unilateral, not bilateral. On examination in an early stage the pia mater

and arachnoid covering the surface of the cord are found to be vascular, and there may be seen miliary granulations, thickened vessels, and a proliferation of connective tissue. Later we find the meninges thickened, the arachnoid opaque and sometimes adherent, with calcareous incrustations and fibro-cartilaginous *plaques* analogous to those found in the pleura and peritoneum after inflammation of those membranes.

M. Voisin commences his fifth lecture by insisting strongly on the fact that insanity is a somatic disorder, and he is, he says, more and more convinced that a purely moral treatment is insufficient to effect the cure of it. He proceeds to enumerate the morbid lesions he has met with in those dying insane. These are congestions, apoplexies, extravasations of hematine and hematodine, dilatations of the capillaries and necrosis of the vessels. Atheroma is one of the most frequent, seldom to be discovered except with the aid of the microscope, chiefly found at the bifurcation of the vessel, and rarely extending throughout its length. It produces ampullary dilatations, and these are followed by aneurism. M. Voisin has never met with any patient whose malady was of two months' standing, in whose brain he did not find one or more of the lesions above-mentioned. In the brain of those who die after an acute attack of a few days he has found an intense hyperæmia of the cortical substance, and a marked injection of the smaller capillaries. He then describes the alterations in the brain-cells, which are of three degrees. First, the protoplasm undergoes a fatty and pigmentous degeneration, the nucleus and nucleolus remaining intact as well as the axis-cylinder. Secondly, the protoplasm begins to be absorbed, the cell becomes opaque, granular, and irregular, the nucleus and nucleolus are barely visible in the darkened mass, and the cylinder is atrophied and filiform. Finally, the protoplasm disappears, the cell appears as an isolated body, varying in shape, the axis-cylinder being detached, granular, fatty or pigmentous, having the remains of the nucleus in the centre. These alterations are the consequence of the obstacles to the normal flow of the blood, the lesions of the vessels and extravasations which precede them. Another fact is of great interest. The alterations in the brain-cells are not found to the same extent in the different parts of the cerebrum. There is a localisation according to the form of the insanity. In partial insanity, with sensorial disturbance and hallucinations, and in partial

sympathetic insanity, the lesions are seen in the optic thalami and parietal convolutions, especially the first in the upper portion (*lobule paracentral*), while the frontal convolutions are healthy. When the insanity is general and complicated by incoherence or dementia, the alterations are perceptible in all the convolutions. The loss of consciousness of the disorder and the absolute belief in the reality of the delusions are evidence of the extension of the disease to the frontal convolutions. Certain observations of M. Schiff confirm these views. He found that excitation of the peripheral nerves produced an increase of temperature in the nerve-centres apart from all changes of the circulation; and M. Voisin tells us that excitation of the special nerves of hearing, smell, and sight increases the temperature in the parietal convolutions. He has often met with patients suffering from cataract who have had illusions and hallucinations ending in insanity through excitations transmitted by means of the optic nerve. And removal of the cataract cured the insanity. In the seventh lecture he pursues this subject further. He is of opinion, contrary to that of some writers, that hallucinations depend on excitation or lesion of the external organs of sense, at any rate in a certain proportion of cases. With the assistance of M. Galezowski he examined the eyes of twenty-eight patients who suffered from primary hallucinations of sight, and of the twenty-eight twenty were found to have lesions of the interior of the eye, two having glaucoma and eighteen cataract in various stages. All the eighteen had had, prior to the hallucinations, sensations of seeing black flies, spiders, or specks with impaired eye sight. Hallucinations which have such an origin may be distinguished from those which are purely psychical by disappearing when the eyes are blindfolded, or when it is dark, or when total blindness supervenes. The mental state is affected by the objects imperfectly seen, which create fear, doubt, or terror; or the lesions of the eye may create in the optic centres a state of irritation which gives rise to false and exaggerated sensations. In the case of psychical, or psycho-sensorial hallucinations, memory and imagination are first disordered, and the hallucinations are a secondary consequence. There are hallucinations of hearing of a similar kind depending on hyperæsthesia or irritation of the ear. These vanish if there is complete silence, or if the ears are stopped, and are often unilateral.

A certain class of insane patients, according to M. Voisin,

suffer from a sthenic pathological condition analogous to the "*sthenie*" of Brown. They may be known by their physiognomical characteristics. Their complexion is yellowish; the forehead, nose, and lips are drawn and pinched; the skin wrinkled; the whole countenance thin and miserable. The body and limbs are also emaciated. Amenorrhæa and constipation are present, together with anuria from spasm of the neck of the bladder. All the secretions are scanty, and the skin dry. The pulse is small and tense, as may be demonstrated by the sphygmograph, the trace being often nearly a straight line. The state of the heart is often the directly opposite, the impulse being violent, so as to overcome the resistance of the spasmodic contraction of the peripheral vessels. The result of the latter is an anæmic condition of the nervous centres, and a disturbance of the relations of these parts. The patients chiefly suffer from melancholia or melancholia cum stupore: they refuse their food, and decline rapidly. The treatment is by means of the chlorhydrate of morphia. The sthenic condition gradually disappears, and the complexion improves as the arterial tension lessens. The fact that during any febrile disorder the mind of an insane patient frequently becomes clear, may be explained, according to the author, by the fever having produced in the brain a paralysis of the vasomotor nerves, and thus the sthenic condition of the vessels is diminished, or, for the time, removed. Besides morphia, baths and the constant current are of service to overcome the condition of spasm.

M. Voisin tells us that neuralgic pains are common amongst the insane, and may be felt in the body, limbs, or head, in the genital organs both internal and external, and may be a pain, a sensation of heat or cold, pinching or dragging, lightness or heaviness, giving rise to various hallucinations or delusions. It may also be of the nature of an *aura*, and may rise from the limbs or genital organs to the head. Hyperæsthesia of the ganglionic system may bring about a constant craving for food, a constant desire to pass water, or sexual excitement. The treatment of such cases is by means of subcutaneous injections of the chlorhydrate of morphia. The next lecture is on sympathetic insanity, which takes its origin in some organ at a distance from the brain on which it reacts. The origin is often difficult to discover; but it must be discovered, as the lesion must be cured in order to cure the insanity. Uterine affections are often the starting point of the disorder, and a case is related where insanity of more than six years' stand-

ing was cured by injections of nitrate of silver into the uterine cavity. In two autopsies of patients suffering from sympathetic insanity, the abdominal ganglion of the sympathetic nerve was diseased, the nerve-cells being diminished in number, atrophied, or filled with pigmentary and fatty granules. Insanity may also depend on maladies of the intestinal canal or liver, on worms, on cancer of the stomach, gastric disorders, and lung disorders. The next lecture is on the insanity of early life, and in the following the author narrates some interesting cases of insanity arising out of the events of the siege and Commune, and then passes to the consideration of Tubercular Insanity. The cases to which he gives this name are characterised almost always by melancholia, by hallucinations of sight, and delusions which urges the patient to suicide; occasionally, though rarely, there may be delusions of riches and grandeur. We may also sometimes observe symptoms akin to those of tubercular meningitis, such as partial paralysis of the face or limbs, together with symptoms of tubercle of the lungs and bones and of spinal meningitis. The morbid appearances may be compared with those of general paralysis, from which they are distinguished by the existence of tubercular granulations in the capillaries of the cortical substance; or they may be the lesions of tubercular cerebro-spinal meningitis, or small isolated tubercular masses visible in the cortical substance with the naked eye. This form of insanity may be arrested, but the patients are always characterised by a mental weakness, which indicates that the brain has undergone some definite change. It bears no relation to the insanity which supervenes in persons who have reached an advanced stage of tubercular disease. In the next lecture M. Voisin considers the mental symptoms observed in acute and chronic alcoholism. Alcoholism may, he tells us, give rise to every variety of insanity, being a general disorder. The acute symptoms are chiefly melancholia, stupefaction, delusions of persecution leading to suicide, imaginary terrors, and sometimes delusions of pride and self-satisfaction. The chronic mental affections are amnesia with or without aphasia, difficulty of articulation, weakness of character and want of energy, a blunting of the intellect and imbecility. Drinking patients are liable to brain disturbance while suffering from acute disorders, as acute rheumatism, pneumonia, pleurisy, or injuries. He does not find that absinthism is characterised by symptoms differing from those of alcoholism. He is of

opinion that the legal responsibility of chronic drinkers is seldom complete, inasmuch as all their faculties, both moral and intellectual, may be affected; at the same time he thinks that the doctrine of absolute irresponsibility is, as a rule, inadmissible. The concluding lecture is upon the affections ot speech in general paralysis. The work is illustrated by plates of microscopical anatomy and by some photographs of patients. We commend these lectures to our readers; they represent the results of investigations conducted in a true pathological spirit.

The Superannuation of Officers in British Hospitals for the Insane: Its Principle, Policy, and Practice. By W. LAUDER LINDSAY, M.D., F.R.S.E., Physician to the Murray Royal Institution for the Insane, Perth. J. and A. Churchill.

Dr. Lindsay has in this little book tabulated and explained all the information available in regard to the very important subject of retiring allowances to the officers of asylums. At much pains he has obtained the facts from the various institutions; with still greater labour he has arranged them in the forms most suitable for reference, and he has commented on them judiciously and enthusiastically. At the outset he very shrewdly remarks that the Governors of Asylums are often guided less in regard to such a question by what is right in the abstract, "than simply by the practice of their neighbours." By diffusing information, therefore, as to the practice of pensioning, wherever it has been adopted, Dr. Lindsay hopes to bring in a "fashion to grant superannuation allowances to all classes of officers and servants after fifteen years' service, at the rate of about two thirds the total money value of office at the date of retirement."

For his data the author went to the Irish Lunacy Authorities, to Dr. Kitchen's valuable pamphlet on the subject, and to the officers of the English and Scotch Asylums and their Reports. Pensions have been granted in twenty-eight English county Asylums, the criminal Asylum at Broadmoor, one borough, and one idiot asylum, and in five registered hospitals. In Ireland they have been granted in fifteen district and one state Asylum; and in Scotland in four Royal Asylums. There seems to be no

provision in the statutes for granting pensions to the officers of the Scotch district asylums, an omission which really lessens the value of salaries and wages in those institutions by from ten to twenty per cent., as compared with the Royal Asylums. We do not think it creditable to the Scotch Board of Lunacy, who have so much power in regard to the district asylums, and who have taken such an interest in them, that a successful attempt to remedy this anomaly has not been made. That Board is not credited with any great reluctance to go to Parliament to get amendments to the Scotch Lunacy Acts, in regard to matters which it considers important. In the long run it would do more for lunacy in Scotland to tempt good men to enter that branch of the profession, than many things that are now more thought of. Our Scotch brethren have this grievance, and they ought not to be content; they ought to stir in the matter. The higher powers will be all the more likely to help those who help themselves.

The total yearly expenditure in England on pensions is over £10,000, in Ireland, £2,300, and in Scotland about £700. Dr. Lindsay points out the marked contrast in the expenditure in different asylums on pensions, as illustrating the very different views asylum committees take of their duty in this respect. It seems to be at present a matter of chance whether an officer gets a large or a small pension, or gets a pension at all. In Table 5 will be found in detail the amounts paid to different classes of officers in the different institutions. The Royal Asylum, Glasgow, heads the list with £600 a year to Dr. Mackintosh, certainly a well-earned reward for long and good service. Kent rewards its late asylum superintendent with £150 a year, fortunately the lowest sum in the table. It seems quite common in Ireland to reward faithful service in the case of ordinary attendants, with sums of four, five, six, and seven pounds a year. The author draws a very marked distinction between officials who have, and those who have not, charge of patients in the amount of pension he thinks they ought to draw. At p. 34 an interesting list of the amounts of salaries of the medical officers of asylums during active service is given. £1,000 a year is put down as the highest money payment. Dr. Lindsay thinks this small compared with the sums earned in practice by successful medical men, by whom £2,000 a year, he estimates, is commonly made. He then goes on to the rather delicate question of the money value of the official allowances of asylum officials, putting down in

black and white what he considers to be their equivalents. We need scarcely recommend all medical superintendents of asylums to study this table. It has the interest and value of enabling them to see themselves as others see them, and it excites a not unnatural curiosity as to their neighbours' affairs, *e.g.*, who the happy man was who made £900 a year by consultation practice; or the equally fortunate individual with the boarder who paid him £1,000 a year. It certainly does not impress one with the money to be made in our specialty, when we see that Dr. Lindsay only assigns a total money value of £1,100 a year to the four best paid institutions in the United Kingdom, viz., the Edinburgh, Essex, Glasgow, and Wakefield Asylums. We much doubt, however, whether the holders of those appointments would commute for that sum.

The author then gives tables showing the duration of service and age of the various pensioners, and the period of their enjoyment of pensions up to this time. No Asylum pension has been enjoyed for twenty years. This fact should be vigorously pressed on the notice of grudging committees by expectant annuitants. The common belief that they never die is clearly not true in the case of those who have had the charge of the insane. It is a most undoubted fact that asylum work is wearing work, and that it tends to undermine the tone of the nervous system. Who ever heard of an old asylum official who was not hypochondriacal at times? Dr. Lindsay also points out the risks to life and limb that are inevitable to the service. He says that during twenty years five serious attempts have been made on his own life. We have known many cases of attendants, whose nerve has been permanently broken after a struggle with a patient. The "morbidly irritable pugnacious condition that is so naturally the result of the long-continued anxieties of office," is a real risk. "That they allowed their tempers to get the better of their judgment, is only a vulgar way of putting a pathological fact," may be very true, but there are obvious limits to its universal application, among asylum attendants for instance. In practice, we must assume the truth of the doctrine of the freedom of the will in such cases.

The principle which ought to regulate Public Asylum authorities, is to regard the management of the insane as so much more exhausting and dangerous both to mind and body than any department of H.M. Civil Service, or even H.M. Military or Naval Service, that in

addition to the benefits of the Civil Service Superannuation Act aforesaid, Asylum officers should be entitled to certain special pension-privileges represented by—

(*a.*) Nominal additions to length of service or age, or by

(*b.*) Absolute additions to the maximum grants under the Act of 1859.

The practice which ought to prevail should be—

(*a.*) To make a specific distinction between those officers and servants who have charge of patients, and those who have not; and

(*b.*) To give a much higher rate of pension to the former—to wit, to Medical Superintendents, Matrons, and Attendants of both sexes, according to the degree and character of their responsibility, the exhausting and dangerous nature of their work, and the persistency of their worry.

The task of writing this small book is a most public-spirited one on Dr. Lindsay's part. He deserves the thanks of all asylum officers. It will direct needed attention to the matter; and he will be a very incurious asylum official who does not master its contents, while he will not be a very wise superintendent who does not see that a copy is permanently placed along with the Lunacy Acts in his Committee room.

The Increase of Mental Disease.

Dr. Jamieson, Physician to the Royal Asylum, Aberdeen, has delivered an address to the North of Scotland Association, in which, after describing the manner of treating the insane in the Old Asylum at Aberdeen, when he first became connected with it, he lays stress upon what he calls "the alarming increase of insanity in our time." The following is Dr. Jamieson's interesting description of things as they were in 1840:—

At the beginning of the century, such of the insane as were poor and required medical treatment in Aberdeen were lodged in the back of the basement of the Old Infirmary, in a part of the building partaking in many respects of the character of a cellar, save that it was not underground; and surely it was a great improvement on this mode of care when it was changed to the form of a separate hospital, even although constructed under the asylum ideas of that day. The house so built is not now in existence, but it was in partial use until about 1850, and was in full operation when I first became connected with the psychological department of medicine in 1840, forming, indeed, the larger part of the then working asylum. The floors were of stone, the cubic space of the separate rooms was under half of

what would now be insisted upon as sanitary essential. Some of them were entirely dark when the door was shut, and none of the rooms, though thought to be adapted for maniacal cases, had windows above half a foot square, placed out of reach in a high corner, and guarded outside by a strongly-bolted shutter. The *cell*—so was the room nominated—may be said to have contained nothing in the way of furniture, often not even a bedstead; for the straw upon which the patient lay was spread upon a built platform in the further corner, or behind the door, which was of plank, strongly fastened with a ponderous lock, and pierced with a slit, iron barred, for inspection. I am, of course, describing what were the worst points in our local Asylum, as a contrast to what exists now. The patients were neither medically neglected, ill fed, ill clothed, nor cruelly used, unless it might be in the way of personal physical restraint, and all the surroundings were but the reflection of the social and medical ideas of the time. Some of the customs and remedies in vogue would now make the inquirer stare—such as the bath of surprise, the rotatory chair, the application of jolting in cases of obstructed discharges, the idea of compulsion which ruled the moral treatment of the disorder, and the very general application of bodily restraint in difficulties of management of the individual. The suicidal were restrained; the destructive had their hands fastened or covered; the violent were locked up or chained up, or both together; and runaways had their legs fastened or impeded. If you would not eat, you had to swallow per force; if you ate what was not food, you had to wear a mask; and if you would not lie in your bed at night, a considerate kindness ingeniously tied you into it. The gradual amelioration and ultimate disappearance of all this have occurred in our own time. In no department of physic has the change been so progressive, so great, and so satisfactory.

Dr. Jamieson entertains decided opinions concerning an increase in the production of insanity, which he has enunciated very positively. But we think that no one who has given serious attention to the question will feel quite satisfied with the grounds on which he has based his confident opinion. The "narrowness of view and latitude of assertion" which he discovers are plainly not all on one side.

I believe that the most remarkable medical phenomenon in our time has been the alarming increase of insanity. Crime has been diminishing; prisons, here and there, have been shut up; but who hears of an asylum being shut up anywhere, or even of its numerous inmates decreasing? Are we but changing lawlessness for incapacity, cunning for weakness, and are we better because fools accumulate and thieves decay? The fact has been denied, as most facts have, but I have heard of no proof of its contrary, beyond what has been based either on narrowness of view and latitude of assertion, or that sociological optimism that insists that no evil can possibly increase in this wonderfully enlightened age. But how stands the case as exhi-

bited in the light of local experience? In 1844, or thirty-one years ago, there was one asylum in Aberdeen, doing all for the district that the present existing Institution does, or more fully, and it contained 150 persons; now it contains 480. It has more than trebled the number of its inmates in thirty years. Has the population in this part of Scotland trebled itself? Has it doubled itself, or even become a third more numerous in the same time? But this is not all; there are in the neighbourhood three other asylums in the shape of poorhouses, none of which existed then, and a hundred additional lunatics may be credited to them. The last report of the Commissioners to Parliament shows that there has been a continuously growing ratio of lunatics in the population of Scotland since their appointment; that it increases faster than the population, and also faster than the pauperism of the nation, and that the increase is even yet greater in England. In 1840 (I take this date because it is the date of my own acquaintance with this special department of the profession) there were just seven asylums in Scotland, now there are twenty-four, exclusive of eight private establishments and the lunatic wards of more than a dozen poorhouses. Last census made one patient in every 430 of the population; whereas the census before, it was but 530; and lately, I have heard the proportion surmised to be one in 300.

Surely Dr. Jamieson must feel on reflection that these are far from adequate data on which to base the unqualified assertion that "the disease increases in the population, growing like a malignant fungus, living on the decaying vitality of the trunk from which it has parasitically sprung." At any rate, a remark which he makes in another part of his address might have suggested to him that there are other causes than an increase in the production of insanity which will account for much of the undoubted large increase in the registered insane population. "Half-a-dozen Acts of Parliament," he says, "within less than twenty years, have assured the public of Scotland that their lunatics were not overlooked or forgotten—but overlooked in a less metaphorical sense—by as many inspectors as there are Acts." Have these half-a-dozen Acts of Parliament had no effect in multiplying asylums and swelling the number of registered insane persons, apart from any increase which there may have been in the production of insanity? Whether the disease be on the increase or not in this generation, it admits of no doubt that Dr. Jamieson's picture must produce an erroneous impression upon the minds of those who have not investigated the subject.

But Dr. Jamieson is by no means enamoured of the tendencies of the present age, and finds no difficulty in discovering the causes of the degeneration which he assumes.

The causes which devitalise the nervous system of the individual ultimately, have first injured the race generally, and become apparent in the advancing degeneration of the community. Is there such a degeneration? I am aware that to say so raises a clamour of dissent. Are we not bigger, braver, better, wiser, more long-lived, more everything that is admirable than our ancestors? Does not every authority declare so, except your mere narrow-headed *laudator temporis acti?* Decay of vital force indeed! Do not censuses show increasing rates of population? Do not statisticians and insurance tables declare a longer average life? Are not old pests, plagues, and poxes less fatal? Are not old armour and accoutrements found small for our better fed and more powerful limbs? And, in short, instead of falling away, are we not in a state of evolution and progression? But I for one do not see it. I believe that there is a great increase in diseased and half-invalided conditions; an increase in all diseases of the nervous system, or an increase of the nervous factor in all diseases; that there is an anæmic physiognomy prevalent in all town inhabitants; a readiness to break down under trial; a tendency to be unduly influenced by slight causes; and a degeneration of physical character, as seems to be well recognised by those who enlist for military and naval services, or who require to replace vacancies in the police, or amongst watchmen, warders, and such like. The physical deterioration is thought to be more observable in the male than in the female section of the community, and may be remarked on all occasions which lead to those of similar station being brought together at kirk, market, or assembly. There is, one might say, a harmonious moral retrogression also, in the ruling selfishness and loss of manliness that can find no pleasure in art, or effort, or sacrifice, but only strives, with any fervour, at such aims as exacting more and more money for worse and worse work, with less hours of exertion, and shows less and less respect for all idea of duty. The very movement of women for what is called their rights, so far as it means a wish to be independent of men, is but a deflection of the balance showing loss of weight in the opposite scale.

We cannot say that we share Dr. Jamieson's alarm. The world has been going wrong from the beginning—stoning, burning, crucifying its prophets who were sent unto it, and yet, somehow, it has contrived to get on. When one nation drops the torch, another nation takes it up and carries it forward, and we are not of those who think that Englishmen or Scotchmen have touched the culminating point of progress and are destined to end the process of humanization on earth.

> But Rome decayed, and Athens strewed the plain,
> And Tyre's proud piers lie scattered in the main,
> Like these thy strength shall sink, in ruin hurl'd,
> And Britain fall, the empress of the world.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *American Psychological Literature.*

By T. W. McDowall, M.D., Northumberland County Asylum.

American Journal of Insanity. Vol. xxx, January to April, 1874.

January, 1874. No. 3. *Pathology of Insanity*, by Dr. John P. Gray. *On Expert Testimony in Judicial Proceedings*, by Dr. John Ordronaux. *On the Perivascular Spaces in the Nervous Centres*, by Theodore Deecke. *Two Cases of Paralysis*, by Dr. Daniel H. Kitchen. *Phosphorus in Insanity*, by Dr. Willis E. Ford. *Hæmatoma Auris.—Recovery*, by Dr. E. H. Van Deusen. *Clinical Observations on the Dementia and Hemiplegia of Syphilis*, by Dr. M. H. Henry.

April, 1874. No. 4. *Syphilitic Affections of the Nervous System*, by Dr. W. H. Broadbent. *Is Habitual Drunkenness a Disease?* by Dr. John Ordronaux. *On the Germ-Theory of Disease*, by Theodore Deecke.

Vol. xxxi.

July, 1874. No. 1. *Pathological Insanity*, by Dr. John P. Gray. *Psychical or Physical*, by Dr. Charles H. Hughes. *Feigned Insanity, the Waltz Case. Clinical Cases, Syphilis*, by Dr. Willis E. Ford. *The New Lunacy Code.*

October, 1874. No. 2. *Proceedings of the Association of Medical Superintendents of American Institutions for the Insane. Homicide.—Suspected Simulation of Insanity*, by Dr. I. Ray. *State of Missouri v. Anton Holm, Murder in First Degree*, by Dr. Charles H. Hughes. *Psychological Medicine considered as a Speciality.*

January, 1875. No. 3. *The Duncan Will Case*, by Dr. I. Ray. *Artificial Alimentation*, by W. A. F. Browne. *Case of Perrine D. Matteson. Delirium Tremens*, by Dr. Daniel H. Kitchen. *Hospitals for Inebriates.*

April, 1875. No. 4. *State of Missouri v. Benj. F. Cronenbold: Murder in the First Degree*, by Dr. C. H. Hughes. *Case of Isabella Jenisch—Epileptic Insanity*, by Dr. J. Ordronaux. *General View of Insanity*, by Dr. John P. Gray.

Vol. xxxii.

July, 1875. No. 1. *Responsibility of the Insane, Homicide in Insanity*, by Dr. John P. Gray. *In the Matter of Richard Beckwith, a Lunatic.*

October, 1875. No. 2. *Responsibility of the Insane, Homicide in Insanity*, by Dr. John P. Gray. *On the Vicarious Function of the*

Cerebral Hemispheres and Convolutions, considered in relation to Unilateral Wounds of the Head and Insanity, by Dr. C. H. Hughes. *New Cerebro-Psychical Diseases*, by Dr. W. A. F. Browne.

Pathology of Insanity.—In this paper Dr. Gray states very shortly the results of extended observations he conducted at the New York State Lunatic Asylum. As all careful microscopic observations are of great value, the following paragraphs from the paper are given:—

On comparing the various alterations displayed by the cases studied, it seemed to be a phenomena of quite regular occurrence that the morbid process affects in the beginning and in a general manner the central elements, viz., the nerve cells and neuroglia undergo changes in their intimate composition and arrangement, before the integrity of the conducting elements of nerve fibre become notably impaired.

The increase of interstitial amorphous matter between the fundamental nerve elements has been prominent in every case, and, while the connective fibres have been multiplied considerably beyond their natural degree, the scarcity or complete absence of connective nuclei has also been no less constant.

In chronic mania and dementia the increase of interstitial, granular, amorphous matter and connective fibres, or, in other words, the hyperplasia of neuroglia, both in the grey and white substances, has been characteristic of the disease, reaching the highest limits ordinarily in the grey matter and appearing more conspicuously in the anterior than in the posterior regions of the brain. The alteration has displayed itself in some places in close connection with the capillaries; generally, however, the degeneration has originated in localized regions, distinctly parcelled out, as it were, from the rest of the cerebral tissue, circumscribed in a cystic cavity, formed by condensed minute connective fibres. These isolated masses are constituted of a granular and friable matter becoming semi-transparent in its advanced stages, and in some cases converted into a serosity.

The granulations which constitute these morbid products would not seem to be fatty, as they are neither dissolved by ether, chloroform or alkaline solutions, and become darker and more distinct when treated by acetic acid, and while preserving their solid form they do not exhibit a homogeneous mass. The study of these developments would lead to the conclusion that they take their origin in the interstitial elements of the nerve tissue, and that in their growth they determine, through a merely mechanical compression, the re-absorption of the nerve cells and fibres. The cavities in which they are contained vary in size from that of the nuclei of multipolar cells to that which can be seen by the naked eye, and constitute the pisiform cavities which give to the brain sections in cases of chronic insanity the Gruyere cheese appearance described by French alienists. That such pisiform cavities may occasionally result from minute capillary hæmorrhages is a well-acknowledged fact. Then the surrounding tissue of the cavity displays a peculiar discoloration, changing from yellow to a dark rusty

brown or ochre colour, due to infiltration of the colouring matter of the blood. The cavities here described exhibit no such tint permeating the surrounding tissues, nor are they in direct connection with the capillary vessels, as the cysts proceeding from old apoplexies always are. In the condition under consideration the brain elements disappear by re-absorption, in scattered points, under a circumscribed necrobiosis originating purely from local conditions of the morbid process developed in the brain.

The trouble which brings about the alterations in the cerebral tissue in general paresis, it is acknowledged, originates mainly in the vascular system, as has been shown by the researches of Virchow, Westphal, Salomon, Lockhart Clark, Sankey, and others, and to this origin must be ascribed the epileptiform symptoms ordinarily attending general paresis, and deriving their source in local disturbances of the cerebral circulation. The change begins in the adventitious sheath of the arteries and veins, the arterioles and larger capillaries, first described by Virchow and Robin, the so-called lymphatic space of His which becomes distended in a small portion of its traject, sometimes uniformly around the minute vessel within, at others bulging out laterally; the enlargement thus produced being filled with lymph, granular cells, and hæmatic crystals or granulations. More generally the vessel is twisted or elongated, and exhibits a fine fatty degeneration of its coats which are often torn asunder, allowing the blood to escape into the lymphatic surrounding sheath, where it coagulates and ultimately undergoes a fatty change. The nervous elements in the vicinity of the blood-vessels are also involved in their structure, and they equally undergo an alteration characterized by a multiplication of the connective fibres and molecular granulations. To such a proliferation of connective elements are due the peculiar firmness and pellucid appearance with change of colour displayed in the grey substance, and which Baillarger has described as one of the characteristic pathological changes of the brain in general paresis.

The condition of the brain in epileptic insanity, and especially the alterations in the medulla, agree in appearance and character with those pointed out and described by Dr. Echeverria in his work on epilepsy.

The instance of syphilitic insanity adds further proof to the fatty degeneration which constitutional syphilis brings about in every tissue.

A fact which seems of the utmost importance is the similarity of histological changes attending the different forms of insanity. If such regularity is displayed in future investigations, as I am strongly led to believe will be the case, this fact will practically confirm the principle, that in insanity we have to contend with only one disease, manifesting itself under different phases in its progress and results. The correspondence between the degenerations of the cortical substance and those in the central ganglia, pointed out in France by Luys, Laborde, and Charcot, and in this country by Echeverria, has found

further confirmation in these researches; whereas, lesions in the structure of the third left convolution, as Bouchard and others have already shown, have not necessarily involved the existence of aphasia or amnesia.

The capillary system has participated in the morbid process in every instance, but it has seemed to be primarily affected, particularly in general paresis and epilepsy. The nature of the alteration has been ultimately atrophic in every case, that is, resulting in the disappearance of central nerve elements, to wit, nerve cells and fibres, with a remarkable hyperplasia of amorphous matter and connective fibres. In acute cases the involvement of the fundamental elements in the morbid process has appeared to have taken place rapidly and without any observable effusion of lymph throughout the tissue. Such a morbid process cannot be looked upon as of an inflammatory character, for no proliferation of capillary vessels, or the so-called inflammatory corpuscles of Bennet, have occurred. The trouble here has rather betrayed itself in a condition of intense irritation, exhausting the power of the cerebral cells, and ultimately bringing on their consecutive necrobiosis.

On the Perivascular Spaces in the Nervous Centres.—Having briefly referred to the views of previous observers, Mr. Deecke proceeds to detail his own results, obtained from the examination of nineteen brains of insane persons, and of one from a young man killed whilst in good health. He invariably found a covering surrounding the vessels penetrating the brain substance, and a sheath inclosing the vessels. The sheath-contents consisted principally of lymph, and by injecting the lymph ducts of the pia mater a direct communication was proved to exist between the former and those surrounding the vessels of the pia mater. As to the true nature of the ducts and membrane, Mr. Deecke adheres to the opinion of the first discoverers, Virchow and Robin. "Besides the homogeneous tunics there are no other membranes visible, but the two in a close connection form the walls of the vessels themselves. I have never observed, either in sections, or in carefully insulated specimens of larger vessels with numerous branches, after removing the sometimes very delicate tunics, any traces of another which could be regarded as an adventitious coat of the vessels. But the peculiarity that even ducts of a true capillary character also show the presence of these membranes and in direct communication with those of larger branches, renders it more than probable that they represent nothing more or less than the very adventitious coat itself." There may be deposits of fat globules, pigment, crystals, &c., in the space between this membrane and the vessels, but such are not necessarily morbid.

Mr. Deecke thinks he has satisfactorily settled the question as to the nature of the filaments crossing between the dilated tissue of the brain and the enveloping sheath of the vessels. "In preparations taken from hardened brain, as the hardening process depends upon a

deprivation of water, the vessels will be found always in a more or less shrivelled and contracted condition. The really existing physiological space enclosed by the adventitious tunic will very rarely be visible even in the thinnest sections. And the more the action of the hardening agent advances, the less distended will these spaces appear; and in most of the cases we may find the thin adventitious membrane so closely adherent to the media that neither a separating space nor the membrane itself seems demonstrable by our optical instruments. It is for this reason that in so many cases the natural condition has been overlooked. The space produced by the contraction of the adventitia was accepted as a true canal around the vessels. The fact that it was possible to fill these canals by an injection, especially by the use of the puncturing methods, could only confirm this theory. In other cases in which the still expanded adventitious covering was seen containing the organised lymph, this state was confounded with the former one, and Batty Tuke and others, in the belief that the one false interpretation had to fall with the other, created the new theory of this hyaline membrane. Nevertheless, he is indebted to Virchow and Robin for the explanation of what he himself calls the adventitious coat.

"Although in all specimens of hardened brain, as above-mentioned, the true adventitious membrane of the vessels is only with difficulty demonstrable, it is virtually always existing. In a closer examination of the external surfaces, such vessels will never show the smooth appearance of the medium coat or the simple membrane of a capillary. They are uneven, shaggy, and trimmed with small bunches of twisted fibres, when insulated; and in sections there are in these artificial spaces the same transversely crossing filaments observable as in the above described spaces of a morbid origin. The application of higher and well-defining powers will leave no doubt as to the determination of their nature. They represent the so-called Deiter's cells of the connective tissue of the brain substance, these peculiar brush-like or radiant-like cells which, adherent to the adventitious coat of the vessels, in consequence of its contraction, appear as drawn out from the molecular mass, which composes the parenchyma of the nervous centres."

American Association of Asylum Superintendents.—Various matters of more or less importance were discussed at the meeting of this body in May, 1874.

A paper by Dr. Ranney makes special reference to the employment of restraint. Few in this country will agree with him when he says, "In cases of suicidal patients, such restraint as is implied in the use of the covered bed, or crib, seems to me eminently appropriate at night, and affords a full equivalent for watching, or other supervision, and it is less liable to abridge sleep than any other measures affording the needed security . . . . . And then how shall we treat that so frequently fatal disease, acute delirious mania, if we do not apply restraint to secure recumbency? Without such restraint as will

secure it, and in the best possible way conserve the physical forces, there is no success. In many, or most other cases where restraint is applied, increased attendance will wholly, or in part, take its place, but in this disorder such substitution is more likely to be attended with ill results than any needful application of mechanical restraint, for all experience goes to show that the victims of this disorder never yield to any superior force; and, moreover, the simple presence of persons tends to perpetuate the cerebral irritation and mental excitement." This subject may, with great advantage, be shelved for a number of years; certainly it will require a very able man to say anything new concerning it. To expect uniformity in opinion and practice is quite absurd and contrary to reason. It is, therefore, desirable that writing be discontinued and observation continued for a very considerable period; then let us have the results stated—not quotations from this one or that in support of the writer's opinions.

In concluding the discussion, the President said—"I was gratified when visiting the institutions in England, the few I did visit, to find that almost universally—certainly in four-fifths of the cases—the superintendents expressed themselves in favour of mechanical restraint, and singularly enough, the superintendents lay the blame of non-restraint upon the Commissioners in Lunacy, and the Commissioners in Lunacy throw it back upon the superintendents. They say the superintendents are emulous, one of another, to report the smallest number of restraints during the year. Certainly in my presence, and that of an American medical friend accompanying me, almost without exception, they expressed their preference for mechanical restraint, and hoped they would have it established there. From an experience of over twenty years, and from a careful, and I hope by no means superficial, study of this question, *I firmly believe that, in the future, the practice of our best American Asylums now will become the governing rule of Christendom.*" In connection with the passage here printed in italics, it may be remarked that, if there be any truth in the saying that imitation is the sincerest form of flattery, then our American brethren must surely feel satisfied when they are solemnly informed by Dr. Ramsay that "professional and public opinion in England is receding from its extreme position, and conforming more to the opinions and practices of alienists in this country!"

Dr. Curwen made some remarks on the "peculiar manifestations of insanity in families, and on the causes of the difference in mental development in different members of the same family, and also on the prevention of insanity."

Several members of the Association recounted their experience with various drugs, chiefly chloral hydrate. Many of the remarks are interesting and instructive, though it was necessary for the President to inform a doctor present that croton chloral hydrate had nothing to do with croton oil.

Responsibility of the Insane.—Dr. Gray does not believe in impul-

sive insanity. He cannot conceive of a homicidal act, impulsive, without motive, delusion or passion, simply a so-called impulse to kill. The fifty-eight cases of homicide examined in this paper he divides into five classes :—1. Those in which the crime was the direct offspring of delusion. 2. Those in which the crime was committed during a paroxysm of insanity. 3. Those in which the crime was committed by manifestly insane persons, from motives and conditions which might influence a sane mind, as anger, revenge, mistaken identity, drunkenness. 4. Cases of epilepsy, in which the crime was committed while the persons were in the epileptic circle, or changed mental condition, following the fit. 5. Cases of mania à potu. 6. Cases of delirium tremens. 7. Not insane.

A large table gives valuable information on many points relating to the cases; *e.g.*, sex, age, habits, hereditary tendency, form of insanity, mode of homicide, motive or delusion, injuries to self and suicidal attempts, particulars regarding the crime, &c.

It is worthy of note that 27 of the 58 cases were known to be of intemperate habits.

Dr. Hammond on the Mental Functions of the Spinal Cord.

The following extracts are taken from a paper by Dr. Hammond in the *Journal of Nervous and Mental Diseases* for January, 1876 :—

" All these and even more complicated motions are performed by the decapitated alligator, and in fact may be witnessed to some extent in all animals. I have repeatedly seen the headless body of the rattlesnake coil itself into a threatening attitude, and, when irritated, strike its bleeding trunk against the offending body. Upon one occasion, a teamster on the western plains had decapitated one of these reptiles with his whip, and while bending down to examine it more carefully, was struck by it full in the forehead; so powerful was the shock to his nervous system that he fainted, and remained insensible for several minutes. According to Maine de Biran, Perrault reports that a viper whose head had been cut off moved determinedly towards its hole in the wall. This subject has been well studied by Dr. Dowler, of New Orleans, by Pfluger,* Paton,† Onimus,‡ and several others. I have performed a great many experiments and made numerous observations relative to the matter, and have for a number of years taught in my courses on diseases of the mind and nerve system the doctrine now set forth, that wherever there is gray nervous tissue in action, there is mind also. To the details of some of these experiments, I beg to invite the attention of the Society, merely premising that I have quite recently gone over the ground with great care, verifying with

* Die Sensorischen Functionen der Ruckenmarks der Wirbelthiere, u. s. w. Berlin, 1853.

† On the Perceptive Power of the Spinal Cord, as manifested by Experiments on Cold-blooded Animals.

‡ Journal d'Anatomie et de Physiologie, October, 1871.

as much exactness as possible the results obtained by others and by myself, and extending the scope of the experiments in several important particulars.

" *Experiment I.*—I removed the brain of a large frog, and then waiting a few minutes for the animal to recover from the shock of the operation, proceeded as follows: I pinched the left hind foot with a pair of forceps, and the limb was at once withdrawn; I pinched a little harder and the animal struggled vigorously to escape, and succeeding, made several leaps, each of two or three feet in length. I then touched the right side of the abdomen with a glass rod, on which was a drop of vinegar. The right hind foot was at once carried to the exact spot I had touched, and was rubbed energetically against the skin. The left side was treated similarly, and the rod being held in contact with the skin, it was pushed away by the left hind foot. The skin over the left shoulder was then seized with the forceps and tightly held; efforts were made to remove the instrument with the left hind foot, then with the left fore foot, and these not succeeding, the whole body of the animal was violently agitated, and through the struggling the hold of the forceps was broken and the frog gave two leaps. Laid upon its back, it immediately resumed the ordinary position on its belly with its hind legs drawn up. I then held the glass rod with a drop of vinegar against the right dorsal region. The frog tried to push the instrument away with its right hind foot. I cut off this foot, and it then made similar efforts with the left hind foot. These not being effectual, it made a leap of about a foot, and then scratched the irritated spot with the left hind foot.

" *Experiment II.*—I removed the brain from a frog, and after waiting as before for the immediate effects of the operation to disappear, placed the animal in a tub of water. It immediately began to swim. I held my hand so that the animal's head would come in contact with it, and prevent further progress. Continued efforts to swim were made for a few seconds and then ceased. Removing my hand the animal again swam.

" Of these movements Vulpian says, that when the frog is placed in water an excitation is produced over the entire surface of the body in contact with the water; this excitation provokes the mechanism of swimming, and this mechanism ceases to act as soon as the cause of the excitation has disappeared, by the removal of the frog from the water. If this were a true explanation, the movements of swimming would certainly be continued, notwithstanding the interposition of an obstacle; but, as we have seen, they are arrested. Onimus shows very conclusively, and I have verified his experiment, that Vulpian's explanation is not correct; for, as he declares, with frogs without brains placed in water, and from which the skin has been entirely removed, the movements of swimming are continued when they are placed again in water, which proves that the excitation of the cutaneous surface is not the true cause of these movements.

"Now, what do such experiments show? If they do not prove that the spinal cord has the power of perception and of volition, what do they prove? What more could the animal possibly do to escape the inconvenience to which it is subjected by having an irritation applied to its body? It must be remembered that it has but one sense—that of touch—left, and that one-half or more of all the gray nerve tissue of its organism has been removed. It will not suffice to say, with Dr. Maudsley,* that they are no more evidence of consciousness and will than is the fact that in the double decomposition of a chemical salt one acid chooses voluntarily the other base; for in the first place the acid and the base are not organised and living substances, and in the next place they always act in precisely the same way under similar circumstances, which is not the case in the movements of the frog deprived of its brain. It is true that there is a general similarity of actions, but so there is when the brain has not been removed, and so there is also in the higher animals, man included, when the circumstances determining certain actions are identical. And this is so well-known a fact that we can predict with exactness what movements will be performed under known conditions, not only as regards the lower animals, but man himself. Dr. Maudsley admits that the actions in question are for a definite end, and have the semblance of pre-designing consciousness and will, but he then says that they may be quite unconscious and automatic. But he forgets that in all our relations with our fellow creatures the only evidence we have of their consciousness and volitional power is derived from our knowledge of their actions. No one can say with absolute certainty that any other person is performing a conscious and voluntary act. That is a matter which is only known to the individual himself; and hence, however conscious the frogs submitted to such experiments may be, we have no means of ascertaining the fact except by the careful study of the psychical and physical phenomena manifested. We interrogate them, and the answers are perfectly logical and definite; no less so, in fact, than they would have been had the brain not been removed.

"But there are many other facts which go to show that the spinal cord is something more than a nerve centre for reflex actions and a conductor of impressions to and from the brain. Paton, in a salamander, divided the vertebræ and spinal cord immediately below the brachial plexus, so that the anterior extremities were still in nervous communication with the brain through the upper part of the cord, while the posterior extremities were cut off from it, and only received nervous influence from the lower part of the cord. After allowing a few minutes to elapse, the following phenomena were observed:

"The animal raised itself upon its fore legs and began to move forward, but did not drag its hind feet like an animal that had suffered paralysis, but supported its body on them as on its fore legs, and exerted them distinctly in the act of locomotion. I could observe no

* Body and Mind, second edition, London, 1873, p. 9.

difference between these movements and those which it performed before the division of the cord, except that it now walked with less power and energy. I allowed the animal to remain at rest for a short time, and then slightly touched with the point of a needle the integuments of the right dorsal region, and it raised up its right hind foot and passed its toes across the part. On irritating the integuments of the left side of the abdomen, it raised up its left hind foot again and again to the part. After a short interval, I touched with the point of a needle the upper portion of the left dorsal region immediately below the division of the cord, and it raised up its left hind foot and passed its toes distinctly over the part. I continued the irritation, and the animal repeated the movement, raising up its left hind foot and passed its toes over the part.

"We are, I think, justified in concluding:

"1st. That of the mental faculties, perception and volition are seated in the spinal cord, as well as in the cerebral ganglia.

"2nd. That the cord is not probably capable of *originating* mental influence independently of sensorial impressions—a condition of the brain also, till it has accumulated facts through the operation of the senses.

"3rd. That as memory is not an attribute of the mental influence evolved by the spinal cord, it requires, unlike the brain, a new impression, in order that mental force may be produced."

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2. *French Retrospect.*

(Concluded from Vol. xxi, *p.* 632.)

M. Léon Dumont on Cerebral Reflex Action.*

In this valuable paper M. L. Dumont gives a critical history of cerebral reflex action, and of unconscious cerebration. Having given a short summary of the first definitions of reflex action, and taking the views of Prochaska and Legallois as a starting-point of his history (Unzer was, however, the teacher of Prochaska, and the most philosophical inquirer of the last century), he brings the subject to the time when Marshall Hall, founding on the experiments of Flourens, maintained that the brain is not an excito-motor organ, and cannot, therefore, be the seat of any reflex action.

It was at this date (1837) that Laycock, in examining the phenomena of mesmerism, showed that both the mental and the motor phenomena caused by mesmeric processes are simply due to pathological conditions of the brain, thus artificially induced, and to be classed with those of imitation, delirium, hallucination, somnambulism, &c.,

* L'Action Reflexe Cerebrale. MM. Laycock, Carpenter, Luys. *La Revue Scientifique.* Jan. 8th, 1876.

and that all these and other phenomena are dependent on a reflex function of the brain. Laycock further demonstrated, in investigating hysterical phenomena, the influence of the ovaria in exciting *automatic* activity of the brain in women, who are the chief subjects of mesmeric as well as of hysterical disorders.

M. Dumont then gives a summary and criticism of Laycock's chief researches, ending with his chapter on Memory, in the last volume of this Journal (July, 1875); fully asserting his priority as to reflex cerebration.

M. Dumont next takes up Carpenter's researches, which date from 1852, as then published in his "Outlines," and more recently in his "Mental Physiology," and examines critically and at length the opinions which specially belong to Carpenter. He refers to his previous essay in the "Revue Scientifique,"* as showing that the facts Carpenter quotes from Sir William Hamilton afford no support whatever to his doctrines of "Unconscious Cerebration." And as to other mental phenomena brought forward by Carpenter, M. Dumont is equally doubtful. Of this class are the recall into consciousness when we least expect it of an idea we have vainly sought to bring back, and the other like instances, such as the elaboration of judgments and the invention of ideas. They are rather conjectures, to be explained by a theory of unconscious cerebration, than proofs of the doctrine. M. Dumont here introduces some interesting views of his own, which we shall shortly notice.

Under a third head, M. Dumont notices the adoption of the doctrine of cerebral reflex action by English and French psychologists of the experimental school, and observes, that if contemporary English philosophers, like Darwin, Spencer, and Bain (he might have also named Huxley), do not expressly extend the doctrine of reflex action to the brain, it is only a question of terminology; while they speak of spinal reflex action only, they do not fail to explain cerebral functions as being reflex.

M. Dumont thinks that the notion of extending the theory of reflex action to cerebral phenomena, which has of late been largely developed in France, is probably due to the influence of English physiologists and psychologists. He specially names M. Taine, as having applied the doctrines to psychology, in his valuable work on the Intellect, and M. Onimus as having applied it to the elucidation of the physiology of language, and of the morbid states known as aphasia.†

M. Dumont devotes a fourth division of his history to the recent treatise of M. Luys, observing that the labours of neither Laycock nor Carpenter have any mention, as they ought to have had, in that work.‡ So far as the general phenomena and doctrines are involved,

* "Conscience et Inconscience," Rev. Scient., 28 Dec., 1872.

† "Sur le Language considéré comme phènomène automatique." Journ. de l'Anat. et de la Physiol, 1873, p. 543.

‡ Etudes de Physiologie et de Pathologie Cerebrales.—Des actions reflexes du cerveau dans les conditions normales et morbides de leur manifestations, 1874.

M. Luys adds little to the views Laycock has taught and applied to physiology, pathology, and practice. More especially Luys adopts Laycock's theory that the hemispheres are in relation as "trophic" centres with the whole body, and have much more, therefore, than the restricted functions assigned to them by physiologists of ministering to external relations and mental activity in the influence they exercise over all *internal* relations. Concurrently with this view, Luys adopts also Laycock's doctrine of the diffusion of impressions through the brain and nerve-centres, and thence through the body; but he fits to all these an anatomical theory of a "sensorium commune" whence the "irradiation of incitations takes place to all parts." This he places in certain submeningeal zones of small cells to be found in the cortical substance of the convolutions. It is in this region that the operations of the will, as due to cerebral reflex function, take place. M. Dumont, in criticising Carpenter's "suprasensible" hypothesis of the will, remarks that volition is, in truth, according to Carpenter's own ideo-motor theory, a striking manifestation of reflex action, in accord with ideas which are themselves due to excitation from without, and transformed in the depths of the cortical zones into corresponding ideations,

M. Dumont, in objecting to Carpenter's anatomical theory of a sensorium commune, also observes that it is more reasonable to conclude that the seat of the consciousness of a given moment is that part of the brain or of the nervous system where the change takes place, upon which the consciousness of the moment depends. It is probable (he thinks) that with each act of attention or of will towards a determinate object, there is a local cerebral hyperæmia, within the limits of which consciousness becomes more vivid, to the detriment of consciousness in all other parts of the brain, which, at the same time, also become proportionally anæmic. The play of the organ is super-excited by a certain amount of motion received from without, and hyperæmia is the natural result of the acceleration of nutrition thus induced. This hypothesis is not without solid support in other phenomena. Thus, it has long been well known that the cutting off of the supply of blood to a particular portion of the brain by plugging of the vessels, or otherwise, is followed by defective nutrient and functional activity of the portion of brain-tissue so supplied. Hughlings Jackson, in this country, has largely illustrated this class of morbid phenomena, and more recently M. Duret has given a very valuable exposition of the distribution of the encephalic arteries, with special reference to this point.*

These views have, however, rather a mechanical than a dynamical bearing. It is desirable to know how, in attention, volition, thought, emotion and the like mental conditions, the activity of the circulation and of the nutrient processes is influenced in particular cerebral regions. To explain these phenomena, Laycock adopts the theory of cerebral

* "Archiv. de Physiolog.," Dec., 1874.

vasomotor and trophic reflex action. Accordingly the various encephalic centres, which are vasomotor centres, have respectively their corresponding cerebral areas or regions of arterial distribution and trophic activity. This is seen, *e.g.*, in the relation of the pons to the parts supplied from the vertebrals and basilar artery, and of the areas of the internal carotid—the hemispheres. Thus, there is an anatomical relation between the development of the cerebral nerve-centres and the trophic areas on the one hand, and between these latter and the source of excitation, whether they be external, or internal on the other. Laycock has applied these views to both physiology and pathology.*

This is but a brief notice of M. Dumont's important critical history. Other interesting views as to consciousness are stated by M. Dumont himself, but there are difficulties in the way of clearly comprehending them, more especially as to the relations of consciousness to organization, which are due, apparently, to ambiguities in the use of the term. It would be of essential service to future inquiries and discussions, if an exact physiological meaning of this and other terms could be agreed on. It might be settled, for example, whether the word "consciousness" should be used strictly to denote a cause or a condition, and, that being determined, to take another word to denote the cause, if consciousness be held to be a state or condition, and due to a cause—as, for example, when the state of hotness is said to be due to heat. In this case, mind might be used to denote the energy or cause on which consciousness as a considered condition depends.

Some Observations on Mental Disease. By Dr. Lentz.†

The first of these observations treats of the use of hot water as a revulsive. It is well-known that congestion, especially in its more rapid and severe forms, is often frequent in both the cerebro-spinal and respiratory systems of the insane, and often proves rapidly fatal. The general debility of the insane appears to be daily increasing, and their condition to demand rather the infusion than the abstraction of blood.

It is in asylums that these congestive attacks are most frequently seen, often following convulsive attacks of various forms, and producing an embarrassment of respiration which must soon lead to a fatal result, unless assistance be afforded. Bleeding, in all its forms, must be discarded, its employment only tending to hasten death,

† See "Mind and Brain," 2nd edit., 1869, Vol. ii, p. 471, *et seq.*, where ganglionic and segmental areas of nutrition in the brain and spinal cord are defined. See also for practical applications to clinical observation, "A Clinical Trophic and Vasomotor Anatomy of theBrain and Spinal Cord, from a new point of view," "Med. Times and Gazette," 19 Aug. and 2nd Sept., 1871.

† Bulletin de la Société de Medecine Mentale de Belgique, 1873.

especially after the convulsions of general paralysis. In these cases treatment must be prompt and decisive, and these indications appear to be responded to by the use of hot water as a revulsive in the following manner. A large sheet, folded in four, is to be soaked in hot water, and to be immediately applied to the whole anterior and posterior surfaces of the trunk alternately; in some cases to both at once, as well as to the soles of the feet and the calves of the legs. The applications may be renewed every minute, the temperature of the water varying with the gravity of the case, and even boiling water may be used. These applications are of special value when applied to the whole extent of the spine. This procedure is not new, and though of no avail in the cure of paralysis or epilepsy, has saved life, and possesses the advantage of easy and rapid application. It acts rapidly on sensibility, and, applied to the spine, it restores patients from the prolonged stupidity which follows epilepsy. The result in these cases is as much attributable to the action on sensibility as to that on the vascular system. Further, this treatment is perfectly harmless; the most serious result being a slight scald, which, however, is rarely seen, the action of the hot water being less severe when applied by means of linen than when directly applied.

The second observation is on a case of pachymeningitis, in a young man of 21, the result of a fall on the head. On admission the patient, while exhibiting the symptoms of acute delirious mania, was emaciated and pale, showing that bleeding had been freely resorted to. He was incoherent and restless; possessed varying delusions; slept little; and was very dirty in his habits. Nothing striking was observed in the state of the motor functions, or in the sensibility. The history was imperfect, but some months previously a piece of coal had fallen on his head while in the pit. The disease had begun by an access of fever, returning each afternoon, and characterised by redness of the face, injection of the eyes, pain in the head, an expression of stupor, and, finally, a restlessness increasing until evening. In the morning he would be better, but after admission this intermittence disappeared.

After four months he was discharged convalescent, but in five months was readmitted. On this occasion he was in a state of absolute dementia, silent, dirty, and requiring his food to be placed in his mouth. Sensibility remained, but was obtuse. He remained in this condition for three months, after which he began to brighten, talking incoherently, and taking notice of what was going on about him. An attack of excitement seemed to be imminent, when suddenly in October he sustained an attack of epileptiform convulsions, which left him in a condition very similar to that in which he was when readmitted. This attack was soon followed by others, his condition varying from stupor to restless excitement, and in one of greater severity than usual he died.

On post-mortem examination the calvarium was found normal; the dura mater much injected, especially on the right side, which exhibited complete fluctuation; the left side was normally resistent. The opening of the arachnoid cavity displayed a true sac, occupying the whole extent of the right half of that cavity. The sac, completely closed, was perfectly organized, and composed of a soft, velvety membrane, with a smooth and glossy surface, free where opposed to the brain, but slightly attached where opposed to the dura mater. It contained a considerable quantity of blood, which had collected at the base of the brain, especially in the infra-spinous fossa. Save a slight injection, the brain and its membranes were healthy, though in the right hemisphere there existed a well-marked depression, corresponding to the collection of blood in the infra-spinous fossa. The other organs presented nothing unusual.

This condition, viewed in connection with the progress of the case and the nature of its symptoms, appears to support the theory last maintained by Virchow, on the formation of neo-membranes of the dura mater. Whilst Baillarger admitted that the cyst was formed from the effused blood itself, others held that that only acted as an irritant on the arachnoid, provoking an exudation, which, becoming organised, formed the cyst, in both theories the hæmorrhage being looked upon as primary.

Virchow holds that the cyst is a result of inflammation of the dura mater, and that the blood is afterwards effused into it.

In this case, the first symptoms were suggestive of the irritation of inflammation; as the membrane became organized these gradually disappeared, then hæmorrhage taking place, the appearances of dementia were produced, these again in their turn to fade away as the clot became absorbed.

Another point of interest in this case is the fact of the occurrence of traumatic pachymeningitis in a patient lacking a well-marked predisposition.

As regards diagnosis, this case appears to be one of well-defined symptomatic mania, the disease being pachymeningitis, the mania only a symptom. In two cases, with similar delusions, one may be diagnosed as symptomatic; the other as due to organic disease, by the absence from, or presence in, at their outset, of those evidences of loss of intellectual power, often seen in old standing cases, or early in the course of general paralysis.

PART IV.—NOTES AND NEWS.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

A quarterly meeting of the Medico-Psychological Association was held in the Royal College of Physicians, Edinburgh, on Tuesday, the 14th of December. Among those present were Drs. Jamieson, Clouston, Fraser, Batty Tuke, Ireland, Frd. Skae, Anderson, Thomas Howden, J. A. Campbell, Laycock, McDowall, Brodie, Grierson, Maclaren, Denholm, Stewart, and Professor Calderwood.

On the motion of Dr. Ireland, Dr. Laycock was called to the chair.

The minutes of last meeting were held as read.

EXHIBITION OF PATHOLOGICAL SPECIMENS.

Dr. Clouston showed the brain of the epileptic patient, whose case was described in the "Clinical Notes and Cases" of the Journal for October, 1875 (p. 427). Dr. Clouston then showed two microscopic specimens, being sections made by Dr. J. J. Brown, of Morningside. The one showed innumerable small apoplexies in the spinal cord of a kind not previously described, and the other miliary sclerosis affecting the medulla in a case of general paralysis, where the sclerosis followed the peripheral nerve-fibres inwards, and also followed the course of the small arteries.

REFLEX AUTOMATIC AND UNCONSCIOUS CEREBRATION.

The Chairman then said, an interesting paper on "The Unilateral Phenomena of Mental and Nervous Disorders," by Dr. Archibald Robertson, indicates a field of observation which Asylum Superintendents might very usefully occupy on a systematic plan. Many years ago I worked at these unilateral phenomena, and have a chapter on the subject in my "Treatise on the Nervous Diseases of Women" (p. 199). I venture to suggest a few points of not difficult observation. The physiognomical diagnosis of unilateral diseases might be helped by observing the unilateral development, atrophy, or other conditions of soft parts like the ears and nostrils, or the development and colour of the hair on head and face. It is seldom that the two ears are alike in size or form or development of lobe or helix. Thus there may be a soldered lobe on one side and a "wattle" or unsoldered lobe on the other. When this is so, it is most usual for the cerebral or encephalic disease to be on the same side as the soldered lobe. In the "Medical Times and Gazette" for 22nd March, 1862, I have given illustrations of various kinds of ears. Hæmatoma may also be unilateral. I have observed in cases of encephalic diseases hæmatoma of the ear on the same side as the symptoms. The experiments of Brown Sequard tend to show that there is a spot in the restiform tract which regulates the circulation in the ears of rabbits. The distribution of the hair on the face corresponds obviously to nerve-centres. It is usually thinner on the left than on the right side. So also as to colour and greyness. One whisker may be greyer than the other. A medical friend informs me that he had a neuralgia on both sides of his face, and that his whiskers turned so grey that he shaved them off; his moustache and chin beard being unaffected. Lately attention has been directed in "Nature" to the proportions of the hand and fingers, but more especially of the index to the ring finger. The varying proportions observed have been thought to be due to race, but it is more probable that the special uses of the hands determine these. Here, again, the two sides differ in proportion, size, &c. The easiest and surest plan of observing the proportions of the hands would be to place each hand flat on a piece of stout paper with the palms downwards, and the thumbs placed

close to the index finger, and then to mark the outlines in pencil; or the thumb may be placed at a fixed distance from the index, say an inch, measured at the tip of the thumb. Ears might be either photographed or casts taken. In either case it would be well to notice the line of direction of the long axis of the ears to the cranium, which from much observation I have concluded is *ethnic*, and in relation to the form and set of the nose. Other points might be named, but these are enough for illustration.

Professor LAYCOCK then read a paper on "Reflex, Automatic, and Unconscious Cerebration." (See Originals, Pt. I, and January No., p. 477.)

Dr. IRELAND, in the course of a few remarks upon Dr. Laycock's paper, said that his own position had been well enough defined by the title of his essay—"Can Unconscious Cerebration be proved?" Many processes might take place within the cerebrum of which we knew nothing; but when anyone asserted that such a process took place, the onus of proving it rested upon that person. He would not enter into the question of priority between Dr. Laycock and Dr. Carpenter; and one of the reasons why he had paid more attention to the expositions of the theory made by Dr. Carpenter, was that Dr. Laycock had mixed up his views on unconscious cerebration with his theory of reflex cerebral function. Nevertheless there was no necessary connection between the two. Reflex cerebral action, as described by Dr. Laycock, might take place, and be attended with consciousness. Dr. Laycock had demurred to his remark that unconscious cerebration derived no support from physiology, but was based upon self-examination or inferences derived from it. But in those portions of his paper which Dr. Laycock had read to the meeting, there was nothing to show that this was erroneous. Dr. Laycock had asserted that the examination of certain mental processes resembled those which the chemist made upon visible matter. In the case of the chemist certain re-actions could be seen to take place within the test tube; but in the brain certain molecular changes were known as ideas. If any one could study these molecular changes, and tell their order, nature, and succession, *that* would be physiology; but to study them as ideas, and then to tell us that these ideas were the result of molecular changes, was a mixture of psychology and physiology which he held in little esteem. He was apt to get impatient at explanations which still left everything to be explained. His own mind instinctively recoiled from any causal connection between changes in the composition or arrangement of molecules and our ideas. He thought the learned professor's remarks on the teleological nature of organisms were well put. He had read one of Dr. Laycock's philosophical papers, in which he referred certain instincts in animals to a principle of unconscious mind in the universe, which, like the force of gravity, is a property of matter, and like it probably dependent upon an immediate volition of the Deity. We were thus led back by the learned doctor to a purely immaterial conscious force as the real origin and final cause of what had been called reflex action and instinct. He could not clearly distinguish this from the old axiom—*Deus anima brutorum*. Dr. Laycock had a great talent for detecting analogies; but these analogies appeared to him to be often too loose. He often reminded him of the speculations of ancient Greek philosophers. The Greeks, in their dearth of observations, explained the phenomena of the physical world by generalisations taken from mental processes, such as the relations of form and number. Dr. Laycock seeks to explain mental processes by analogies drawn from physical science. Dr. Laycock said that mental association was a process similar or identical to spinal reflex action. Well, he could see a certain loose resemblance; but the comparison looked better in the mouth of a poet than in that of a metaphysician. Dr. Ireland then went on to remark upon the great difficulty of proving that we have been unconscious of any past mental process. The state of double consciousness would always be in the way of any attempt like those made by Dr. Carpenter to infer the existence of unconscious cerebration from realised intellectual results, for it never could be proved that such results

were not worked out in states of dreaming or somnambulism, in which consciousness existed, though separated from memory. Dr. Ireland did not, as Dr. Laycock seemed to believe, entirely agree with Sir Wm. Hamilton's view that consciousness was retained even during sleep; but he thought it probable that a feeble condition of consciousness might remain at some times, getting weaker or stronger, or again lapsing into unconsciousness. He thought that the subject could not be studied without very searching self-examination. He had noted several instances in which people might hastily say that their actions were not accompanied by consciousness, and yet, where, on reflection, it was found that they were so. A man had a heavy body in his pocket, and yet had no distinct consciousness of the weight; but if the weight were suddenly pulled out of his pocket by someone unknown to him he often noted the difference, that is between the weight he formerly supported and the weight he now supported; but in order to make the comparison he must have known both the first weight and the second weight which he supported. He referred to a well-known instance where a woman, who had lost sensation on one side, was apt to drop her infant when her eye did not rest upon it, showing that consciousness was necessary to a simple operation, which could easily be combined with other actions. Dr. Ireland mentioned a case which had happened to him the other day. He wrote a letter, promising to send an enclosure, and sealed it up. Almost immediately after he could not recollect whether he had put in the enclosure or not, and opened the letter; but on seeing the enclosure something in the manner it was folded immediately brought back to his memory that he had been quite conscious when he put it in. There were generally several parallel objects of consciousness, but the memory did not always follow all these parallel objects. In general those objects which were most attended to were best remembered.

Dr. Clouston said he was sure they had all listened with great pleasure to Dr. Laycock's paper, and that he thought they would all agree he had made out a remarkably good case in proof of his discovery of reflex function as applied to certain parts of the brain; and thought there was no doubt that in future the credit of making this discovery would be given to Dr. Laycock, and not to Dr. Carpenter; and that, in regard to the discovery of this and other similar functions of the brain which Dr. Laycock had made, they were so much in accordance with the law of evolution as they now understood it, so much in accordance with what Herbert Spencer had called the development from the homogeneous to the heterogeneous, that they must be true. They coincided entirely with the whole law of evolution as it was applied to biology. Dr. Laycock's discovery of reflex action, as applied to the higher functions of the brain, followed its discovery as applied to the cord, his discovery of trophic centres followed that, and, last of all, his generalization as to the thermal centres, all these generalizations formed a part not only of physiological discovery, but a part of the law of evolution, as it was understood. It struck him that there was one weak point in Dr. Laycock's paper. As he understood it, the Dr. claimed for himself to have distinctly stated the law of evolution in 1839. He quoted the words of the passage, "chain of phenomena." Now he thought that the pointing out of a "chain of phenomena" and the statement of a law of evolution, as now stated by Mr. Herbert Spencer, were two different things—as Mr. Spencer would say the one is a being, the other is a becoming; the one is the pointing out of a mere gradation; the other of a development; the one is a series of phenomena, the other is a real law or generalization. In regard to the automatic function of the brain it seemed to him that Dr. Laycock and Dr. Carpenter were using the same phrase in totally different meanings, and, therefore, they occupied different grounds. This applied also to the unconscious cerebration, and when they jumped from the automatic to the unconscious cerebration, they jumped from the region of physiology to the region of metaphysics. Dr. Ireland had sufficiently dwelt on this aspect of the question.

The CHAIRMAN said Dr. Ireland seemed to have a difficulty in regard to the differences between physiology and metaphysics. There can be no doubt that these terms are often used in a vague way, whether they refer to method or subject of inquiry. Sir W. Hamilton dwelt fully upon that in his lectures. The science of *phusis* or nature—*natura* in Latin—has both a general and a limited scope. Primarily it was general, and was the science of the laws which govern the material universe. Hence, physiology and physics—*ta phusica*—what belonged to phusis or nature corresponded formerly to what are now known as the philosophy of nature—natural philosophy—the natural sciences. The word metaphysics, merely denoted *ta meta phusica*—what came after the *phusica* in Aristotle's works, and thus another subject and method was differentiated. Now the mental physiology of the present day, so far as it includes memory and other cerebral phenomena, are termed in Aristotle the less phusica, or "*Parva naturalia.*" But *phusis* and *natura* are words which denote laws in the sense of order of development or *genesis*, and, therefore, mean also evolution, and more especially the things that are about to be evolved—*natura* being the plural of the obsolete *naturus*. The word metaphysics, as now commonly used, means, in regard to method, the acquisition of knowledge of mental phenomena by speculation or thinking about them; more especially in a wider sense by thinking about those phenomena of nature which are beyond observation or experience. From this point of view Mr. G. H. Lewes has proposed to substitute the term metemperics—that is to say, beyond experience—for the word metaphysics. Dr. Ireland has observed that it was utterly absurd to speak of any connection between atoms and consciousness. But not so absurd as it may appear, when it is remembered that atoms are metaphysical and metempirical things. No one has ever seen or felt an atom, nor even a molecule, which is a congeries of atoms united according to definite laws. Sir Wm. Thompson has attempted to calculate from mathematical data the size of the molecules of water, but even that process is metempirical. There are, however, two kinds of philosophical or metaphysical speculation, which are wholly different. The one starts with a fact of experience, *i.e.*, of something done—the other with a something thought, the common method. A knowledge of atoms is reached by the first mentioned method. The thinker divides a piece of matter into two parts (here the Chairman divided a piece of paper). Then each half is thus further divided, and each sub-half is again divided, and so on, until the act or fact of division is mechanically impossible. But he can go on dividing in thought or imagination, and can thus repeat the process *ad infinitum*, concluding necessarily that matter is thus infinitely divisible. This, then, is both metaphysical and metempirical. But, for the purposes of deduction and practical work, the mental process of subdivision must stop somewhere, and so at the point where it is stopped we say the particle of matter is indivisible further. Now this is simply the meaning of the word atom. All this while the atoms exist to us only in thought, and, as such, are inseparably connected with that state of consciousness upon which the thought depends. But all thought, however profound, requires brains—made up theoretically of these metaphysical or metempirical atoms—indeed, the more profound the thought, the more necessary are brains for the thinking. It was simply an impossibility that the "mongol" idiot woman (pointing to a cast of whose skull was on the table) could have any reasonable notions of philosophy or of atoms. The Chairman then proceeded to show that another source of the difficulties Dr. Ireland had found was in the vague and contradictory meanings attached to the words unconsciousness, mind, and the like, and thus confounding the states or conditions of the living man, named consciousness, with the cause of these conditions. What he had all along attempted to show was, that consciousness as usually and practically understood, is not a cause, but that causation must be put further back, and traced to a point of origin common to both the phenomena of life and of consciousness. This, in fact, was done long since in Greek

philosophy, and by St. Paul, one of the greatest of both Jewish and Christian philosophers of his time. The Chairman also reverted to the philosophy of evolution as a philosophy of the causes of the phenomena of life, and which, taken in connection with the correlation of physical forces, first shown by Faraday in modern times, will give a new view to many questions of the day, as has been already shown by the philosophical works of Herbert Spencer. He thought it only right to observe, however, that the same method was followed by him forty years ago, and that he had acquired much information from the writings of philosophers of the 17th century, when the discoveries of Newton led to changes in philosophy, and to discussions like those of the present day. The doctrine that motion or energy is indestructible, and is never lost, but only transferred, was explicitly stated by Grew in his Cosmologia Sacra. What he (the Chairman) had developed most especially in regard to mental science and the practice of medicine, both in mental and general diseases, was the doctrine of the law of reversion as correlative with that of evolution, and of both as correlative with the laws of development and nutrition, not only of all living things, and of granules and cells, but of the molecular evolution and reversion of their chemical constituents. Here was a field for working at what comes before us in daily life, which is "the prime wisdom." There are insuperable difficulties, doubtless, in the way of ascertaining the relations between conciousness and organisation, some of which the Chairman named, but it was a serious fallacy in method to conclude, from our ignorance of things, that they are non-existent. He did not say, therefore, that plants are unconscious, because that which in us corresponds to vegetative life is so. He could not, in fact, solve the question, except metempirically, or by speculation, but if he were obliged to come to a conclusion on the question, the answer would be a modified acquiescence in the affirmative, assuming also that there may be very different states of consciousness from those of mankind.

CASE AND AUTOPSY OF A KALMUC IDIOT.

At this stage Dr. Jamieson, of Aberdeen, took the chair.

Dr. Fraser read a paper on a "Case and Autopsy of a Kalmuc Idiot." (This will appear with illustrations in a future number.)

Dr. Ireland said, that in the absence of Dr. Brodie, he wished to make a few remarks. The paper had interested him extremely, and he hoped it would open the field for a new type of idiocy. He believed this co-relation of structure sometimes gave a clue to a line of research. It was difficult to see the connection between the different peculiarities which Dr. Fraser had so carefully studied. But it was possible that by comparing them with healthy individuals they might be able to get at a specific generalisation. He could not say that he ever met such a type or felt in his own mind the necessity of classifying it. But the subject was almost entirely new to him, and he would certainly look and see whether he could find any members of the class which Dr. Mitchell and Dr. Fraser had described. He did not think that there were any Kalmucs in the East, and he thought they should exclude this kind of patronymic from the kingdom of Fife (laughter). He did not quite understand that all the features that constituted a type had been observed by Dr. Mitchell. He certainly had good hopes that Drs. Mitchell and Fraser would yet work out something in regard to the matter worthy of notice. In regard to an allied type of idiocy he must say that he did not think he had seen cases of Cretins in this country. Some asserted that Cretins were a very distinct form of idiot. If they tried to describe the Cretin they would find that the exceptions were as great as the rule. He could not make out that they could prove the existence of Cretins in Scotland. He said if he were classifying the Kalmuc idiot he would put him under his own "Congenital" class. He had stated his belief that the class of congenital idiots, when it was fairly worked out, would be resolved into two or three classes. He would be very well pleased to see a sub-class of idiocy erected.

The CHAIRMAN said it struck him that the term Kalmuc was a very objectionable term. He thought there was nothing marked adout the Kalmuc, and there was no reason for nicknaming an idiot by calling him a Kalmuc. He thought this uncalled-for term should be departed from. Why did they call such an one a Kalmuc? The idiot is no more a Kalmuc than any other human being.

Dr. FRASER—It is so called on account of the form of the eyes and the size of the head.

IMPULSIVE INSANITY.

Dr. MACLAREN read a paper on "Impulsive Insanity."*

The CHAIRMAN said he thought this was a very interesting paper, and he would be glad to hear observations upon it. His own idea was that it was a case of epilepsy—a variety of epilepsy—and was one of those to which criminal insanity belonged, and he asked whether the lady had been under any treatment at all.

Dr. MACLAREN replied that she seemed to have been greatly over-drugged.

Dr. CLOUSTON said his idea was that it was most closely allied to epilepsy, but not quite that disease. There were many of the features of the case that made it very analogous to what was called automatism. Looked at from a physiological point of view the case was one of automatic and unconscious cerebration. On the previous day he had met the lady walking with two attendants. They had each hold of one hand, and seemed to be somewhat afraid of her. He told them to let go her hand and she would walk with him. She walked round the asylum grounds perfectly well except on passing a heap of manure, when she ran towards it and tried to take hold of the spade that was in it. He afterwards asked her why she went to the manure. "Well," she replied, "I never can pass a heap of manure without an impulse to go to it, because when I was a girl I denied Christ." He asked "How?" She said, "Because when I was once told some good thing had to be done, I made an excuse and would not do it. I went out after I had said so, and I thought that as I had denied Christ I would take to very low work to make up for it, and the first thing that I saw was some dung, which I at once began to spread." It appeared that her pastor had quoted a particular passage of Scripture with reference to the meaning of denying Christ, and she had never passed a heap of dung ever since without having an impulse to go and spread it, thinking at the same time of that passage, and repeating it aloud. This was certainly an automatic action of the brain, or, as some physiologists would call it, a reflex action, and illustrated the morbid brain-working which resulted in those impulsive acts, described by Dr. Maclaren. I believe she had been heavily drugged by bromide of potassium, chloral, and other drugs. Since she came to Morningside she had got scarcely anything of that kind; nothing but fresh air and food, and in some respects, she was better in regard to her mental state, but these impulsive attacks came on, and during each of her conditions the very same association of ideas and reflex acts occurred. In the one case she was conscious, and in the other unconscious, which was very interesting as regards the mode of action of the higher centres of the brain, that being entirely independent of what is called consciousness. He thought the paper was very interesting and well written.

Dr. CAMPBELL said that there were many people who believed that hæmatoma was caused by injury. Now he would like to know Dr. Maclaren's experience on that subject in regard to what he had seen at Morningside. He directed attention to the occurrence of impulsive acts the result of masturbation.

Dr. MACLAREN said his opinion was that it might occur independently of injury.

LUNACY ACTS.

Dr. SKAE then read "Remarks on Lunacy Acts (Scotland)," by Dr. Rorie.

The CHAIRMAN said it was a great practical inconvenience to certify every-

* See "Medical Times and Gazette," Jan., 1876.

body to be insane after they had been three years in an asylum, and he thought it was a piece of unnecessary legislation.

Dr. SKAE thought the tendency was more and more now-a-days to find out that the insane, instead of being put into an asylum, might, to a great extent, be properly treated at home, and that perhaps would increase as a knowledge of insanity spread among the people. He would look with apprehension to the probability of everybody who is insane being put into an asylum, as they would not know where to stop (laughter).

Dr. CLOUSTON said, with reference to paralytics and other broken down specimens of humanity of that kind, that it might be a subject of consideration whether it was a philanthropic and merciful thing to have them sent to asylums. He said that on coming to Scotland he was struck with the extreme licence given in regard to the release of patients. He could not realise, when he came here, that while the placing of a pauper lunatic in an asylum required the sanction of the sheriff and two medical men, the discharge of that lunatic was scarcely provided for at all. There were no legal documents and no formal procedings by which they should regulate the matter. That struck him as being a very anomalous thing in law. He thought the annual certificate was a useless form, whatever was the intention. He did not think that many Superintendents of asylums gave much consideration in going over the cases, but certified them as a matter of course. The only benefit the regulation had, was that it gave them a handle in regard to inspectors of the poor, so that they could say that they were unable conscientiously to certify certain cases.

A YEAR'S EXPERIENCE OF THE DISUSE OF AIRING COURTS.

Dr. SKAE then read a paper by Dr. FRASER, on " A Year's Experience of the Disuse of Airing Courts."

The CHAIRMAN said he had never found any inconvenience from the use of airing courts. His asylum was very near a large town, and his grounds were only 40 acres at the outside. He never experienced any difficulties in connection with the use of the airing courts; the deaths were very few, and he adhered to his present arrangement. He had no " airing court diseases."

Dr. IRELAND said, with reference to Dr. Fraser's experiences, that the question might arise whether there were no patients for whom airing courts were necessary. There might be patients who would do better out of the courts, but were there none who would do better in them? If so, he did not see why superintendents should pull down the walls of their airing courts.

Dr. HOWDEN, Haddington, said he had never seen a case in which the airing courts were really required, and the walls of his airing court would be taken down in the course of a day or two. He had no cases of general paralysis.

Dr. CAMPBELL said he thought that those in a state of paralysis and acute excitement were safer in the courts than they would be otherwise.

Dr. ANDERSON said he had abolished airing courts to a considerable extent, and made them rather to resemble gardens. He would like if the courts were altered so as to be as much like gardens as possible, and be open from the Asylum, on the principle of there being greater freedom to the patients in that way.

Dr. CLOUSTON had not quite abolished the airing courts, but he thought the less they could use these courts the better, except as gardens, and for certain exceptional, acute, and excited cases. He thought that if the airing courts were of such a kind that the inmates could sit and enjoy themselves in them on a warm day they would be pleasant and good things; but he thought the old system of airing courts in some asylums was very objectionable, and led to many of the results which Dr. Fraser had mentioned. Since he came to Morningside he had greatly diminished the use of airing courts, and abolished them altogether for the higher class of patients. During the months of

November, December, and January they did not allow the patients to sit outside; but as much as possible during the year they allowed them to go out into the garden, and his experience tended to bear out Dr. Fraser to a great extent in his principle, although that gentleman had perhaps contrasted in too vivid colours the former and the present state of the patients in the Fife Asylum (a laugh).

Dr. Skae then read the note of "A Case of Death from Undetected Injuries," which had occurred in his asylum (see Clinical Notes and Cases, p. 99); and a paper by Dr. Finlay Murchison, entitled "What is our present position in reference to the Use of Mechanical Restraint in the Management and Treatment of the Insane?"

THE MEETINGS OF THE ASSOCIATION.

Some discussion took place as to the time at which the quarterly meetings of the Association in Scotland should be held; and it was agreed that the next one should be held in the first week in March, and the following one in the first week in October; and that after that they should be held in the first week of February, and first week of September; the hour of meeting to be one o'clock.

Votes of thanks were then given to Dr. Laycock and Dr. Jamieson for presiding, and to the Royal College of Physicians for the use of the hall.

The proceedings then terminated.

THE IRISH LUNATIC ASYLUM SERVICE.

It will be within the recollection of the readers of the "Journal of Mental Science," that at the Annual Meeting of the Medico-Psychological Association, which was held last year in Dublin, a paper was read by Dr. Stewart, of Bristol, on the subject of the Irish Lunatic Asylum Service. Dr. Stewart's paper, which was listened to with great interest, contrasted the position of English and Irish Medical Superintendents of Public Asylums, and pointed out that Irish Superintendents were required to perform so many and such various duties that little time was left to them for the cultivation of the scientific branches of psychology, that they are, for instance, held responsible for the discharge of duties that in England fall to the share of the Clerk to the Committee of Visitors, and to the Steward of the Asylum. English Medical Superintendents were somewhat surprised to find their Irish colleagues charged with the duty of making out voluminous returns, conducting the whole correspondence of their establishments, paying the salaries and wages of the staff, managing the asylum farms; and that in the majority of Irish institutions for the insane, these duties had to be performed without even the assistance of a second resident medical officer. The fact of the meeting being held in Dublin, and the large number of Irish members of the asociation who were present, led to a long discussion upon the subject-matter of Dr. Stewart's paper, and the Irish Superintendents were gratified to observe the warm interest manifested in their behalf by the English and Scotch members of the Association present. For the information of those who were not able to attend the Annual Meeting, we may observe that the position of Medical Superintendent of Irish District Asylums, until the discussion of last year, had been little known or understood by their English brethren. In England the appointment of Superintendent rests in the hands of the Committee of the respective Asylums—he is their officer, entirely under their control, and is paid by them. Whether this is in accordance with the most advanced ideas of asylum management or is the best possible relative position, either for the medical men themselves, or the patients under their care, may perhaps be a matter of doubt. In Ireland the case is very different; there the appointment of Superintendent is made by the Lord Lieutenant; the Superintendent holds his office from Government, is dismissed only by order of the Lord Lieutenant, is responsible

to him, but receives his pay from the county cess levied for the general support of the Asylum—an anomalous position, and one which, in these days of change, can hardly be expected to last.

The Irish Superintendents, alive to the necessity of speedy action, and with the view of improving their position, in the event of approaching legislation, determined to lay their case before the Chief Secretary.

A meeting having been convened on the last day of November, and Dr. Lalor having been called to the chair, the following, amongst other, resolutions were unanimously passed:—

Copy of Resolutions passed at a Meeting of Medical Superintendents of Irish Lunatic Asylums held in the Hall of the King's and Queen's College of Physicians, on Tuesday, Nov. 30th, 1875.

RESOLUTION No. I.—That a Committee be appointed to further the interests of the Irish Superintendents.

RESOLUTION No. II.—That Dr. Courtenay be appointed Secretary and Treasurer.

RESOLUTION No. IV.—That we, the Resident Medical Superintendents of District Asylums in Ireland, being Government Officers, appointed under warrant of the Lord Lieutenant, respectfully request that our Salaries may be paid by the Government out of the Capitation Grant now paid to the several Asylums.

RESOLUTION No. V.—That we think it advisable that Assistants to Resident Medical Superintendents should be appointed to all the Asylums, in order that Privy Council Rules 47 and 50 may be carried out in their integrity; and that in Asylums containing more than five hundred patients there should be two, and, when more than a thousand, three Medical Officers, in addition to the Superintendent.

RESOLUTION No. VI.—That we call the attention of the Government to the omission of any provision for the Salaries of Medical Superintendents of Irish District Lunatic Asylums containing over eight hundred patients, and that we consider our pay should increase in proportion with the number of our patients, no matter how large the Institution.

RESOLUTION No. VII.—We consider that No XXXV. of the Privy Council Rules and Regulations for the management of District Lunatic Asylums in Ireland is most objectionable, placing us on the same footing as the Matron with regard to leaving the Asylum. And we further think, that the words in Rule XIII. "She shall not absent herself from the Asylum at the same time as the Resident Medical Superintendent," should read "She shall not absent herself from the Asylum without the leave of the Resident Medical Superintendent."

The meeting, convinced of the necessity of the co-operation of their whole body, so as to make their case as strong as possible in the eyes of the public, directed their Secretary to forward the following letter to each Irish Superintendent:—

9th December, 1875.

SIR,—I am directed to forward you a Copy of certain Resolutions, passed at a Meeting of Irish Resident Medical Superintendents, held at the College of Physicians, on Tuesday, November 30th, 1875, and to inform you that a Deputation, consisting of Drs. LALOR, TYNER, EAMES, ROBERTSON, and COURTENAY, waited afterwards upon the Inspectors of District Lunatic Asylums, when these Resolutions were submitted for their consideration and advice thereon, and I am happy to have to state that the deputation was favourably received by them; on consultation, it was deemed advisable to turn all our efforts to obtaining the end pointed out in No. IV. Resolution, as, that being granted, the question of Superannuation would of necessity follow.

Having decided to wait upon the Chief Secretary at the earliest opportunity and urge our claims, I will communicate to you, when SIR MICHAEL HICKS BEACH will be willing to receive that deputation. when it is earnestly requested you will attend, as our success, to a very great degree, will depend on the unanimity and co-operation we evince in pressing our claims.

With reference to Resolution No. VII., it was, of course, only intended for the consideration of the Inspectors.

I am, Sir, your obedient servant,
E. MAZIERE COURTENAY, M.B.,
Hon. Sec. and Treasurer.

At a meeting subsequently held at the King and Queen's College of Physicians in Ireland, it was resolved to press upon the attention of the Chief Secretary for Ireland the desire of the Irish Medical Superintendents that their salaries should form a first charge upon the capitation grant of four shillings per head, which Parliament had voted on the suggestion of the Chancellor of the Exchequer, in relief of the local burthen falling upon county cesspayers. It was felt by the Irish Superintendents that, if they could carry this point, their claim to be placed upon a more favourable footing as to superannuation would follow as a matter of course, inasmuch as their being paid their salaries out of the

Consolidated Fund would, at one step, constitute them civil servants, and bring the scale on which they could retire within the terms of the Act 22 Vict., ch. 26. Resolving, therefore, to concentrate their efforts, so far as the Chief Secretary was concerned, upon this important point, the following memorial was drawn up and signed, we understand, by 22 out of 24 Irish Superintendents of Asylums :

To Sir Michael Hicks Beach, Bart., Chief Secretary for Ireland.

The Memorial of the Resident Medical Superintendents of District Lunatic Asylums in Ireland,

Respectfully Sheweth,

That our position at present is an anomalous one, different from any other Branch of the Service, as we are appointed by the Lord Lieutenant and responsible to the Government, but are paid by the Rate-payers.

That by reason thereof we are deprived of the benefit of the Superannuation Act of 1859, not being recognised as Civil Servants, as our Salaries are not paid through the Treasury, and we can therefore only obtain a Pension under the Act of 30 & 31 Vict., cap. 118, sec. 8, under which Act we must hold office for Forty Years in the same Asylum before we can obtain two-thirds of our salary as Superannuation, whilst our Brethren in England are entitled to the same pension after Fifteen Years Service (25 & 26 Vic., cap. 3, sec. 12).

That the Public Service suffers from the present state of the law, as senior men of many years' experience refuse the charge of larger Asylums, knowing that by removing from one Asylum to another they would forfeit their right to a pension should the length of their service not extend to forty years in the latter.

That the Government now contribute so large a share through the Capitation Grant to the support of District Asylums (about two-thirds of the whole amount), the payment of the Medical Superintendents out of that Grant would cause no increase of expenditure.

That the Poor-Law Medical Officers of Unions in Ireland, who are not appointed by Government, and over whom the Executive have no control, receive half their salaries from the Consolidated Fund.

Memorialists therefore respectfully request that you will take this matter into your favourable consideration, so that steps may be taken if it be deemed right that our salaries be in future paid by the Government out of the Capitation Grant, now paid to the several Asylums.

And Memorialists will ever Pray.

It will be observed that another most important object would be attained by the success of the effort thus made to have the salaries of the Irish Superintendents paid out of the rate-in-aid. Such salaries would cease to be a local charge, and, in the event of an Irish Superintendent being transferred from one asylum to another of greater magnitude, or of greater difficulty of management, the number of years that he had served in one county would not be lost to him on his transfer. He might be moved as often as the executive thought fit, and finally superannuated upon the whole term of his service. At present, a Superintendent serving for 20 years in one county, and afterwards transferred to a more difficult and responsible post, where he might serve say for 10 years longer, would, upon superannuation, lose the whole of the 20 years' service. This has all along been felt to constitute a very real grievance, inasmuch as it imposed a penalty upon promotion, and induced very able Superintendents to remain in small asylums, where their length of service had given them a claim to some superannuation in the event of their being unable to continue the active discharge of their duties.

Early in February the Chief Secretary signified his readiness to receive the deputation, which accordingly waited upon him. Dr. Lalor ably represented the views and wishes of the Irish Lunatic Asylum Service; but, in the short account of the interview that has reached us, we remark that the Inspectors of Irish Asylums are conspicuous by their absence. We may be permitted to observe that, upon such an occasion, we should have expected to find one or both of the Inspectors present, and prepared to support the very reasonable and respectfully urged request of our Irish brethren. The Chief Secretary for Ireland, while receiving the deputation with marked courtesy, said that he did not at present feel prepared to legislate further on the subject of Irish Lunacy, and that when the opportunity for so doing might arise, the wishes of the deputation should be borne in mind; and, at the same time, he remarked upon the absence of any representations from the Boards of Governors of Irish Asylums on the subject of the memorial. We counsel our Irish friends to take the hint,

and to secure the support of their respective Boards. In a matter which does not directly increase local burdens, we should imagine that the various Boards would be found willing to assist their officers. It is not improbable that further legislation may be in contemplation with regard to the Irish Asylum Service, and we venture to think that the suggestion thrown out by the Chief Secretary will, if generally adopted, strengthen his hands in carrying out the wishes of our Irish confrères.

EFFECTS OF COLOURS ON THE INSANE.

The "Gazette des Hôpitaux" contains a curious article on this subject. Dr. Ponza, director of the lunatic asylum at Alessandria, Piedmont, having conceived the idea that the solar rays might have some curative power in diseases of the brain, communicated his views to Father Secchi, of Rome, who replied in the following terms:—"The idea of studying the disturbed state of lunatics in connection with magnetic perturbations, and with the coloured, especially violet, light of the sun, is of remarkable importance, and I consider it well worth being cultivated." Such light is easily obtained by filtering the solar rays through a glass of that colour. "Violet," adds Father Secchi, "has something melancholy and depressive about it, which, physiologically, causes low spirits; hence, no doubt, poets have draped melancholy in violet garments. Perhaps violet light may calm the nervous excitement of unfortunate maniacs." He then, in his letter, advises Dr. Ponza to perform his experiments in rooms the walls of which are painted of the same colour as the glass panes of the windows, which should be as numerous as possible, in order to favour the action of solar light, so that it may be admissible at any hour of the day. The patients should pass the night in rooms oriented to the east and south, and painted and glazed as above. Dr. Ponza, following the instructions of the learned Jesuit, prepared several rooms in the manner described, and kept several patients there under observation. One of them, affected with morbid taciturnity, became gay and affable after three hours' stay in a red chamber; another, a maniac who refused all food, asked for some breakfast after having stayed twenty-four hours in the same red chamber. In a blue one, a highly excited madman with a straight waistcoat on was kept all day; an hour after he appeared much calmer. The action of blue light is very intense on the optic nerve, and seems to cause a sort of oppression. A patient was made to pass the night in a violet chamber; on the following day he begged Dr. Ponza to send him home, because he felt himself cured, and indeed he has been well ever since. Dr. Ponza's conclusions from his experiments are these:—"The violet rays are, of all others, those that possess the most intense electro-chemical power; the red light is also very rich in calorific rays; blue light, on the contrary, is quite devoid of them, as well as of chemical and electric ones. Its beneficent influence is hard to explain; as it is the absolute negation of all excitement, it succeeds admirably in calming the furious excitement of maniacs,"—*English Mechanic*, March 3rd, 1876.

"The curious oriental reds, yellows, blues, and greens in glasse-painting, especially when the sun shines, doe much refresh the spirits. After this manner did Dr. R. revive the spirits of a poor distracted gentleman, for whereas his former physician shutt up his windows, and kept him in utter darkness, he did open his window lids and let in the light, and filled his windows with glasses of curious tinctures, which the distempered person would always be looking on, and it did conduce to the quieting of his disturbed spirits."—*Aubrey, in Anecdotes and Traditions; Camden Society Edition, p.* 96.

Dr. Symes Saunders of the Devon County Asylum has made ingenious use of this quotation from Aubrey; having placed it at the head of a subscription list for stained glass windows to be placed in the new Chapel.

Appointments.

Davies, F. P., M.B., C.M., M.R.C.S.E., has been appointed Medical Superintendent of the Kent County Asylum, Barming-heath, near Maidstone, vice W. P. Kirkman, M.D., resigned.

Major, H. C., M.D., has been appointed Medical Superintendent of the West Riding of Yorkshire Lunatic Asylum, Wakefield, vice Dr. Crichton Browne, appointed a Chancery Visitor of Lunatics.

Miles, G. E., M.R.C.S.E., has been appointed Assistant Medical Officer to the North Wales Counties' Lunatic Asylum, Denbigh, vice Ellis, resigned.

Wood, T. O., M.R.C.P.Ed., F.R.C.S.Ed., M.R.C.S.E. (Assistant Medical Officer of the Kent Asylum, Maidstone), has been appointed Resident Medical Superintendent of the Isle of Man Lunatic Asylum, Douglas, vice Harrison, deceased.

Young, A., B.A., L.S.A.L., has been appointed Second Assistant Medical Officer to the Kent County Lunatic Asylum, Barming Heath, vice Wood, resigned, on being appointed Medical Superintendent of the Isle of Man Lunatic Asylum, Douglas.

THE W. AND S. TUKE PRIZE ESSAY.

EXTENSION OF TIME.

Some of the descendants of William *and* Samuel Tuke (*the former of whom proposed the establishment of the York Retreat in* 1792, *and the latter wrote the "Description" of the humane system of treatment commenced there*) *having placed at the disposal of the Medico-Psychological Association the sum of One Hundred Guineas, the Association offers a prize of this amount for*

"The best series of original Cases and Commentary, illustrative of the Somatic Ætiology of various Forms of Insanity, accompanied, when possible, in fatal cases, by reports of post-mortem examinations and microscopical preparations—their bearing on the symptoms being pointed out."

Cases not seen by the writer may be cited, but must be distinguished from those actually witnessed by himself.

The W. *and* S. Tuke Prize *is open to all without restriction as to country, profession, &c., but the right is reserved to withhold it, should there be no essay of sufficient merit. Essays, to be written in English, and not in the author's handwriting, to be sent in a sealed envelope, bearing the motto of the essay, containing the name of the writer, to the undersigned, not later than June* 30*th*, 1877. *The microscopical preparations, but not the essay, to belong to the Association.*

W. RHYS WILLIAMS, M.D., Hon. Sec.

Bethlem Royal Hospital, London, Dec., 1874.

It will be observed that the time at which Essays are to be sent in has been extended from June 30*th*, 1876, *to June* 30*th*, 1877.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

On Wednesday, May 10th, there will be a quarterly meeting of the Medico-Psychological Association at Bethlem Royal Hospital, London, S.E., when Dr. T. C. Shaw will read a paper on "The Measurement of the Palate;" and Dr. Hack Tuke a paper on "A Short History of Bethlem Royal Hospital." Notices of further papers to be sent to the Hon. Sec., Dr. W. Rhys Williams.

Erratum.—The name of John M. Diarmid, at the head of the second Original Article, should be John McDiarmid.

Mc Farlane & Erskine Lithrs Edinr

KALMUC IDIOT.

THE JOURNAL OF MENTAL SCIENCE.

[*Published by Authority of the Medico-Psychological Association.*]

No. 98. NEW SERIES, No. 62. JULY, 1876. Vol. XXII.

PART 1.—ORIGINAL ARTICLES.

Kalmuc Idiocy: Report of a Case with Autopsy. By John Fraser, M.B. *With Notes on Sixty-two Cases.* By Dr. Arthur Mitchell, Commissioner in Lunacy.

My attention was directed to this case by Dr. Arthur Mitchell, Commissioner in Lunacy, in the course of his official visit last spring. He informed me that it was one of so-called Kalmuc idiocy, a form of idiocy rarely met with in asylums, but nevertheless not really uncommon. Dr. Mitchell pointed out in this case the distinguishing physical characters of this class of idiots. Some of the more prominent of these are obliquity of the eyes and palpebral slits, shortness and flatness of the nose, depression at its root, broadness or squatness of the hands, transverse fissuring of the tongue, shortness of stature, disproportion between different parts of the limbs, smallness of the head, and shortness of its antero-posterior measurements. Certain mental characteristics are said to be very constantly present, and these will be referred to in the details of the case. The peculiarity of the eyes and nose give the face a Kalmuc look, and hence the name.

After having my attention thus drawn to this case, I endeavoured to obtain the literature relating to this form of idiocy, but without success. Dr. Mitchell, however, has notes, casts, photographs, sketches, &c., of a considerable number of cases. He has given me in a letter a digest of these notes which he has permitted me to append to this report. The lithograph is from a photograph kindly lent me by Dr. Mitchell.

Report of Case.

Elizabeth Meldrum, aged 40; admitted 18th Feby., 1875; from Ferryport-on-Craig, Fife; died, 29th March, 1875.

History.—The following is all I have been able to gather regarding

the patient. She was an illegitimate child, and parturition at her birth is said to have been normal. Her mother, who died some time before the patient's admission into the asylum, is said to have suffered remorse and mental pain during her pregnancy, and to have expiated her sin by constant and affectionate care of her unfortunate offspring.

Physical Condition.—Patient was a short slenderly made woman in fair condition, weight 6st. 12lbs., height 4ft. 8½ inches. The trunk was symmetrical but flattish; breasts small and firm, resembling those common in a girl in 12 or 14; upper limbs were short; arm very short in comparison with forearm; hands broad and short; fingers short, and when hand was placed on any flat surface, the fingers inclined to spread widely out; joints of fingers lax, and admitted of abnormal extension, nails almond-shaped, short and curved inwards at points. Lower limbs were short in proportion to the trunk; thigh short in proportion to the leg. The foot presented the following peculiarities: the big toe was large in proportion to the foot; second toe was unusually long, third toe was half the length of the second; the fourth, half the length of the third, and the fifth or small toe was of normal size (see sketch). The fourth toe was curved downwards, and but a small triangular portion was left uncovered by the third and small toes. This peculiar deformity was symmetrical, and from the drawings of the feet of other Kalmuc idiots, it seems a deformity not altogether uncommon among them.

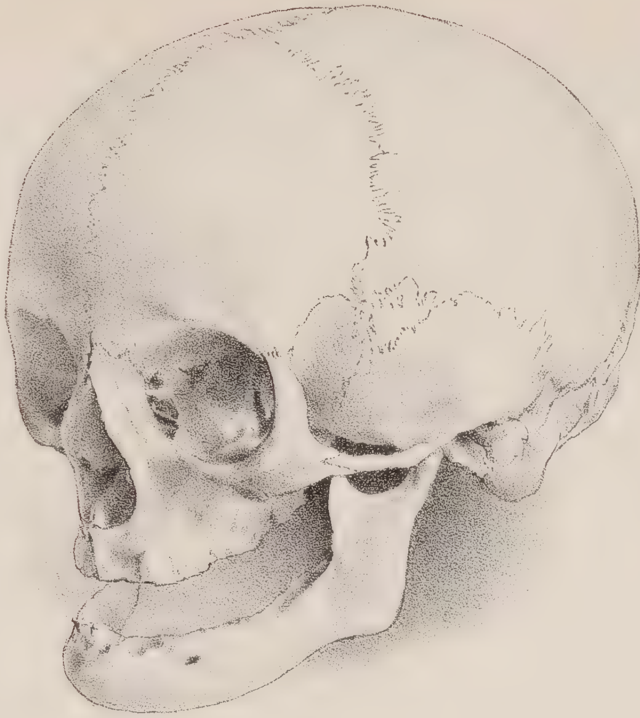
Her head was small and round. The asymmetrical condition of the head, which will be particularly referred to in the description of the skull, was not observed during life. The hair was fine, thin in quantity, and of a light brown colour. The ears were small and simple in conformation.

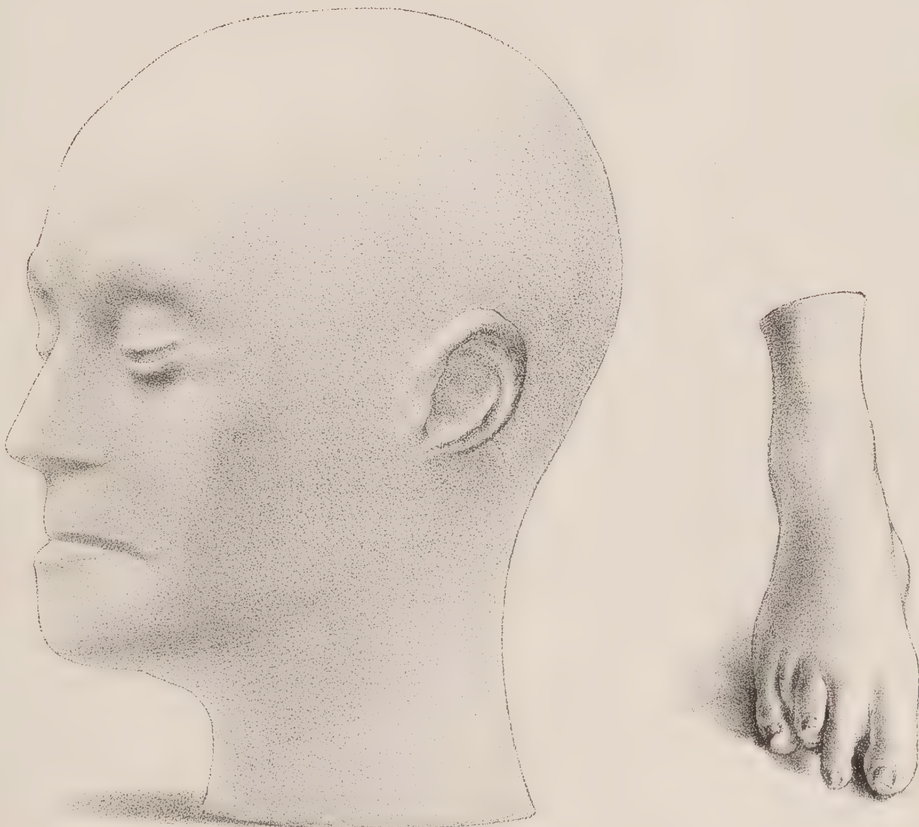
The following are the dimensions of the head:—

	Inches.
1. Circumference in line of eyebrows, inside upper part of ear and occipital protuberance	19½
2. From root of nose to occipital protuberance	11¾
3. From ear to ear over vault . . .	10¼
4. Longitudinal diameter . . .	6¼
5. Transverse	5⅝
6. Diagonal diameters—	
From right anteriorly to left posteriorly	6¼
,, left anteriorly to right posteriorly	5⅞

Dr. Mitchell pointed out to me that the plane of the face and the plane of the back of the head tended to form two parallel lines. The space between these lines measured 6⅜ inches.

The face was almost square, the length to the breadth being 6⅜ inches to 4¾. Cheek bones prominent, and chin sharp and projecting. Forehead was rounded in outline and surface, and rose in a moderately





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SKULL, CAST, & FOOT, OF E.M. A KALMUC IDIOT.

straight manner. It was by no means a retreating or low forehead. Two peculiarities were at once noticeable, viz., the obliquity of the palpebral slits and the broadness of the base of the nose. The palpebral slits ran outwards and upwards in a very marked manner. The inner canthus seemed drawn down. The eyebrows shared in this obliquity. The eyes were small in comparison with the size of the orbits, colour of iris grey, and eye-lashes were absent. The bridge of the nose was narrow, but inferiorly the base became broadened out. Mouth was small, and always pursed, lips thin and angles generally curved downwards.

Interior of mouth presented the following peculiarities: the tongue was long, thin, and much pointed. On the dorsum were numerous transverse fissures, and on the left side about the beginning of the posterior half was a strip of smooth surface about an inch long, and three-eighths of an inch broad. Only the incisor teeth were present, two in upper and four in lower jaw. Palate was not particularly arched.

Physical examination as to the position, size, and condition of internal organs revealed nothing abnormal until her illness set in.

Mental Phenomena.—Her intellect may be said to have been that of a child from a year to eighteen months old. She could not speak, but she uttered sounds with volubility as if she were busily speaking, and when in anger she did this with emphasis and vehemence. Her sight and hearing were good. She remembered the faces of those who were kind to her, and of those who annoyed her, and sought notice from the former and avoided the latter. Her chief characteristic was an affectionate disposition. This was evidenced by her kind, contented, and happy expression, and by her grasping the hand of any one who took notice of her, patting it, and putting it to her cheek. At times she had the peculiar habit of putting one's hand on the back of her head, and indicating that she wanted it smoothed.

Another characteristic was her love of decoration. Any bright article of dress she wore with jealous care, and drew every one's attention to it. If any other patient had anything gay on, she always pointed to it.

She is reported as being very fond of music.

She continually sat in the corner of a bench next the fire, with her feet under her. She had no sense of modesty, and her habits were dirty. She had a great hatred of water, and her struggles against being bathed were strong and persistent. On admission she was extremely dirty, and I attribute the cause of death, acute pleurisy, to the constant bathing which was rendered necessary by her habits.

The description of the mental state would have been fuller, had the patient been longer under observation. She died after about six weeks' residence in the asylum.

Post-mortem Examination.—After the full details given under the head of "physical condition," I need here only describe the skull and brain, and incidentally refer to the viscera within the trunk.

Head.—Scalp very thin. (Sketch of cast of head as taken 14 hours after death is to be seen in Plate 2.)

Skull as a whole is very light, weighing, inferior maxilla included, only 1lb. Many parts are extremely thin, especially the roofs of the orbits, the wings of the sphenoid, and the fossa for the lobes of the cerebellum.

The configuration is asymmetrical. The cranium seems as if it had been grasped diagonally from left anteriorly to right posteriorly, and squeezed. There is a flattening over the outer edge of the left orbit and right parietal eminence, and a slight bulging out at right frontal region and left parietal eminence. The internal fossa are unequal, the left occipital fossa is $\frac{3}{8}$ of an inch broader in the transverse direction than the right, and the right middle fossa is evidently broader than the left.

The sutures of the vault are very open; slight force would separate each bone. The frontal is open throughout its entire length, though the age of the patient was forty. As many as five wormian bones are to be counted in each lambdoidal and squamous suture. At the base, a wide interval exists between the petrous bones and the basilar portions of the occipitals. In these spaces, wormian bones of apparently poor cancellous tissue are to be found. The spheno-basilar synchondrosis is not visible, nor is there any elevation or ridge to mark its site. The basilar bone seems normal in every particular. The suture between the lesser wings of the sphenoid and the frontal bone is open. From the state of all the sutures, it will be evident that the skull could have expanded in every direction. This case is therefore one not due to early ossification of any suture.

Foramina of the base are large, especially the median and posterior on either side. Arterial foramina are normal.

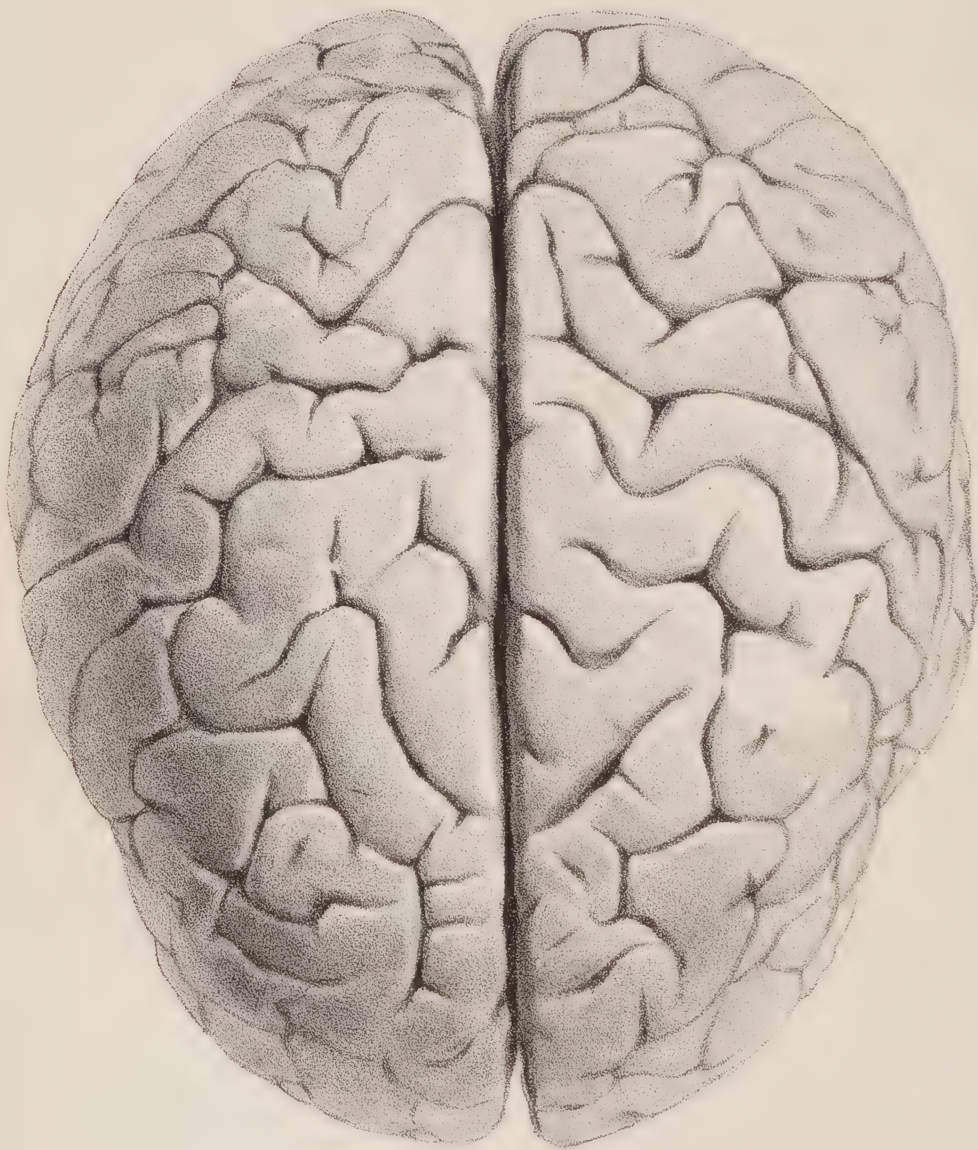
As regards individual bones, the most important peculiarity is the absence of the nasal bones. A small projection from the frontal bone seems to be their representation. (Well illustrated in sketch of skull.) The processus auditorius on each side is whiter than the surrounding parts of the temporal bone, and these processes seem to have maintained their individuality. The horizontal plate of the palate bone is not arched, and the suture between the two maxillary bones at this part is complete. The inferior maxilla has the obtuse angle consequent upon an edentulous condition.

The orbital cavities are normal, but the anterior nasal aperture is, comparatively speaking, large.

The following are the measurements of skull :—

Measurements of Skull.

	Inches.
External cranial circumference . .	$17\frac{1}{2}$
,, ,, longitudinal curve . .	$11\frac{1}{8}$
,, ,, transverse ,, . .	$11\frac{1}{4}$
Longitudinal diameter . . .	$5\frac{7}{8}$



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BRAIN OF E.M. A KALMUC IDIOT.

	Inches.
Transverse diameter . . .	$5\frac{1}{4}$
Bimastoid „ . . .	4
Bizygomatic „ . . .	$4\frac{5}{16}$
Frontal „ . . .	$3\frac{15}{16}$
Length of Hard Palate . . .	$4\frac{5}{16}$
Breadth „ at widest part. .	$1\frac{1}{4}$
Breadth of Orbit	$1\frac{7}{16}$
Vertical width of Orbit . . .	$1\frac{7}{16}$
Depth of Orbit.	$1\frac{9}{16}$
Width of Anterior Nares at widest part .	$\frac{7}{8}$
Vertical width of Anterior Nares . .	$1\frac{7}{16}$
Width between orbits . . .	$\frac{3}{4}$
Internal Base—	
Distance from Foramen Cœcum to Internal Occipital Protuberance . . .	$5\frac{1}{4}$
Distance from Foramen Cœcum to Anterior edge of Foramen Magnum . .	$3\frac{1}{16}$
Distance from junction of Sup. Petrosal Sinus to Lateral Sinus on either side . .	$4\frac{1}{4}$
Anterior-posterior length of Basilar Process .	$1\frac{1}{4}$
„ „ diameter of Foramen Magnum . . .	$1\frac{5}{16}$
Transverse diameter of Foramen Magnum .	$1\frac{5}{16}$

Brain.

The *me*[illegible]*s* were normal. Veins running into Sup. Longitudinal Sinus were engorged in consequence of the obstructive pulmonary disease of which the patient died.

The *organ* is small, the whole encephalon only weighing $40\frac{1}{8}$ ozs. Consist[illegible]nce was normal, but configuration was asymmetrical, corresponding, of course, to want of symmetry described as appertaining to the skull. There was bulging in right frontal and left parietal regions, and slight flattening in left frontal and right parietal lobes.

Convolutions were slightly flattened when brain was removed. The general course of the gyri is comparatively simple. (See drawing of brain.) The sulci vary in depth; anteriorly many are very deep. The principal fissures are well marked, the external parieto-occipital fissure on the left side runs outwardly for nearly two inches. Posterior part of both third frontal convolutions is very narrow; this taken in connection with the patient's want of articulate speech is interesting. The island of Reil on both sides is small and undivided; no convolutions spring from its external margin. The superior gyrus of both temporo-sphenoidal lobes is very narrow.

The base was carefully examined at time of removal, but the cranial nerves, pons, medulla, crura, and arteries presented no noticeable abnormality.

On Section, the grey matter had a breadth of four to five millimetres anteriorly, and of three to four posteriorly. Being desirous of preserving the brain in its entirety, only few measurements with the tephrylometer have been taken, and only the tip of the right frontal lobe was hardened for sections.

Ventricles normal.

Microscopic Examination of grey matter shows an average number of tripolar and multipolar cells of apparently normal size, distinctness, and contents. Some have the usual yellow pigment. Nuclei of neuroglia are not increased, nor is there any abnormal fibrillation. The perivascular canals are dilated, and the hyaline membrane is in many preparations puckered and kinked.

Cerebellum.—The left lobe is slightly longer in transverse diameter than the right, otherwise this organ is normal.

Sympathetic ganglia of the neck were removed. These were small, and the right superior one was half the size of the one on the left side.

Trunk.

Thorax was symmetrical.

On opening cavity, 75 ounces of bloody serum was found in left pleural cavity. Both costal and visceral pleuræ were coated with vascular flocculent lymph; organ collapsed. On section, substance was found to contain miliary tubercles in first or cartilaginous stage.

Right lung was emphysematous anteriorly, and hyperæmic posteriorly. Miliary tubercles also present, but in lesser quantity.

Heart was small, aortic valves fenestrated, otherwise normal.

Abdomen.

Though every organ was carefully examined, it is unnecessary to detail the state of each. I may mention, however, that the uterus was small, or round, cervix uteri constricted, and that the ovaries were small, and full of cicatrices of ovulation, but none apparently recent.

Notes by Dr. Mitchell.

1. I have a record of visits paid to sixty-two so-called Kalmuc idiots; and I have notes, more or less full, regarding the physical and mental condition of fifty-four of the sixty-two. What follows is taken from these notes, and refers of course to the class rather than to individuals.

2. I think it almost beyond question that they are more common on the east side of Scotland than on the west.

3. I have never seen a Kalmuc idiot in any Scotch asylum, except in that of the Fife and Kinross District, in which there have been two—Kinloch and Meldrum. In our insti-

tutions for imbeciles, so far as I can remember, I have only seen two.

4. Of the fifty-four, thirty were males and twenty-four females.

5. I think it nearly certain that they are short-lived. The oldest I ever saw was 43. The ages of the fifty-four are shown in the statement which follows :—

Ages.	M.	F.
0—10	7	0
10—15	5	6
15—20	5	4
20—25	6	4
25—30	0	4
30—35	5	4
35—40	1	1
40—45	1	1
	30	24

6. Many of the fifty-four are now dead. Phthisis caused a large majority of these deaths. In not a few instances, however, death was attributed to nothing more definite than general decay—a sort of precipitated senility.

7. I have recorded the height of seven adult males and fifteen adult females. The males give an average of nearly 4 feet 8 inches—the range being from 4 feet 2 inches to 5 feet 3½ inches. The females give an average of nearly 4 feet 5 inches—the range being from 4 feet 1 inch to 5 feet 1 inch.

8. I have various head measurements in the cases of eleven adult males and fourteen adult females. The average circumference of the male heads was 20⅜ inches, and the range was from 19 to 21½. The average circumference of the female heads was 19⅘, and the range from 18 to 20½. The antero-posterior relatively to the lateral diameters were short—that is, the heads were brachycephalic, as well as small. I think this was almost invariably the case.

9. In a large proportion of the cases, these idiots were recognised as notably small and weak at birth. I convinced myself that this was almost certainly true of nineteen of the males and thirteen of the females. In other words, the condition appears to date from the intra-uterine life.

10. Heredity as a cause does not appear with any special frequency in their history. My notes rather indicate the reverse.

11. Kinship of parentage is certainly infrequent. No case of the relation of full cousinship between the parents is recorded in my notes. In four cases, however, the parents were related to each other as second cousins, and in other two cases a still more distant relationship existed. On this point I obtained information regarding fifty-one of the idiots.

12. Of a considerable number I have noted that the mothers were in a marked state of bad health during pregnancy; in a state of bad health, however, which received no name, but of which it was always told to me that emaciation was a result.

13. It not unfrequently happens that in the male adult Kalmuc idiot only one testicle descends. I have recorded this of five cases. In one boy, ten years old, neither testicle had come down. The hair on the pubes, in the axillæ, and on the chin and cheeks, is generally scanty.

14. Puberty is reached late and the menstrual discharge soon ceases in the females, who never show active eroticism. My observations point clearly to this conclusion as correct. I have not known any case of a Kalmuc idiot woman having a a child. As in the males, so in the females also, the hair on the pubes and in the axillæ is scanty. At the time of the establishment of the menstrual discharge, however, plumpness appears, and the mammæ are fairly developed.

15. The shape of the head—the position of the eyes—the weak sight—the condition of the tongue, teeth, and palate—the burr in articulation and the defective speech—the shape of the hand snd feet—&c., &c., occur in the class generally very much as they occurred in Meldrum, but they are better seen in idiots of the class who are somewhat younger than she was, and who have not begun to show signs of decay.

16. The large, rough, red, hacked tongue is very constant. At one time I thought there was a uniformity of pattern in the hackings, but the drawings I made show that this is not the case.

17. In no instance did I find that the hand or foot differed in character from what was seen in the case of Meldrum. As I made numerous casts and drawings I was led to look minutely into this point. I refer here only to the shortness and broadness of the hand and foot.

18. Many of the fifty-four were photographed for me, and of others I had large chalk drawings made. Both the photographs and drawings were the work of country artists, and with the exception, perhaps, of the little photograph I

gave you (the name of patient I have omitted to preserve) not one of them can be called successful.

19. The concurrent constancy of a characteristic condition of mind with a characteristic condition of the body is what gives interest to this form of idiocy. The mental state is as distinct, as peculiar, and as steady as the physical. If the fifty-four were brought together they would be found to resemble each other strikingly in personal appearance. But more than this, they would also be found to resemble each other in character, in capacity, in likings and dislikings, in habits, in defects, in aptitudes, &c.

20. They are not cretins, but I can quite understand that they might be held to be cretinoid idiots. Of full cretins there are, I think, only from 12 to 20 in Scotland, appearing preferentially in no particular district. Not one of the full cretins seen by me in Scotland was goitrous. The same was true of the Kalmuc idiots. But both full cretins and cretinoid idiots occur, even in strongly goitrous districts, without exhibiting in themselves any trace of goître. Cretinism is a form of idiocy which affects goitrous districts, but which may present itself anywhere. When goître is associated with cretinism, it is as an accident of the idiocy. That accident, of course, will present itself with frequency where goître prevails, which it usually does where cretinism prevails. Goitrous persons are not necessarily cretins or cretinoid; and cretins or the cretinoid are not necessarily goitrous. It is even a question whether in a goitrous district, the proportion of the cretins who are goitrous is very much greater than the proportion of the goitrous in the general community. It is quite possible, therefore, to regard the Kalmuc idiots as cretinoid, though they show no tendency to goître. I do not say that they should be so regarded; but at the same time I recognise certain points of alliance between the mental and physical states of so-called Kalmuc and of cretinoid idiots.

21. Only two of the fifty-four are recorded as illegitimates, but I scarcely think that this can represent the case truly. Of idiots and imbeciles of all sorts in Scotland, one in every six is born out of wedlock. There can, however, be no special connection between illegitimacy and Kalmuc idiocy, for (putting aside the fact that I have not recorded anything to show such a connection, which might be an omission, and is at best negative evidence), I find that I have in a large number of cases recorded the idiot's position in the family

of which he was a member—that is, whether he was first born, last born, or neither first nor last. The facts so recorded do not point to the frequent occurrence of illegitimacy.

22. Some of these facts are grouped in what follows :—

(*a*) Six of the idiots are given as first born.
(*b*) Twenty as the absolutely last born in families consisting of more than one and often of many more than one child.
(*c*) Eight as not the absolutely last born, but as appearing far down among numerous births. Thus :—

1 is said to be the sixth child
1 ,, ,, seventh child.
4 are said to be ninth children.
1 is said to be the tenth child.
1 ,, ,, fourteenth child.

My notes indicate that in these eight families other births followed the birth of the idiot,—even in the last, where the idiot was a fourteenth child.

I have not noted anywhere that the idiot was a solitary child. Still in some cases that must have been so, as happened indeed in the case of Meldrum, who is one of the two illegitimates referred to.

The inference from these facts appears to be that Kalmuc idiots show even a less tendency to be first born children than do the idiotic taken all together. Illegitimates are frequently first born.

23. In thirteen instances I have noted that at the birth of the idiot labour was normal and easy. In no case have I noted that instrumental assistance was needed. This I think conclusively shows that Kalmuc idiocy is not referable to injuries sustained at birth, because, when I made these notes, I took a special interest in the whole child-bearing history of the mothers of idiots, including in a special manner the birth-history of the idiots themselves. On these points, I subjoin all the facts which I have recorded, and which seem of any value :—

1. In one case there were long and irregular intervals between the births of the different members of the family.
2. In another case the idiot was born prematurely.
3. In another, the idiot lost blood largely from the navel soon after birth.

4. In another, the idiot presented by the breech, and the labour was long.
5. In another, the mother was seriously injured by a fall when pregnant with the idiot.
6. In another, the idiot was born eleven months after its mother had had a miscarriage in the third month of pregnancy—the miscarriage being followed by illness and great debility.
7. In another, the idiot was born two years after its mother had had two miscarriages close after each other.
8. In another, frequent miscarriages appear in the child-bearing history of the mother.
9. In another, the mother, after bearing six healthy children, was injured by a fall—had several miscarriages—then ceased to become pregnant for eight years, when she gave birth to an idiot, and after another short interval to the Kalmuc idiot.
10. In another, labour was long, and the placenta adherent.
11. In another, after having several healthy bastards, a woman married, and bore the Kalmuc idiot—the only child she had in marriage.
12. In another, the parents of the idiots were five years married before the birth of their first child. After another interval of five years, their second and last child, the idiot, was born.
13. In many cases the mothers told me that the motion of the idiot in utero was little felt.
14. In one case, the mother of the idiot ceased to be prolific at 31.
15. In another, at 35.
16. In nine cases the mothers' ages at the time of the idiots' birth were respectively 50, 46, 44, 43, 43, 42, 42, 42, 40.
17. In one case the father's age was said to be 70.
18. In another, the mother of the idiot had twins, and so had its father's mother.
19. In another, the idiot was one of twins.
20. In another, the father's mother had twins.
21. In another the mother of the idiot had twins, and the maternal aunt of the idiot had twins four times running.
22. In another, the mother of the idiot had twins.

*John Howard. An Essay.**

The name of John Howard stands alone in history as the pre-eminent type of disinterested benevolence, and the tendency of his work has been universally accepted as having less admixture of evil than perhaps that of any other man. Respect and admiration have been lavished upon him without measure; whether by those whose sympathies were naturally with the objects of his commiseration, or by those who simply desired to emulate his singlemindedness and active humanity. There is this peculiarity in his wide reputation, namely, that the *criminal* as well as the unfortunate have a direct interest in applauding his beneficence; while the good cannot but admire his devotion to the cause of the helpless, and his straightforward simple method. It would be too much to say that he *preceded* as well as excelled all other labourers in his special field, or that without him prison reform would never have been achieved, or would have been even indefinitely postponed; for a Parliamentary Committee had reported fully on the subject 70 years before, and Mr. Popham was Howard's immediate predecessor in introducing some important practical legislative improvements. But it is indisputable that Howard awakened an enthusiasm on the subject without which it is impossible to say how far those improvements could have been carried; and further—that he was the principal means of the complete exposure of the frightful abuses and defects of prison management which were then so prevalent. The expansion of his indomitable labours to nearly every corner of Europe, while it established England's pre-eminence in the stupidity as well as cruelty of its maladministration, furnished him not only with ample proofs that these evils were almost equalled in some foreign countries, but with many examples and patterns (for instance, in Holland and Switzerland), which he copied and laboured to introduce generally; and added such weight and volume to the public opinion, which he created or converted to his views, that there is no similar movement which has been more widely, energetically, and persistently sustained.

* As it is often very profitable to have the routine of thought disturbed by the presentation of a subject in an entirely new view, we publish this original essay, which has come to us from Australia, without endorsing the author's views or his estimate of Howard; in justice to whose memory we have thought it right to append, as notes, the brief comments of one who is singularly qualified by study of Howard's life and character to give a just opinion concerning both.

One stain only has been attempted to be cast upon his memory—namely, his asserted severity to his son. Even this, however, has been confidently and triumphantly denied. Possibly, few believed it; and of those, probably a majority—judging by the fact that his son's ultimate insanity ensued upon a brief career of unbridled dissipation—believe that Howard really erred, if at all, on the side of leniency. In any case, the purity of his motives cannot be impugned; and if a difference in his conduct towards his son might have produced different results, society at large—whose advantage engrossed his care to the prejudice of his parental character—would have felt itself ungrateful had it questioned the propriety of his devoted service; as it would certainly have been unwise to repress any exhibition of that social feeling which it is really so important to cultivate and so difficult to arouse.

But his son was born in 1765, and Howard from that time was rarely at home. He resumed his travels abroad at once, partly to fill the void in his mind caused by his wife's loss, and partly—for the same reason which had made him a traveller from his youth—to improve his health, and his knowledge of men and things. His special career commenced in 1773 only, when he was forty-seven years of age, upon his appointment as Sheriff of Bedford. Thenceforward he appears to have suffered nothing to interfere with the prosecution of his peculiar mission. Any severity which he may have practised towards his son can scarcely be supposed to have been sufficiently continuous to affect the lad's mental constitution permanently. Even the charge of neglect seems scarcely consistent with the facts recorded, that no expense was spared in his son's education, and that considerable care appears to have been manifested in the selection of those persons to whom it was confided. So far, indeed, as the causes of young Howard's excesses and insanity are traceable to the conduct of his father, it would seem quite as probable that they arose from the excess of care with which it was attempted to guard him from contamination. It is not unusual for only sons to be brought up in a singular manner, nor is it at all uncommon for persons of like rigidly ascetical principles to imagine that virtue is tarnished by the mere knowledge of vice. Thousands of young persons have in this manner been kept in such utter ignorance of the ordinary temptations of the world that they have never had opportunities of exercising their judgment and discrimination as to the consequences of good

or evil conduct. The only theoretical motives to virtue and deterrents from vice with which they have ever been acquainted are of so eminently unpractical a kind, that they are instinctively prevented from even endeavouring to apply them when occasions proper for testing them arise. Not being even forewarned, they are anything but forearmed. It is quite overlooked that, in the moral struggles of a rational being, knowledge is power; and that moral education is far more a matter of exercise than of inculcation.

Whether young Howard's moral collapse ensued more or less from causes herein indicated, must remain now a matter rather of speculation; though the general circumstances of his youth seem to favour the supposition of their applicability. Many features in the singular, though eminently practical, character of his father, suggest that it might have had a deeper origin in inherited temperament and mental constitution. His father notoriously suffered much from bad health, and most in youth. He had an apparently morbid love of travelling. That he was remarkably impulsive; that is, that he was very susceptible to certain impulses, which were liable to engross his nature, and so to affect his history to a startling degree—is abundantly proved. His first marriage, from a sentiment of gratitude; his attempted journey to Lisbon after the desolating earthquake of 1755; his curious compact with his second wife to the effect that in all cases of difference of opinion his voice should rule; the curious fact that though his sympathies must doubtless have been strongly engaged in favour of prisoners, while he himself was suffering as a prisoner in France, yet his concentrated energy was not actively aroused in their behalf until he was actually 47 years old, 18 years after;* the manner in which he thenceforward devoted his whole time and strength unrestingly to objects in which his interest was awakened so late in life; and still more, perhaps, the subsequent diversion of his attention from prison discipline, which for years wholly engrossed him, to the investigation of the plague and quarantine systems;† all these things indicate a mental constitution liable to be overwhelmingly affected by casual circumstances, and yet capable of responding with its entire energy to an

* The fact that Howard, after obtaining exact information respecting his fellow prisoners in France, procured their release, is overlooked.

† The obvious explanation that quite early in his prison inquiries Howard became profoundly interested in the Gaol Fever and Confluent Small-pox, and curiously unwholesome state of our prisons, is ignored.

impulse thus casually awakened, to a complete disregard of every other. He apparently inherited a strongly ascetical instinct, itself indicative of great enthusiastic capabilities, and of a tendency to run to extremes in action as well as in speculation. It does not appear further than as a general impression derived from a perusal of his life, that wealth had been long the condition of his family. It has been advanced by psychologists of repute that the acquisition of unwonted wealth in a family has a tendency to produce mental aberration; and though this as a concomitant cause can *now*—in defect of more precise information—be no more than a matter of indirect inference, it corresponds so far with fact and probability, that it should not be lightly excluded from consideration.* Very high authorities can be quoted to the effect that singularity and extraordinary energetic action are in themselves abnormal, and indicate a condition liable to, if not indeed involving, actual aberration more or less. It has also been said by an expert that by means of such the great advances in civilisation are achieved.

My object, however, is to point out the most important lessons which it strikes me are to be learnt from the history of Howard, and without which it would scarcely be worth while to discuss points which must now be too obscure to serve as matters of very profitable speculation.

No one could be further than I am from impugning the perfect purity of John Howard's motives. But I demur altogether to the propriety of judging any man by his motives, and for two ample reasons. In the first place his motives cannot be known with any degree of certainty; and in the second place, the most evil acts might be excused by real or alleged purity of intention; and though no one consistently judges his neighbours by their intentions or alleged motives, still the principle is so far assumed as valid, that the utmost confusion obtains in ordinary judgments of right and wrong. Hence my desire to place the matter in a rational and proper light.

It is very generally recognised that it is both rash and uncharitable to impute evil motives, and very properly so; on the ground of the utter uncertainty as to the motives assumed. But this being the case it should be obvious that the uncer-

* Howard was always the object of a most liberal expenditure at the hands of his father, and was accustomed from childhood to the display of wealth. The father's wealth was the result of industry in trade, so that he was not the victim of wealth unexpectedly obtained.

tainty, and therefore the rashness, must be as great with respect to good motives; and that judgment of good actions by motives, on whatever grounds assumed, should be exactly as open to suspicion, or rather must be as little reliable, as that of any evil actions. The uncertainty in the imputation of motives—the imminent risk of falsity of conclusion, from the lack of reliable data, when judging men by their supposed motives—can be the only rational ground of objection; for there can surely be no impropriety whatever in imputing true motives, could they only be certainly known to be there alone.

It may be contended that a man is certainly aware of his own motives, if he can be trusted to state them accurately. There is nothing I should have more confidence in contesting. Not only will men in general unhesitatingly refuse to admit as reliable any one man's account of his own motives for any particular act, but I believe they will on consideration admit that though the opinions of others of his act are necessarily liable to be utterly mistaken (which is proved in most cases by the fact that they will differ about them to any conceivable extent), yet that those opinions are in general far more probably correct not only than the man's account to others of his own motives, but even than his account to himself. There is, in fact, nothing about which men are so likely to be deceived as the motives which really cause their own actions. For instance, most men will at once adduce rational or social motives for their own acts, and also rational or what are termed self-regarding ones for those of others; whereas no position is more impregnable than that in which it is affirmed that men do not, as a rule, act in obedience to deliberate reason, but rather to habit or instinct. The two motives doubtless ordinarily coincide, and the conflict does not then appear; but where they do conflict, habit carries the day with but little assistance from circumstance. A person habituated to virtue will not do a vicious act, unless the pressure of circumstances be overwhelming. When rational conviction adds its weight to that of habit, the pressure of circumstances may be reduced to a minimum. So criminal habits, which are nearly always both inherited and confirmed and supported by circumstances of strong temptation, can never be eradicated; though while circumstances are modified, so as to reduce temptation to a minimum, the criminal tendency will remain latent; and if evil temptations and associations can be permanently prevented it is weakened, and there may be room to hope that moral habits may be not only generated but confirmed. When,

however, habit is confirmed and assisted by organic degeneration, as in the case of victims of drunkenness, it is notorious that the strongest rational conviction of certain evil results—nay, even experience of them—is insufficient, as a rule, to stay it. There is something analogous in physics. Sir W. Thomson and Helmholtz are said to have found that, under certain conditions, "if motion of the kind called rotational is once set up in a fluid, the portion of the fluid to which this motion is communicated, *retains for ever*, during all its wanderings through the fluid mass the character of the motion thus impressed upon it." (See "Nature," 23 Jan., 1873, page 220.) This appears to me a perfect illustration, not only of the persistence of force, but also an explanation of the force of habit. Habit—hereditary or acquired—is thus the general spring of human action. In fact, virtue that is not habitual, is not virtue, nor does an isolated evil act constitute vice. To be either virtuous or vicious, a man's acts must be not only habitual but characteristic. Character is a word of ambiguous interpretation; but either meaning is significant of the drift of my argument. It implies either that inherent constitution of a man, in virtue of which his acts are of a certain fore-calculable quality, and in accordance with which therefore he cannot but act; or, otherwise, his reputation in society, which is determined necessarily solely by results, and not by his motives or intentions. The word character has really no meaning on any other theory, and is diametrically inconsistent with that of free volitions as an element of moral action; habits being, as a rule, formed and consolidated before the maturity or the application of the rational judgment. It is because I feel that most of man's errors—personal and social—arise from his being habitually ruled by feeling instead of his rational judgment, that I undertake to write this paper. Not that I hope thereby to effect a reform. But I know that every little helps, and I think it right to contribute my mite towards a result which will surely come. And not that I mean to assert that my real motive in writing is that I think it right to do so. I am aware that my writing is the product of my circumstances and temperament. If I say—woe is me if I preach not this gospel; I mean that it would be essentially woe to me were I to do otherwise. But I also know that any action produces effects, however small, and that I am now but one of a numerous class which is working towards the same end. Every—ever so—little really helps.

Howard's motives could not have been purer. But how

know I that?* Admitting that his conscious motives may have been concealed, and that his real motives—the causes of his conduct—may have been, and probably were, vastly different from those of which he was conscious? Simply because I know and am persuaded that no man is impure or unclean by reason of the motives that determine and produce his conduct. If one be pure, wise, and useful, and another impure, foolish, and mischievous, each is so by reason of a chain of causes of which a few links only can be discovered by the careful exercise of the highest faculty of man—*Reason upon his experience.* And this can be consistently denied only by denying also the existence of a chain of causation—of the relations, in fact, of cause and effect. It should be clear that all desire good by whatever means they propose to attain to it. That is their one universal motive. Ignorance and prejudice distort and disguise it, and frequently cruel circumstance reduces the prospect of it to a hard choice between closely balanced evils. And when in such conditions the wise shall scarcely be saved, where shall the inheritor of folly and vice appear? There is no fact more evident than the infinite variety and disparities of human capacities of every kind. It would be as rational to deny the diversity of their conditions. Yet the assertion of the freedom of the will is equivalent to a denial of any difference whatever in their physical and mental constitution, in their knowledge, and in their circumstances.

There is no man—no criminal in Newgate—who would not, if he could, be perfectly wise and virtuous. But he cannot. There is no virtue which I would not possess and practice, *if I could*, and I am certain that my reader—be he whom he may—can say, and truly say, the same of himself. Yet we fall far short of our desires—of our will. There is proof extant that Howard himself was as far behind his standard and aspirations as either of us fall short of ours.† What ground then can we have for judging differently of our neighbours, or of Howard's son? None. And if it thus appears the depth of uncharitableness to judge them differently, I know that that uncharitableness arises solely from prejudice and error almost universally inherited, and

* In all this discourse about motive, no notice is taken of Howard's repeated statements in his letters to private friends, and in his diaries, that his motive was a sense of duty, and love of Christ. Whatever the real bearing of this fact on the author's argument, he should have noticed it.

† Only inasmuch as he took for his standard the ideal of Christ and religious obligation.

originally a necessary product of superficial observation and impulsive action; and that to blame those who exhibit it would be an error equally wild. Let us not therefore judge one another any more; but judge this rather, that no man put a stumbling block or an occasion to fall in his brother's way.

We know that heredity does not necessarily affect every successive generation observably; that atavism may exempt at least one occasionally in the series from what will inevitably reappear. It is therefore not certain that the defects of young Howard were derived direct from either of his immediate parents. Still his father exhibited characteristics which, with slight modification by circumstances, might be expected to produce such aberration in his offspring, if not in himself. There can be little doubt that to many persons Howard himself appeared scarcely sane. It may be that apparently slight differences in their experiences might have reversed the characters of Howard and his son. They were of one stock, with the addition in the son's case of the cross of the blood of Henrietta Leeds, whose idiosyncrasy there is no known reason to suppose was essentially calculated to change it.* The son's capabilities for evil as well as good were certainly inherited, whether from his father or not; for it may be even more confidently asserted that what comes out in the flesh was bred in the bone—than the converse, which is almost a truism, and is certainly trite. And his desires, there is no reason to suppose, were worse, though his associations, habits, and perhaps tendencies were different. His attitude was doubtless accurately described by Paul; the good that he would—he did not; and the evil that he would not—that he did. The same language was precisely as applicable to his father, judging by the records of his private diary.

Now it will be readily conceded that so far as a man does inherit irrepressible impulses to act in this or that manner, he deserves no praise for obeying them, any more than he deserves praise for being six feet high or red-haired. He cannot help himself if he would; for whether he would or not, must depend upon his impulses, inherited or otherwise caused. It is also obvious that Howard's actions were not performed against his inclination or will, and that for him to

* The early death of Henrietta Leeds, Howard's second wife, from what was most probably consumption, is a fact which no writer on the Psychology of Howard ought to overlook.

have acted otherwise would have been disagreeable and painful to him. He was very wealthy and his own master; and he obeyed his instinct, whencesoever derived, and indulged his peculiar hobby to the top of his bent. Though he spent tens of thousands in travelling about Europe fulfilling his inclination, which coincided with what he thought his duty, he was far from impoverishing himself;* and he does not appear to have denied himself anything which was really a pleasure to him, or to have subjected himself to anything which was not capable of being made subservient to his favourite objects, and therefore to him a source of enjoyment. Yet the main ground of the praise lavished upon him is his self-sacrifice and disinterestedness! He certainly lacked as much as Zaccheus. Nay, he sacrificed everything —even his son—to his particular hobby, and devoted himself to that alone which his peculiar nature made him feel pleasure in doing.† Was not his son actually more entitled to credit for self-sacrifice? For HE did sacrifice his health, his reason, his life, and of course his wealth. He literally and unequivocally sacrificed himself, and for a most inadequate object. The elder Howard achieved a reputation which the whole world envies. Empresses solicited his company in vain. Emperors he kept standing for hours in deference to his unbending humour.‡ He died in old age, wealthy, respected, mourned, and almost adored by all Europe, the good and the bad, from the sovereign on his throne to the felon in the dungeon.§ Contrast with this his son's miserable end. I hold that, accurately speaking, young Howard far more than his father practised self-sacrifice; and that to say that the father was *disinterested* in devoting himself to the objects in which he felt most *interest*, is a simple contradiction in terms. I say this advisedly, and am quite prepared to accept the logical consequence, that self-sacrifice, so far as real, is essentially what it was in young Howard's case—VICE; and that virtue—including such as Howard's—is none the less virtue, because it is, like his son's vice, though voluntary (that is, done with consent, pleasure, and will, and the

* A letter to Samuel Whitbread, in which Howard speaks of selling Cardington, shows that this statement is inexact.

† Inconsistent with a previous statement, and not true. Howard's treatment of his son can be blamed only by those (if any exist) who deem it the duty of a widowed father to live under the same roof with an only son, and keep him in perpetual tutelage.

‡ This is new to me.

§ A most imperfect and misleading account of Howard's death.

prospect of good as motive), performed with as little real option or choice, as are the dictates of the blindest instinct. Thus they personally are worthy of neither blame nor praise. But I think it even more incumbent on us to estimate carefully the value of their work by the results, and to mark strongly our approbation or disapprobation of their conduct. We are enabled to do this with the greater freedom and force, while attributing their conduct not to them but to circumstances; we can condemn or approve their acts without blaming or even praising them. Men are attempted to be judged by their motives, which in my view are all equally good, and in the popular view cannot possibly be known; their work, by the results, which are generally very different from those which they have in contemplation. But thus wisdom can be really charitable, and freely forgive them, for they know not what they do!

I hold that with motives—supposed good or bad—we have nothing to do. They cannot possibly be distinguished with even approximate certainty; and if they could they would be found so inextricably interwoven with ancient heredity and distantly converging circumstances that nothing could be more senseless than to praise or blame the active or passive instrument of their fruition; or to imagine that he could possibly have acted otherwise without reversing the past history of the universe, and substituting a fresh chain of causation from all eternity. Men are but the seeds of time; and if one bears ample fruit, and like Newton interprets nature, and another like Napoleon sends thousands to destruction, while a third, like Howard, abolishes cruel abuses, each does his part at the expense of his neighbours; as the one acorn which fructifies absorbs nutriment from thousands of others equally potential in themselves, but, for lack of opportunity, serve only as manure for his particular growth. It is not unworthy of remark that the above-named three historical characters appear to have formed the culmination of their stock, and to have exhausted its capabilities of variation in themselves; while in ordinary cases, though matrimonial connections appear to secure variation by instinctively forming antithetical conjunctions, the result is almost invariably a stereotyped mediocrity.

I think we have now arrived at a stage in the development of intellect whence we should discern the fallacy of judging of the worth or utility of conduct by its proximate rather than its ulterior results, and the uselessness of expecting to

modify the course of events to any great extent by operating upon proximate rather than distant links in the chain of causation. This improvement could only ensue upon the expansion of knowledge and the multiplication of recorded observations. And in proportion to the enlargement of our apprehension of the importance of studying wider causes and effects, will mere human individuality sink into its proper relative insignificance in the production of sociological improvement; and steps in civilisation, and even the achievements of the least puny of men as much as the movements of the masses which they appear to direct, will be recognised as being evolved in cosmical history of which they form but infinitesimal parts. While the attention of men was restricted to immediate causes and effects, it was scarcely wonderful that they should entirely fail to modify the sequence of events to any large extent. The theory of free-will—which arose in a feeling of personal power with an ignorance of its source—was the very narrowest possible conception of causation, in which all but the single last connected link in the chain of causation escaped observation altogether; and it was scarcely wonderful that the influence of human wisdom upon the course of events should have been proportionately slight. As we gain a more accurate conception of causes and effects we shall learn also how much more powerfully intelligent and consistent efforts are capable of modifying the distant future; and hence also the ultimate importance of all our actions. The further back in the precession of events that human wisdom recognises the efficience of causes, so much further may it hope eventually to influence effects. Could Howard have discerned the remote effects of his course of action he would certainly have modified it so as to prevent the evil in them. But they could not be discerned then by Howard, nor even perhaps by Judge Heath himself.

By declining to judge men by their motives, and to allot praise and blame to them for what is the product less of their intervention than of antecedent and concomitant circumstances, we shall entirely avoid injustice and uncharitableness to those who would certainly have done better if they could; and by estimating the value of their actions by the results alone, we shall with due caution derive much more advantage in guiding our own conduct than if we proceeded on the theory of motives. Judging Howard's work by his motives, which were good, we should be bound to accept the

results as good. But, if so, we should recognise the results of any other man's work, however evil, as good also, because good is the motive of all.* And it seems to me that the true value of his work has yet to be estimated; in fact, it has scarcely yet been fully developed. What are now the results?

The most obvious immediate result which Howard discerned was the lessening the actual physical cruelty practised upon prisoners. This was a good. But what has been the later effect upon the world? Prisoners, as a rule, may fairly be taken to represent the bad—the evil portion of human society. To say that Howard did good solely or mainly to the evil would be to give an entirely new aspect to the question of the value of his work. If that were the case, and the whole of it, surely the results would be wholly evil. But it is not the whole of the case, though a material feature in it. Howard's sympathy was with misfortune rather than with crime. He was one of the first builders of model cottages, and was careful that those who inhabited them should be good citizens so far as he could judge. This was even better, for thus he marked the distinction between good and evil. He founded schools, too, which was better still. For that was calculated to spread knowledge, which is the best preservative against evil. But alas! he sadly qualified the good thus done; for in his schools girls were not taught to write, and that accomplishment was withheld from all boys, except a few that he selected as fittest to be trusted with so much power. This evident want of confidence in knowledge as the best preventative of crime strongly suggests that Howard acted in blindness to consequences, though not in disregard of those which he discerned. We should learn better. I am not forgetful that his later labours were partly directed to the improvement of hospitals and the alleviation of the sufferings of others beside criminals. I shall show that even this has also produced evil effects. But his principal work was directed to the improvement of the condition of prisoners in gaols, and upon that is mainly based his reputation.† In the right hand of his statue in St. Paul's Cathedral is a KEY.

* This assumption that *good* is the motive of all men is scarcely fit to be used in any serious essay.

† This statement is imperfect. The improvement of the condition of prisoners was but one of a series of labours to which he was successively called by duty and opportunity.

Before Howard's time, although the Report of the Committee of 1701-2 proves that the abuses in prison management had received attention and condemnation, no effective measures appear to have been taken to remedy them until 1773, when Mr. Popham brought a bill into Parliament to remedy the greatest general abuse, which Howard soon afterwards assisted to abolish, namely, the payment of gaolers by fees instead of by wages. Howard's enthusiasm doubtless accomplished in a few years what might otherwise have taken much longer to do.* But his enthusiasm overshot the mark, as feeling not strictly regulated by reason always does.

I must now endeavour to distinguish the results to which his enthusiasm was blind, but which the disregarded reason of his time was not incompetent to discern. The logic of Judge Heath was almost impregnable ("Dixon's Life of Howard," p. 219). Speaking of transportation, he said, "If you imprison at home, the criminal is soon thrown back upon you hardened in guilt. If you transport, you corrupt infant societies, and sow the seeds of atrocious crimes over the habitable globe. *There is no regenerating a felon in this life.* And for his own sake, as well as for the sake of society, I think it better to hang." The only defect of this reasoning is, that in it the alternative of perpetual imprisonment was overlooked, and short imprisonments only were contemplated. Whereas, if convicted criminals were never released, the greatest mischiefs that they do would be entirely prevented. First, they would not contaminate the honest and innocent; and, secondly, they would not propagate their evil stock. It is altogether a narrow, imperfect view that regards only the particular case or individual. The improvement of society, or rather its preservation from evil, is the pre-eminent duty of social rational men. Good citizens should always be preferred to bad ones by moral beings. This principle dictated another wise saying, which has been preserved, though not adequately appreciated. It was spoken by an English judge, but I regret that I know not if it was Heath. "Prisoner at the bar," said he, "you will be hanged—not because you have stolen a horse, but in order that horses may not be stolen." In this admirable pithy saying is embodied the whole duty of man as legislator and administrator. Society at large, and particularly those of its members otherwise

* This is a very inexact statement. The work that Popham did not succeed in doing, Howard accomplished in about five months of the winter of 1773-74. Nor was any work ever less deserving of the epithet "*enthusiasm*."

most exposed to contamination and temptation, are in it regarded as entitled to security from those evils, and to consideration in preference to one individual who has forfeited his title to any. Were this principle consistently practised, crime would be greatly lessened, if not nearly exterminated, in a few generations.

Howard, however, like other people, and more particularly like criminals, acted from feeling and not from reason. His instinct was to do good, to alleviate and relieve suffering; and he devoted himself to what seemed to his superficial view the cases in which amendment was most required. He disregarded the reason of his age, which I have quoted. Still I am far from saying that he should be blamed or held responsible for the evil which has followed. He did his best; but though his motives were as pure as Judge Heath's, the present result of his labours I hold to be mischievous and immoral in the highest degree. I do not say that he in any instance sympathised with a criminal as such. But from his time certainly dates the unreasoning sympathy with criminals which has spread and grown to the present time, having sprung originally from his enthusiasm as cause. It may be that we should ascend to even more distant causes, and trace Howard's own enthusiasm as well as that to which it gave birth, to that system of which he was such a devoted adherent, and which states that there is more joy in heaven over one sinner that repenteth than over ninety and nine just persons who need no repentance. In worldly practice no principle could offer a more direct premium to crime, or could be more mischievous or immoral in its general tendency.

I hold that all men are alike blameless; their motives being without and not within them; and good—not evil—being their universal desire. The results of their acts are alone worth estimating, as furnishing data for future rational action, and those results I now desire to expose as accurately as possible. I maintain that the sympathy and enthusiasm in favour of criminals, which Howard's work was mainly instrumental in producing, tends to confound the judgment of good and evil more or less throughout society. It tends directly to ameliorate the physical condition of the felon to such an extent, as to make him an object of rational envy to the thousands of struggling poor who are far worse housed, fed, and clothed than he. It has tended inevitably to provide for the felon and criminal a life of ease and comfort in gaol, while hundreds starve—and see their children starve and grow

criminal—simply because they will not thieve and swindle.* It has affected popular feeling, and legislation, and administration to such an extent, that sleek convicts are constantly released to contaminate the previously honest, and demonstrate to them that the simplest and legal way to exchange a condition of cruel anxiety as well as privation for one of ease and idleness is to violate the laws of society. It has rewarded the guilty and taught immorality to the innocent, and it has so blinded men to these results, that the human race is now undergoing a process of deterioration in other ways. The NON "*survival of the fittest*" is now the rule. Irrespective of the moral contamination which the perpetual release of invigorated and skilled criminals ensures, the morbid sentimentality which blindly causes this evil, produced others scarcely less gigantic and pernicious. The hopelessly diseased and the lunatic are the objects of far more care and expenditure than the honest distressed poor; and it is notorious that the imprudent, the diseased, the weakly, the immoral, and the criminal, propagate in an enormously greater ratio than the prudent, the healthy, the strong, the moral and the honest.† I say notorious; and to show that the imprudent and the immoral, which include the criminal, do so—requires no corroborative remark. That the diseased and weakly do so is easily shown. For a larger proportion of them lead sedentary or home lives, and receive attentions which lead to matrimonial connections, while the healthy and strong run risks, and are often actively engaged, so as to preclude settling down to a home life; and the chances are in favour of the most enterprising among them being cut off by accident or privation. The multiplication of the evil proportion would not be much the greatest, were it not that a much larger number than formerly are, at great cost and with most pernicious results, saved from the extermination for which nature would select them. What logical reason—to counterbalance the obvious evil results—can be given for preserving any person with hereditary disease? Yet this is done at enormous expense. Or in defence of the heavy expenditure incurred for the support of gibbering idiots and two-legged animals who possess no distinguishing characteristic of humanity but the form and the capacity for mischief? Formerly they were exterminated by neglect and barbarity. Why should the healthy and the sane be sacrificed, as they

* Obviously untrue.

† Some proof of this ought to have been given.

now are, for the sake of the sickly and the mindless? Would it not be better for the sake of our posterity, and to prevent the certain deterioration and possible destruction of the human race, that they should be exterminated with tenderness and humanity?* Particularly while it is merely barbarity and worse than neglect to keep them alive in conditions of disadvantage, and frequently of positive pain? Reason unmistakably pronounces their doom. Only feeling exclaims against it. Why? Is it not because, listening to feeling and being deaf to reason, causes crime, lunacy, disease, and even weakness? Is not the very sympathy felt with those whom nature would unhesitatingly condemn to rapid extermination symptomatic of the general spread of the disease itself?† Would it be exhibited by perfectly sane and healthy persons? Is not the whole head sick and the whole heart faint? Why will ye be stricken any more?

I think it certain that, from the above causes, the average of morality and intelligence in the human family is lowering surely and perhaps not slowly. The first and most feasible remedy is—the perpetual imprisonment of criminals. The next is the painless destruction of all those whose intellectual existence has already ceased, and of those by whom disease would be propagated. Thirdly — I would recommend a thorough knowledge of physiology to be taught to all of both sexes, with a view to guard against evil matrimonial connections. These measures alone would suffice to work a moral revolution in the world.

Nothing was farther from Howard's intentions than to assist in the production of such a state of things as now exists. And I honour him personally exactly as much (and as little) as any one else for his intentions. I think it, however, the duty or function of a rational being to endeavour to discern the truth, and, having found it, to proclaim it for the benefit of the world; and if Howard did good to the diseased and the criminal, I confess that I would rather save the healthy and the moral from degenerating to the conditions which awakened his sympathy; the present NON-SURVIVAL OF THE

* If this be seriously meant, it is not very consistent. Such practice would be the most effectual way of exterminating that social and moral feeling of mankind which is the essential condition of the evolution of the social organism.

† Is not human sympathy then nature; and human art, whether it be supposed to mend or mar nature, itself nature? The author is practically declaring that nature was more enlightened at its lower than at its higher stages of evolution. He clearly should give reasons for this assumption, and not merely declare it.

FITTEST being a great and increasing fact.* To all who believe in heredity (and who does not, more or less?) it should be a striking fact that one Howard should really do much mischief, while nominally sacrificing himself for the benefit of the most evil of mankind,† and that the next Howard should have actually sacrificed himself to vice; and for whose advantage, if not theirs who have the wit to reason out the salvation of humanity from the history of both?

I am strongly of opinion that Howard did most good by far by the uncompromising way in which he did and said what he imagined to be right, without heeding the prejudices and conventionalities of society. True, he could well afford to do it, and for his mere constitutional energy he deserves no praise. But he seems to have done it consistently without fear or favour; and if that were generally done, I believe that far more would be done than Howard did by all his labours.

On the Measurement of the Palate in Idiots and Imbeciles. By T. Claye Shaw, M.D., Medical Superintendent of the Leavesden Asylum.

(Read before the Medico-Psychological Society at Bethlem Hospital, on May 10, 1876.)

There is a general idea expressed in text-books, and more or less freely asserted in practice, but which I shall prove to be a fallacy, that a high-arched palate is so frequently met with in idiocy and imbecility that it may be taken as a sign of their existence. Indeed, when a case of this kind is brought forward the patient is made to open his mouth, under the conviction that a high palate will be found as certainly as a superficial alteration of the tongue in gastric disturbance. We shall see that the connection is an accidental one; and there is, in reality, no relationship between the development of the intellect and the height and width of the palate. If we consider that the bones of the cranium are developed in a different manner from those of the face, and that ossification at the base is complete long before that of the bones forming the palate, it is clear that there can be no *primâ facie* reason

* Howard did largely save the healthy and the moral from disease and degeneracy.

† Not so—not for the prisoner only, but quite as much for those whom the state of prisons in his own day destroyed—inside and out.

for thinking that because a person has an imperfect brain he should therefore have an imperfect palate; yet such an interdependence is held. It is quite true that a constitutional taint, such as rickets or syphilis, which affects the ossification of the bones generally and the cranial sutures, would probably affect the palatine bones, and hence it is that many idiots and imbeciles are found to have high or imperfect palates: but on the other hand some modifying taint may dwarf the height of the body, may affect the shape of the head to such an extent as to make an idiot of the microcephalic type, and yet leave the palate untouched, perfect in all conditions of width, height, number, quality, and regularity of teeth.

With a view to settling the question, I have measured the palates of the patients of this Asylum, and have drawn some conclusions which, though mostly negative in character, may be, I hope, of positive value in proving that there is no necessary connection between idiocy and a high palate, but that persons with acute intellects may have most highly arched and contracted ones. To avoid error I have taken adults, but not old people, since atrophy of the alveolar process would cause lessening of the vertical height, or at any rate the appearance of it. My friend and colleague, Dr. Chas. Cobbold, has assisted me in carrying out the measurements, and in kindly tabulating the figures, of which, however, I can in this paper give a few only. We have, also, in addition to the palate measurements, taken those of the skull, in most instances, as to contour, greatest length, height, and width and degree of contraction of base. Between some of these measurements and those of the palate there is a general connection, but not by any means the one that has been accepted. The instrument I have designed (made for me by Elliott, of St. Martin's Lane) can be applied to the measurement *at any point of the palate*, to its length, width, and vertical height. It consists of two pieces of German silver, sliding one within the other, an inch long when closed, but capable of extension to more than two inches, graduated on the margin into English lines. These slides are worked by two levers, moved outside the mouth and turning on pivots for use in any direction. The horizontal slides are traversed by a groove in the same axis in which works a lever acting at right angles moved from outside the mouth by a handle of flexible metal; this second steel lever gives the vertical height of the palate taken from the alveolar process. By this arrangement we can at the same moment

take the transverse and vertical measurements at any point wished, from the pterygoid processes behind to the intermaxillary bone in front. The scale is made out in English inches and lines, and if the palate is very narrow in front, the palatometer can be supplemented by a pair of hinged compasses blunted at the points.

On taking up a well-formed skull we see that a plane with nearly equal sides can be formed by a series of lines drawn in front from the nose-frontal articulation to the anterior nasal spine, below from this anterior nasal spine to the posterior edge of the hard palate, above from the naso-frontal articulation to the anterior border of the sella turcica, and behind by a line connecting the sphenoid with the posterior edge of the hard palate. The intermaxillary bones may thus be put out of count as affecting the arch of the palate, being independent of this quadrilateral, and not entering materially into the formation of the palatine arch, which is composed, for all practical purposes, of processes from the maxillary and palate bones. In measuring the palate I always try to hit the position of the anterior palatine foramen, the distance between this foramen and the posterior nasal spine being nearly equal, in a symmetrical skull, to a length which I propose to designate the "nasal length," that, namely, from the naso-frontal articulation to the anterior nasal spine. This "nasal length" being easily measured may be taken as a convenient standard for getting the dimensions of the anterior part of the skull, for by it we can approximately guess the length from the root of the nose to the body of the sphenoid bone, the development of the pterygoid processes of the palate bones, and the length of the hard palate.

On what does the height of the palate depend? Chiefly on the degree of development of the alveolar processes and the period of ossification of the palatine and maxillary sutures. There is to be noticed a curious coincidence, viz., that a long or wide palate is, as a rule, found with, I do not say is determined by, a long or wide cranium. Virchow's theory of irregular ossification best explains this: thus as premature ossification of the sagittal suture causes the dolicho-cephalic or elongated type of cranium, so here we find a palate longer than usual, presumably dependent on premature ossification of the inter-maxillary suture. Again, in the brachy-cephalic type where date of ossification in the coronal and lambdoidal sutures is anticipated, and the cranium consequently bulges from side to side, we have a broad palate and a low arch. It

is not uncommon to see a non-symmetrical palate longer and higher on one side than on the other; this corresponds with what is often seen in the cranium, where from irregular ossification of one side the other developes so as to produce a non-symmetrical skull. The sutures we have to deal with in considering the palate are four—the inter-maxillary, the inter-palatine, and two palato-maxillary. We may thus have—

1st. Long palate, from premature inter-maxillary and inter-palatine ossification.

2nd. Broad palate, from premature palato-maxillary ossification.

3rd. Non-symmetrical palate, from irregular ossification on one side.

What causes a high palate is not very easy to determine. Certain it is, however, that a contracted pterygoid width is associated with it, and as this occurs mostly, if not always (as proved by measurement), in long palates, it is presumably owing to a premature inter-palatine and inter-maxillary contraction which mould the growth of the palate bones to take the direction of least resistance, *i.e.*, upwards. A narrow pterygoid width is usually associated with an approximation of the molars of opposite sides. In measuring these mouths I have taken the length between of the hard palate from the posterior nasal spine to the anterior palatine foramen, the width between the pterygoid processes, the width and height at the first molars and those at the first bicuspids. It is a fact worth keeping in memory that the posterior edge of the hard palate is midway between the anterior palatine foramen and the anterior edge of the foramen magnum, so that in general terms, given the "nasal length," we have, approximately, the length of the palate, the position of the foramen magnum, and that of the vomer. It is difficult to say with accuracy what part the vomer takes in the development of the palate. It probable serves merely to transmit any shocks that may be sustained by the palate to the firm basis of the body of the sphenoid. Its true function is to support the triangular cartilage and the mucous membrane of the nose, and is really more a sufferer than a causative agent in palatal deformities, as may be seen in cases where it is decidedly curved, bulging into one nostril or the other, because instead of being symmetrically developed with the palate and maxillary bones the latter have preceded it, leaving it between two fixed points, above and below, to follow the line of least resistance, *i.e.*, towards one or other of the nasal cavities. After taking many

measurements I have formulated these as fair averages, premising that there is little difference between male and female skulls.

	Length of Palate.	Nasal Length.	Pterygoid Width.	Width at 1st Molars.	Height at 1st Molars.	Width at 1st Bicusp.	Height at 1st Bicusp.
	in. lines.	in. lines.	in. lines.	in. lines.	in. lines.	in. lines.	in. lines.
	2 0	2 0	1 6	1 5	0 7	1 4	0 7
The greatest variations I have found are—							
	2 3	2 6	1 9	1 9	1 0	1 6	0 10
The smallest variations are—							
	1 7	1 5	1 1	0 10	0 4	0 7	0 4
E. F. (Idiot)	1 11	1 10	1 7	1 3	0 4	0 7	0 4
J. F. (Idiot)	1 9	1 9	1 3	1 3	0 8	0 11	0 7

The measurements of these idiots (sisters) who have *microcephalic skulls* give, as a matter of fact, the lowest vertical heights of any that I have taken, including persons of high intellect.

Moreover, their small palatal height shows that no connection can be drawn between a high palate and basal synostosis, for in their case the lengths of bone were very small, viz., 5-11in. and 5-4in. respectively.

I hand round a diagram containing the measurements of many palates, taken from persons sound and of good intellects, of idiots and imbeciles, and of patients in various states of insanity to prove that—

1.—There is no necessary connection between a high palate and the degree of mental capacity of the individual. Some idiots have the flattest and most symmetrical palates, whilst many with strong individuality of character have highly-arched palates.

2.—There is a general relation between the shape of the palate and that of the skull as to length and breadth.

3.—A narrow pterygoid width is invariably associated with a high palate, as is also a narrow skull.

4.—The width at the first molars is almost invariably less

than or equal to the inter-pterygoid width, and is only very rarely greater.

5.—The arching of the palate has nothing to do, as regards height, with premature synostosis of the skull-base.

6.—The differences in the palatal measurements of various mouths are so slight and so various that it is difficult to see of what service a palatal investigation can be in affording a clue to the mental faculties.

Bethlem Royal Hospital. By Daniel Hack Tuke, M.D., F.R.C.P.

(Read at the Quarterly Meeting of the Medico-Psychological Association at Bethlem Royal Hospital, May 10th, 1876.)

The chief point of interest in the subject to which this paper has reference, centres in the questions where and what was the provision made for the insane in England in the earliest period in which we can discover traces of their custody? As this enquiry at once leads us to Bethlem Hospital, I thought when Dr. Williams, some weeks ago, asked me to contribute a paper to the next Quarterly Meeting of the Association, that it might fittingly occupy a portion of our time this evening.

Many, I suppose, are familiar with the fact of the original foundation in 1247 of a Priory in Bishopsgate-street, for the Order of St. Mary of Bethlem, but few are aware at what period it was used for the care or confinement of lunatics, and still fewer have any knowledge of the form of the building which I shall invariably designate, to avoid confusion, as the first Bethlem Hospital—the word "Bethlem" soon degenerating into *Bedlam.*

Before entering upon the less known facts, I will remind you that an alderman and sheriff of London, Simon Fitzmary, gave in the 31st year of the reign of Henry III., 1247, to the Bishop and Church of Bethlem, in Holyland, all his houses and grounds in the parish of St. Botolph without Bishopsgate, that there might be thereupon built a Priory for a prior, canons, brethren, and sisters of the Order of Bethlem or the Star, wherein the Bishop of Bethlem was to be entertained when he came to England, and to whose visitation and correction all the members of the house were subjected.*

* Dugdale's "Monasticon," Vol. vi., pt. iii., p. 621.

The following is the wording of the original grant, slightly abridged :—

To all the children of our Mother holy Church, to whom this present writing shall come, Simon, the Son of Mary, sendeth greeting in our Lord, * * * * having special and singular devotion to the Church of the glorious Virgin at Bethelem, when the same Virgin brought forth our Saviour incarnate, and lying in the Cratch, and with her own milk nourished ; and where the same child to us there born, the Chivalry of the Heavenly Company, sange the new hymne, Gloria in excelsis Deo. * * * a new Starre going before them, as the Honour and Reverence of the same child, and his most meek mother, and to the exaltation of my most noble Lord, Henry King of England, * * * and to the manifold increase of this City of London, in which I was born : and also for the health of my soul, and the souls of my predecessors and successors, my father, mother and my friends, I have given, and by this my present Charter, here, have confirmed to God, and to the Church of St. Mary of Bethelem, all my Lands which I have in the Parish of St. Buttolph, without Bishopsgate of London, * * in houses, gardens, pools, ponds, ditches, and pits, and all their appurtenances as they be closed in by their bounds, which now extend in length from the King's high street, East, to the great Ditch, in the West, the which is called Deep Ditch; and in breadth to the lands of Ralph Downing, in the North ; and to the land of the Church of St. Buttolph in the South ; * * * to make there a Priory, and to ordain a Prior and Canons, brothers and also sisters, and in the same place, the Rule and Order of the said Church of Bethelem solemnly professing which shall bear the Token of a Starre openly in their Coapes and Mantles of profession, and for to say Divine Service there, for the souls aforesaid, and all Christian souls, and specially to receive there, the Bishop of Bethelem, Canons, brothers, and messengers of the church of Bethelem for ever more, as often as they shall come thither. And that a Church or Oratory there shall be builded, as soon as our Lord shall enlarge his grace, under such form, that the Order, institution of Priors, &c. to the Bishop of Bethelem and his successors shall pertain for evermore. * * * And Lord Godfrey, bishop of Bethelem, into bodily possession, I have indented and given to his possession all the foresaid Lands ; which possession he hath received, and entered in form aforesaid.

And in token of subjection and reverence, the said place in London shall pay yearly a mark sterling at Easter to the Bishop of Bethelem.

This gift and confirmation of my Deed, & the putting to of my Seal for me and mine heirs, I have steadfastly made strong, the year of our Lord God, 1247, the Wednesday after the Feast of St. Luke the Evangelist.

From this it appears that Simon Fitzmary's land extended from the King's Highway on the east (Bishopsgate-street

without) to the fosse called Depeditch on the west. The land of Saint Botolph Church bounded it on the south, and the property of a Ralph Downing on the north.

A considerable portion of this site is occupied at the present day by Liverpool-street, and the Railway Stations which have sprung up there.

The topographer in search of the old site, finds to-day striking proofs of the changes which 600 years have brought with them. He is surrounded by the Metropolitan, North London, and the Great Eastern Railways, while Bethlem Gate, the entrance to the Hospital from Bishopsgate-street, is superseded now-a-days by boardings covered with the inevitable advertisement of the paper which enjoys the largest circulation in the world. Deep Ditch is now Bloomfield-street. The name of Ralph Downing, whose property is mentioned in the charter as bounding Bethlem on the north, is, I suspect, represented after the lapse of six centuries, by Dunning's Alley and Place.

There was a churchyard on the property, which was enclosed for the use of adjoining parishes by Sir Thos. Rowe, Lord Mayor of London, at a much later period (1569). Probably the inmates were buried there also. The Broad-street Railway Station booking-office is situated upon part of its site. In connection with this, I may refer to a statement in Mr. Buckland's "Curiosities of Natural History," to the effect that a skeleton, on which fetters were riveted, was found in 1863, in St. Mary Axe, by some workmen engaged in excavations. Mr. Buckland states, on the authority of Mr. Hancock, that Sir Thos. Rowe gave ground in St. Mary Axe, for the use of Old Bethlem Hospital, and certain adjoining parishes. Mr Buckland, therefore, concluded that the skeleton was that of a man who had been a patient in Bedlam, and buried in his chains. He was good enough to place them at my disposal this evening, but as I can find no evidence that Sir T. Rowe did more than what I have above stated, I think there is no connection proved between the skeleton in irons and Bedlam, and have therefore not availed myself of Mr. Buckland's kindness. Bethlem has sufficient sins to answer for, without our adding to the catalogue any which cannot be clearly established.

In this churchyard was buried Ludwig Muggleton—an appropriate resting-place, considering its proximity to a madhouse. Also John Lilburne; four thousand persons, it is said, attending his funeral.

Mr. Roach Smith, who formerly lived in Liverpool-street, informs me that on one occasion an incident proved the former existence of a burial ground on this spot. He writes, "Opposite my house (No. 5) on the other side of the street, was a long dead wall, which separated the street from a long piece of garden-ground which faced some high houses standing, probably, on the site of Bedlam. This garden may have stood on the burial ground. When my man buried in it a deceased favourite cat, he said he came upon the remains of human skeletons. But revolution brought about the disturbance of the cat which had disturbed some of old London's people. A few years since the cat's coffin and her epitaph were brought before the Directors of a Railway as a very puzzling discovery." The engineers of the North London and Great Eastern Railways inform me that many bones were dug up in excavating for the Broad-street and Liverpool-street Stations.

The locality of the first Bethlem Hospital is, I hope, now clearly before you. I will describe the form of the buildings shortly, but will first trace the history of the convent to the time of Henry VIII.

In the year 1330, eighty-three years after its foundation, it is mentioned as a "Hospital," in a license granted by King Ed. III., to collect alms in England, Ireland and Wales, but it must not be inferred from this that it was *necessarily* used for the sick, as the word Hospital was then, and long after, employed as "a place for shelter or entertainment." (Johnson). It is so employed by Spencer in the "Faerie Queene:"—

> They spy'd a goodly castle, plac'd
> Foreby a river in a pleasant dale,
> Which chusing for that evening's *Hospital*
> They thither march'd.

Very shortly after this, namely, in 1346, the monastery or Hospital was so miserably poor that the master applied to the mayor, aldermen, and citizens of London to be received under their protection. This was agreed to, and they were governed afterwards by two aldermen, one chosen by the mayor and the other by the monastery.

Then we come to an important event—the seizure of Bethlem by the Crown. This was in 1375, the 48th year of Edw. III. It was done on the pretext that it was an alien or foreign priory. There was not therefore any seizing of the monastery by Henry VIII. as is usually stated. That had been done

already. The master of Bethlem stated at this time that the annual value of the House was 6 marcs; and that he paid 13s. 4d. a-year to the Bishop of Bethlem, and 40s. rent to the Guildhall for the benefit of the city. Disputes afterwards arose between the Crown and the City as to their right to appoint the Master of the House, but the former triumphed, and Richard II., Henry IV., Henry VI., and Henry VIII. insisted upon and exercised their right of presentation.

It appears that the City had let some house to the Hospital for which they received rent. And further, that afterwards when disputes arose, they actually pretended that the Hospital itself was originally theirs.

I now call your attention to the year 1403, the 4th year of Hen. IV. It appears that Peter, the porter of the House, had misbehaved himself in some way, and it was deemed sufficiently important to necessitate an "Inquisition," to ascertain the condition and management of the monastery. And it is here that we meet with the earliest indication of Bethlem being a receptacle for the insane. I have examined the report of the Royal Commission, and find they state that six men were confined there who were lunatics (sex homines mente capti). The number, therefore, was very small at that time. As might be expected, the glimpse we get of their mode of treatment reveals the customary restraints of former days. The inventory records "Six chains of iron, with six locks; four pairs of manacles of iron, and two pairs of stocks." I do not here, or elsewhere, find any reference to the use of the whip. I may remark, by the way, that the Commissioners observe that whereas originally the Master of the house wore the Star of the Order of Bethlem, the Master at that time did not. The original star contained 16 points, which we may consider to indicate, appropriately, the words *Estoile de Bethlem.*

On the arms of Bethlem, was also a basket of bread, in reference to the Hebrew etymology, "House of Bread." The bread is described as wastell cake, a word first met with in a statute 51 Hen. III., where it is described as white bread well baked.

Chaucer says of the "Prioress"—

> Of small houndes hadde she, that she fedde
> With roasted flesh, and milk and wastel brede.

The derivation of the word, according to Douce's "Illustrations of Shakespeare," is from gasteau, now *gâteau,* anciently

written gastel, and, in the Picard dialect, ouastel or watel, a cake; and not from wassail, as has been stated by some writers.

I would here draw your attention to the site of St. Martin's Lane, and the adjoining district. At the south-west corner of St. Martin's Lane, in the angle formed by it and Charing Cross, was situated a religious house, of the foundation of which I can discover nothing. The point of interest to us in connection with it is this: that at a very early period lunatics were confined there. Stow, in his "Survey of the City of Westminster," says—"On the north side (that is, after proceeding westward from Temple Bar), to a lane that turneth to the parish church of St. Martin's-in-the-Fields, and stretcheth to St. Giles-in-the-Fields, then had ye an house, wherein some time were distraught and lunatick people; of what antiquity founded, or by whom, I have not read, neither of the suppression; but it was said that some time a king of England, not liking such a kind of people to remain so near his Palace, caused them to be removed further off to Bethlem-without-Bishopsgate, of London, and to that hospital the said house by Charing Cross doth yet belong" (Strype's Stow, 1720, p. 2).

I have spent considerable time in endeavouring to discover who this king was, but without success. If we assume that this was the first time that Bethlem received lunatics within its walls, we must refer the event to a date prior to 1403, because we know, as I have pointed out, that there were mad people in Bethlem at that date. Whoever the king was, he appears to have been rather fastidious, considering the proximity is not very close between Charing Cross and the Royal Palace of Westminster. Possibly, as the Royal Mews was at Charing Cross, his Majesty may have sometimes visited his falcons, which were "mewed," or confined there—long before the same place was used for stables—and been disturbed by the sounds he heard.* It is interesting in this connection to learn that Chaucer was clerk of the Charing Cross Mews. On the site of the Mews stands now the National Gallery, and the religious house for lunatics must have been situated in Trafalgar Square, about where Havelock's equestrian statue stands.

You will have observed that in the passage cited from Stow, the house at Charing Cross is described as belonging to

* Some derive the term from the moulting of falcons.

Bethlem Hospital. It did not belong to Bethlem when the latter was founded in 1247, and when it acquired it I do not know; but it is certain that it possessed it as early as 1399, and in all probability at the time of the transfer of lunatics to Bishopsgate Street by order of the unknown king. Certain, also, it is that the Charing Cross property belonged to Bethlem Hospital until 1830, when it was sold or exchanged in order to allow of the improvements which were shortly afterwards made there in laying out Trafalgar Square and building the National Gallery.

We know, then, that from about 1400, if not earlier, Bethlem received lunatics, on however small a scale; and we have here an explanation of the fact which has surprised some, that before the time of the charter of Henry VIII., whose name is inscribed over the pediment of the building in which we meet, the word "Bedlam" is used for a madman or madhouse. Thus Tyndale makes use of the word some twenty years before the Royal Grant in his "Prologue to the Testament," a unique fragment of which exists in the British Museum, where he says it is "bedlam madde to affirme that good is the natural cause of yvell."

Speaking of Wolsey, Skelton, who died in 1529, says in his "Why come ye not to Court?"—

> He grinnes and he gapes,
> As it were Jacke Napes,
> Such a mad Bedlam.

Our familiar expression "Jackanapes" is evidently a corruption of the above.

And Sir Thomas More, in his Treatise "De Quatuor Novissimis," says, "Think not that everything is pleasant that men for madness laugh at. For thou shalt in Bedleem see one laugh at the knocking of his own hed against a post, and yet there is little pleasure therein." And, again, in the "Apology" made by him in 1533 (thirteen years before the Grant), in which he gives a most curious account of the treatment of a poor lunatic: He was "one which after that he had fallen into that frantick heresies, fell soon after into plaine open franzye beside. And all beit that he had therefore bene put up in Bedelem, and afterward by beating and correccion gathered his remembraance to him and beganne to come again to himselfe, being thereupon set at liberty, and walkinge aboute abrode, his olde fansies beganne to fall againe in his heade." Although the next paragraph has

nothing to do with Bethlem, I cannot avoid quoting it, as it illustrates so graphically the whipping-post treatment of that day. "I caused him," he says, "as he came wanderinge by my doore, to be taken by the connstables and bounden to a tree in the streete before the whole towne, and ther they stripped [striped] him with roddes therefore till he waxed weary and somewhat lenger. And it appeared well that hys remembrance was goode ineoughe save that it went about in grazing [wool gathering!] til it was beaten home. For he coulde then verye wel reherse his fautes himselfe, and speake and treate very well, and promise to doe afterward as well." Sir Thomas More ends with this delicious sentence: —"And verylye God be thanked I heare nowe harme of him now."*

To return to Bethlem Hospital. I can discover nothing of interest in regard to it between 1403 and 1523; except, indeed, that I observe in the "Memorials of London," 1276-1419, a man was punished by the pillory for pretending to be a Collector for the Hospital of "Bedlem," in 1412. He was to remain for one hour of the day there, the money box he had used being "in the meantime placed and tied to his neck." At the date just mentioned, according to Stow, Stephen Jennings, previously Lord Mayor of London, gave a sum of money in his will towards the purchase of the patronage of Bethlem Hospital. Three and twenty years later (1546) the citizens of London are said to have purchased "the patronage thereof, with all the lands and tenements thereunto belonging." But there is no evidence that they did give any money for this patronage. Sir John Gresham, the Lord Mayor, petitioned the King in this year to grant Bethlem Hospital to the City; and the King did grant it along with St. Bartholomew's Hospital, on condition that the City should expend a certain amount of money on new buildings in connection with the latter. It is only in this sense, I believe, that they "purchased" Bethlem Hospital; and further, it must be understood that the City obtained the patronage or government only, and not the freehold of the premises, although in process of time the Crown ceased to claim or possess any property in the Hospital.

In the Indenture of the Covenant made 27th December, 1546, between the King and the City of London granting St. Bartholomew's Hospital and Bethlem, there is no mention of

* "The Workes of Sir Thomas More," vol. vii., p. 901. Edit. London, 1557.

appropriating the latter to the use of lunatics (for this, as we have seen, had been done already), but it is simply said "the King granted to the said citizens that they and their successors should thenceforth be masters, rulers, and governors of the hospital or house called Bethlem, and should have the governance of the same and of the people there, with power to see and to cause the rents and profits of the lands and possessions of the same hospital to be employed for the relief of the poor people there, according to the meaning of the foundation of the same, or otherwise as it should please the King for better order to devise." The charter was granted in the 13th of January, 1547. The King died on the 29th. The value of the estate at this period is said to have been £504 12s. 11d.*

I wish to reproduce before you the form of the buildings of Bethlem (or, as we ought now to designate it, Bethlem or Bethlehem Royal Hospital) at the time of Henry the Eighth, and for long before and after that time. I have, I believe, consulted every important map of old London, and have found it no easy task to obtain a clear notion of the appearance of the building at that period. No print of the first hospital is in existence; at least, I have never been able to find it, or met with anyone who has seen it. I believe, however, that a good idea of the premises can be formed from a comparison of the map of Ralf Aggas, made not very long after the death of Henry VIII. (1560), and that of Braun and Hogenberg in their "Civitates Orbis Terrarum," made a little later still (1572). I have reconstructed an elevation of the hospital, which will, I believe, convey to you a fairly correct notion of the extent and character of the premises. I am gratified to know that you will see, I believe, for the first time, so distinct a representation on a fair sized scale of the first Bethlem—the real old Bedlam of Sir Thomas More, of Tyndale, and Shakespeare—within the walls of Bethlehem Royal Hospital itself. Shakespeare, I may here say, uses the word Bedlam six times. You observe a rectangular area surrounded by buildings. In the centre is the church with its chapel. This was taken down in the reign of Queen Elizabeth, and other buildings erected in its place.

The oldest written description of any portion of the building which is extant mentions "below stairs a parlour, a kitchen, two larders, a long entry [corridor] throughout the

* Malcolm's "Londinum Redivivum," 1803, vol. i., p. 351.

house, and twenty-one rooms wherein the poor distracted people lie; and above the stairs eight rooms more for servants and the poor to lie in."*

You will observe that there was a gate on the west side, and another on the east side.

Eight years after the death of Henry the Eighth (1555)—the second year of Philip and Mary—it was ordered that the Governors of Christ's Hospital should be charged with the oversight and government of Bethlem, and receive the account of rents, &c., instead of the City Chamberlain; but this arrangement lasted only a short time, for in Sept., 1557 (the fourth year of Queen Mary) the management was transferred to the Governors of Bridewell (which had been given to the City by Edward VI. in 1553), subject, of course, to the jurisdiction of the citizens. The same treasurer was appointed for both. This union of the hospitals was confirmed by the Act 22 Geo. III., c. 77, and continues, as is well known, to the present day. It was not until this Act that the *paramount* authority of the City passed away, and the government now in force was established, by which it was distinctly vested in a President, Treasurer, the Court of Aldermen, and the Common Council, and an unlimited number of governors, elected by ballot. So that now the only sense in which Bethlem continues to belong to the City is that the Aldermen and Common Councilmen are *ex-officio* governors. As there are at the present time upwards of two hundred governors, they are in a decided minority.

Time was when Bethlem Hospital did not possess the magnificent income which she now enjoys. She knew, as we have seen, what poverty meant; and even if we make due allowance for the increased value of money, we can hardly read without surprise that in 1555 the income from all the possessions of the hospital only amounted to £40 8s. 4d. Of course, considerable sums were collected as alms. Nearly a century after, the valuation of real estates showed an annual value of £470. Several annuities had also been bequeathed, as that of Sir Thomas Gresham in 1575, for "the poor diseased in their minds in Bethlem."

The revenues, however, fell far short of the requirements of the hospital—namely, about two-thirds of the yearly charge—and at a court held in 1642 preachers were directed to preach at the Spital of St. Mary, in Bishopsgate Street,

* Charity Commissioners' Report, 1837, from which much valuable information has been derived.

informing the public of the need of pecuniary help, and exciting them to the exercise of charity.

Again, in 1669 a deputation waited on the Lord Mayor to acquaint him with the great cost of Bethlem, and to request that no patient should be sent until the president was informed, in order that he might fix on the weekly allowance, and obtain some security of payment.

I need not say that since the period to which I refer, the income of Bethlem Hospital has, in consequence of gifts, and the enormously greater value of house property in London, been immensely increased, and that what with its annuities, its stocks of various kinds, and its extensive estates, it is to-day in the position of doing, and without doubt actually does an immense amount of good.

Half a century after Henry the Eighth's death, Bethlem Hospital was reported to be so loathsome as to be unfit for any man to enter. There were then twenty patients. I do not know, however, that any action was taken in consequence. Thirty-four years afterwards (1632), I observe that the buildings were enlarged, and mention is made of " one messuage, newly builded of brick at the charge of the said hospital, containing a cellar, a kitchen, a hall, four chambers, and a garret, being newly added unto the old rooms." Also, "a long waste room now being contrived and in work, to make eight rooms more for poor people to lodge where there lacked room before."*

In 1624, and I daresay at many other periods, the patients were so refractory that it was necessary to call in the flax dressers, whose Tenter boards may be seen in the adjoining field in the maps of London of this period, in order to assist the keepers in their duties!

Just about the same date (1632) I notice that an Inquisition mentions various sums being expended on fetters and straw. The governor at that time, I should add, was a medical man. This is the first mention of such being the case. His name was Helkins Crooke.

Ten years later (1642) there was a still further addition to Bethlem. Twelve rooms were built on the ground floor, over which there were eight for lunatics. The hospital, however, only accommodated some fifty or sixty patients, and it is observed in "Stow's Survey of London," that besides being too small to receive a sufficient number of distracted

* Charity Commissioners' Report, p. 390.

persons of both sexes, it stood on an obscure and close place near to many common sewers.

Smith, in his "Ancient Topography of London," says—and the authority for most of his statements was Mr. Haslam—"The men and women in old Bethlem were huddled together in the same ward." It was only when the second Bethlem was built that they had separate wards.

In Hollar's Map of London, engraved 1667, which gives the most distinct representation of Bethlem Hospital at that period, there are no additional buildings given, although we know they had been made. Nor are those inserted which were built on the site of the church in the centre of the Quadrangle.

I will now pass on to the close of the chapter of this the first Bethlem Hospital, with the remark in passing that Charles the First confirmed the Charter of Henry the Eighth in 1638,* and will direct attention to the year 1674, when the old premises having become totally unfit for the care—to say nothing of the treatment—of the inmates, it was decided to build another hospital. The City granted a piece of land on the north side of London wall, extending from Moor Gate, 740 feet, to a postern opposite Winchester street, and in breadth 80 feet—the whole length of what is now the south side of Finsbury Circus. At the present time Albion Hall, at the corner of London Wall and Pavement, with the houses to the east, marks this spot, the grounds in front of the Hospital being, of course, situated in what is now Finsbury Circus.

Smith's plates, in his "Ancient London," show the back and west wing of the asylum very well; and an elevation showing its front which looked north towards what is now the London Institution, is represented in an engraving frequently met with in the print shops. Circus Place now runs through what was the centre of the building. The building, intended for 120 patients (but capable of holding 150), was commenced in April, 1675, and finished in July of the following year, at a cost of £17,000. It was 540 feet long by 40 feet broad.

Of this building, Gay wrote—

> Through fam'd Moorfields, extends a spacious seat,
> Where mortals of exalted wit retreat;
> Where, wrapp'd in contemplation and in straw,
> The wiser few from the mad world withdraw.

* This charter appears to grant more than the mere patronage of the Hospital.

As the Hospital was opened in 1676, it is noteworthy that it is now just two centuries since the first asylum was built for the sole and express object of providing for the insane in England. This is the building in Moorfields so familiar to our forefathers for nearly a century and a half, and known as Old Bethlem by print dealers, and, indeed, by almost everyone else; for the memories and traditions of the genuine Old Bethlem, which I have endeavoured to resuscitate to-day, have almost faded away.

Let me bring before you for a moment the condition of Moorfields in those days. Finsbury was so called from the finny district in which it lay. Skating was largely practised here. In the old maps Finsbury fields lie on the north-east side of Moorfields. Now Finsbury Circus and Square correspond to the site of a part of Moorfields. Formerly Moorfields extended up to Hoxton, "but being one continued marsh, they were in 1511 made passable by proper bridges and causeways. Since that time the ground has been gradually drained and raised."*

It was a favourite resort for archers. An association called the Archers of Finsbury was formed in King Edward the First's time. There is an old book on Archery, entitled "Ayme for Finsbury Archers," 1628. An anonymous poem in blank verse, published in 1717, entitled "Bethlem Hospital," but attributed to John Rutter, M.A., contains the following lines, referring to the appropriation of the ground for drying clothes:—

> Where for the City dames to blaunch their cloaths,
> Some sober matron (so tradition says)
> On families affairs intent, concern'd,
> At the dark hue of the then decent Ruff
> From marshy or from moorish barren grounds,
> Caused to be taken in, what now *Moorfields*,
> Shaded by trees and pleasant walks laid out,
> Is called, the name retaining to denote,
> From what they were, how Time can alter things.
> Here close adjoining, mournful to behold
> The dismal habitation stands alone.

The following is the description of the building given by Smith in his "Ancient Topography of London:"—

> The principal entrance is from the north, of brick and free-stone, adorned with four pilasters, a circular pediment, and entablature of the Corinthian Order. The King's arms are in the pediment, and

* Noorthouck's "London," 1773.

those of Sir Wm. Turner above the front centre window. * * It certainly conveys ideas of grandeur. Indeed it was for many years the only building which looked like a palace in London. Before the front there is a spacious paved court, bounded by a pair of massy iron gates, surmounted with the arms of the Hospital. These gates hang on two stone piers, composed of columns of the Ionic Order, on either side of which there is a small gate for common use. On the top of each pier was a recumbent figure, one of raving, the other of melancholy madness, carved by Caius Gabriel Cibber. The feeling of this sculptor was so acute, that it is said he would begin immediately to carve the subject from the block, without any previous model, or even fixing any points to guide him. I have often heard my father say that his master, Roubiliac, whenever city business called him thither, would always return by Bethlem, purposely to view these figures.—Smith, p. 32.

Under an engraving of them by Stothard, are the lines:—

> Bethlemi ad portas se tollit dupla columna;
> *'Εικόνα τῶν ἐντός χῲ λίθος ἐκτος ἔχει*
> Hic calvum ad dextram tristi caput ore reclinat,
> Vix illum ad lævam ferrea vincla tenent.
> Dissimilis furor est statuis; sed utrumq. laborem
> Et genium artificis laudat uterq. furor.

Pope, in the "Dunciad," thus spitefully refers to these figures in connection with the sculptor's son, the comedian:—

> Close to those walls where Folly holds her throne,
> And laughs to think Monro would take her down,
> Where o'er the gates by his famed father's hand
> Great Cibber's brazen, brainless brothers stand.

Nettled at being made the brother of two madmen, Cibber retaliated in a lampoon upon Pope, which it is said (with what truth I know not) hastened his death.*

These figures, now banished to South Kensington Museum, and there incarcerated at the very top of the building, and only seen by special permission, are, of course, quite unsuitable for the entrance of the Hospital, but I should plead for their being placed somewhere in these premises, their natural habitat. As works of art, the Governors and Officers cannot but be proud of them. I suppose, however, their banishment is intended as a public protest against the old system of treatment which one of them exhibits, and from this point of view is no doubt creditable. I would here observe that the figure of the maniac is superior to that of the melancholiac, whose

* Pennant's "London," p. 267.

expression is rather that of dementia than melancholia. I think that when Bacon, in 1820, repaired this statue, he must have altered the mouth, because, in the engraving by Stothard, this feature, and perhaps others, are more expressive.

At Bethlem Hospital there were also certain gates called the penny gates, and on each side of them was a figure of a maniac—one a male, the other a female. "They are excellently carved in wood, nearly the size of life, have frequently been painted in proper colours, and bear other evidence of age. It is reported they were brought from Old Bethlem. In tablets over the niches in which they stand, is the following supplication :—'*Pray remember the poor Lunaticks, and put your Charity into the Box with your own hand.*'"*

There was a portrait of Henry VIII. in the Hospital, which was said to have been brought from the first Bethlem. The portrait is now in the Committee-room of the Hospital, in which we meet to-day.

The "penny gates" refer, I suppose, to the custom of allowing Bethlem to be one of the sights of the metropolis, the admission of any one being allowed for a penny, by which an annual income of at least £400 was realized. The practice was discontinued in 1770. This amount is, however, probably exaggerated, as it is difficult to believe that 96,000 persons visited the Hospital in the course of the year. Ned Wright, however, from whom I shall shortly quote, says the fee was 2d. in his time. If so, 48,000 may be about correct,

In the Rake's Progress, Hogarth represents two fashionable ladies visiting this Hospital as a show-place, while the poor Rake is being fettered by a keeper. The doctor, I suppose, is standing by. The deserted woman who has followed him in his downward course is by his side in the Hospital. The expression of the Rake has been said to be a perfect representation of

> Moody madness laughing wild, amid severest woe.

The maniac in the straw in one of the cells was taken by Hogarth from one of Cibber's figures. The chain is clearly visible.

In another cell, is a man who believes himself a king, and wears a crown of straw.

An astronomer has made himself a roll of paper for a telescope, and imagines that he is looking at the heavens. The

* Smith op. cit. p. 35.

patient by him has drawn on the wall the firing off a bomb, and a ship moored in the distance. Ireland, in his "Notes on Hogarth," says it was to ridicule Whiston's project for the discovery of the longitude, which then attracted attention, and had sent some people crazy. Then there is a mad musician with his music-book on his head; a sham Pope; and a poor man on the stairs "crazed by care, and crossed by hopeless love," who has chalked "Charming Betty Careless" upon the rail. One figure looks like a woman, holding a tape in her hands, but is intended for a tailor.*

In a poem, bearing the title of "Bedlam," and the date 1776, the writer, after bestowing praise on the building, adds :—

> Far other views than these within appear,
> And Woe and Horror dwell for ever here;
> For ever from the echoing roofs rebounds
> A dreadful Din of heterogenous sounds:
> From this, from that, from every quarter rise
> Loud shouts, and sullen groans, and doleful cries;
> * * * * *
> Within the chambers which this Dome contains,
> In all her "frantic" forms, Distraction reigns:
> * * * * *
> Rattling his chains, the wretch all raving lies,
> And roars and foams, and Earth and Heaven defies.

Ned Ward, in his "London Spy," 1703, gives a graphic account of his visit with a friend to Bedlam :—

Thus, he says, we prattled away our time, till we came in sight of a noble pile of buildings, which diverted us from our former discourse, and gave my friend the occasion of asking me my thoughts of this magnificent edifice. I told him I conceived it to be my Lord Mayor's Palace, for I could not imagine so stately a structure to be designed for any quality inferior; he smiled at my innocent conjecture, and informed me this was Bedlam, an Hospital for mad folks. In truth, said I, I think they were mad that built so costly a college for such a crack-brained society; adding, it was a pity so fine a building should not be possessed by such who had a sense of their happiness: sure, said I, it was a mad age when this was raised, and the chief of the city were in great danger of losing their senses, so contrived it the more noble for their own reception, or they would never have flung away so much money to so foolish a purpose. You must consider, says my friend, this stands upon the same foundation as the Monument, and the fortunes of a great many poor wretches lies buried in this ostentatious piece of vanity; and this, like the other, is but a monument of the City's shame and dishonour, instead of its glory;

* Cf. Ireland's "Hogarth," for description of this plate.

come, let us take a walk in, and view its inside. Accordingly we were admitted in thro' an iron gate, within which sat a brawny Cerberus, of an Indico-colour, leaning upon a money-box ; we turned in through another Iron-Barricado, where we heard such a rattling of chains, drumming of doors, ranting, hollowing, singing, and running, that I could think of nothing but Don Quevedo's Vision, where the lost souls broke loose and put Hell in an uproar. The first whimse-headed wretch of this lunatic family that we observed, was a merry fellow in a straw cap who was talking to himself, "that he had an army of Eagles at his command," then clapping his hand upon his head, swore by his crown of moonshine, he would battle all the Stars in the Skies but he would have some claret. . . . . We then moved on till we found another remarkable figure worth our observing,who was peeping through his wicket, eating of bread and cheese, talking all the while like a carrier at his supper, chewing his words with his victuals, all that he spoke being in praise of bread and cheese : "bread was good with cheese, and cheese was good with bread, and bread and cheese was good together;" and abundance of such stuff; to which my friend and I, with others stood listening; at last he counterfeits a sneeze, and shot such a mouthful of bread and cheese amongst us, that every spectator had some share of his kindness, which made us retreat. P. 61.

Many other dialogues with the inmates of Bedlam are given, but they are evidently embellished, or altogether fictitious; true as I believe the description of the building and the uproar within to be.

Mr. Harvey, from his recollections of the Hospital in Moorfields, in the early part of this century, thus writes in 1863: "When I remember Moorfields first, it was a large, open quadrangular space, shut in by the Pavement to the west, the Hospital and its outbuildings to the south, and lines of shops with fronts, occupied chiefly by dealers in old furniture, to the east and north. Most of these shops were covered in by screens of canvas or rough boards, so as to form an apology for a piazza; and if you were bold enough, in wet weather you might take refuge under them, but it was at the imminent risk of your purse or your handkerchief. It was interesting to inspect the articles exposed for sale: here a cracked mirror in a dingy frame, a set of hair-seated chairs, the horse-hair protruding; a table, stiff, upright easy chairs, without a bottom, &c. These miscellaneous treasures were guarded by swarthy men and women of Israel, who paraded in front of their narrow dominions all the working day, and if you did but pause for an instant, you must expect to be dragged into some hideous Babel of frowsy chattels, and made

a purchaser in spite of yourself. Escaping from this uncomfortable mart to the Hospital footway, a strange scene of utter desertion came over you; long, gloomy lines of cells, strongly barred, and obscured with the accumulated dust, silent as the grave, unless fancy brought sounds of woe to your ears, rose before you; and there, on each side of the principal entrance, were the wonderful effigies of raving and moping madness, chiselled by the elder Cibber. How those stone faces and eyes glared! How sternly the razor must have swept over those bare heads. How listless and dead were those limbs, bound with inexorable fetters, while the iron of despair had pierced the hearts of the prisoned maniacs."*

It was in 1733 that two wings were added for incurable patients, but this proved insufficient in the course of time; and in 1793 an adjoining plot of ground was obtained, and more accommodation provided. Only six years later, however, surveyors appointed to inspect the premises reported that the Hospital was dreary, low, melancholy, and not well aired; and in 1804 the condition of the building was so dangerous that it was resolved to admit no more patients except those already petitioned for.† As the Asylum had been built upon the ancient ditch of the city, a large portion of the foundation was insecure. Serious settlements had taken place, and rendered it necessary to underpin the walls.‡ When one looks at the palatial building represented in the plate, one feels some surprise to find it described as so low and dreary; but doubtless it was quite time to erect another asylum, and seek a better and more open site.

I do not propose to enter upon the revelations made of the internal condition of Bethlem Hospital by the investigations of the Committee of the House of Commons in 1815;§ some of you are familiar with the prints exhibited at this Committee, of poor Norris who was secured by chains as there represented, consisting of (1) a collar, encircling the neck, and confined by a chain to a pole fixed at the head of the

* Malcolm, in his "Londinum Redivivum," 1803 (Vol. i., 351), says, "The back part of the hospital, next London Wall, is too near the street. I have been much shocked at the screams and extravagances of the sufferers when passing there. This circumstance is to be deplored, but cannot now be remedied."

† Proceedings of the Committee and Reports from Surveyors respecting the state of Bethlem Hospital in 1800 and 1804. London, 1805.

‡ Charity Commissioners' Report, 1837.

§ Bethlem expended £606 in 1814 and 1816 in opposing the Madhouse Regulation Bill.

patient's bed; (2) an iron frame, the lower part of which encircled the body, and the upper part of which passed over the shoulders, having on either side apertures for the arms, which encircled them above the elbow; (3) a chain passing from the ankle of the patient to the foot of the bed.

Time will not allow of my detailing the medical treatment pursued at this time at Bethlem, but I may just give the pith of it, as expressed in one sentence by Dr. Monro in his evidence before the Committee. He had been Visiting Physician since 1783. "Patients," he says, "are ordered to be bled about the latter end of May, according to the weather; and after they have been bled, they take vomits, once a week for a certain number of weeks; after that we purge the patients. That has been the practice invariably for years long before my time; it was handed down to me by my father, and I do not know any better practice." If in all this we are disposed to blame Bethlem, let us still more condemn the lamentable ignorance and miserable medical red-tapism which marked the practice of lunacy in former times.

I may here remark that, prior to the Monros, Dr. Thomas Allen was, in 1679, Visiting Physician to Bethlem, and that, as I have observed already, Helkins Crooke (1632) was the first medical man who is known to have been at the head of this hospital. Dr. Tyson was physician from 1684 to 1703. Mr. Haslam was appointed resident apothecary in 1795, and in 1815 gave evidence before the Committee of the House of Commons. At that time he said there were 122 patients; "not half the number," he stated, "which we used to have." For these there were three male and two female keepers: the former assisting the latter when the female patients were refractory. Ten patients he said were at that moment in chains, and we may be sure that the number was much larger before public feeling had been aroused to demand investigation. "The ultimatum of our restraint," said Mr. Haslam, "is manacles, and a chain round the leg, or being chained by one arm; the strait waistcoat for the best of reasons is never employed by us." Mr. Haslam, when asked whether a violent patient could be safely trusted when his fist and wrists were chained, replied, "Then he would be an innoxious animal." Patients, however, were frequently chained to the wall in addition to being manacled.

We now arrive at the close of the second act in the drama of the Royal Hospital of Bethlehem. The scene of Act the Third is laid in St. George's Fields, after a site at Islington

was fixed upon, but soon relinquished. The area of land covered about twelve acres. Provision was to be made for two hundred patients. In 1810 an Act of Parliament was obtained (50 Geo. III., c. 198), by which the City was authorised to grant the property to trustees for the governors of the hospital, for the purpose of erecting a new one on an enlarged scale—on lease for 865 years, at a yearly rent of 1s. The Corporation entered upon the spot occupied by the old hospital in Moorfields. The first stone was laid in April, 1812, and it was opened August, 1815, consisting of a centre and two wings, the frontage extending 594 feet. "The former has a portico, raised on a flight of steps, and composed of six columns of the Ionic order, surmounted by their entablature, and a pediment in the tympanum on which is a relief of the Royal arms. The height to apex is 60 feet." The funds were derived from the following sources :—

	£	s.	d.
Grant from Parliament	72,819	0	6
Benefactions from Public Bodies	5,405	0	0
Private Individuals	5,709	0	0
Amount of Interest upon Balances in hand	14,873	4	8
Contributed from funds of Hospital	23,766	2	3
	£122,572	7	5

Additional buildings were erected in 1838, the new stone being laid July 26th of that year, when a public breakfast was given at a cost of £464; and a narrative of the event at a cost of £140; a generous outlay of charitable funds.

Of the site of the third Bethlem Hospital a few words will suffice. The notorious tavern called "The Dog and Duck" was here, and there is still to be seen in the wall to the right of the entrance to the hospital a representation in stone of the dog, with the neck of a duck in its mouth. It bears the date of 1716. In Mr. Timbs' "London" it is mis-stated 1617. Doubtless in olden time there was a pond here, and a duck hunt was a common sport, and brought in much custom to the inn. After the "Dog and Duck," this site was occupied by a blind school, pulled down in 1811.

Shakespeare makes the Duke of York say in Hen. VI. :—

> Soldiers, I thank you all; disperse yourselves;
> Meet me to-morrow in St. George's Fields.
>
> 2 *Hen.* VI., *Act.* v., *Sc.* 1

The only other reference in Shakespeare to this locality indicates that in his time there was a Windmill Inn in St. George's Fields, for he makes Shallow say to Falstaff:—

> O, Sir John, do you remember since we lay all night in the Windmill, in Saint George's Fields?
>
> 2 *Hen.* IV., *Act* iii., *Sc.* 2.

The subsequent history of Bethlem Royal Hospital; the considerable improvements which succeeded the investigation; the enquiry and admirable Report of the Charity Commissioners in 1837, from which it appears that at that time some of the patients were still chained, and that the funds of Bethlem had been to no slight extent appropriated to personal uses; its exemption from the official visitation of asylums required by the Act of Parliament passed in 1845 (8 and 9 Vict., c. 100); the unsatisfactory condition of the institution as revealed by the investigations made in 1851 (June 28 to December 4); the placing of the hospital in 1853 in the same position as regards inspection as other institutions for the insane (16 and 17 Vict. c. 96); the sweeping away of the old *régime*, and the introduction of a new order of things; the great lesson to be learned from this history being, as I think, the necessity of having lunatic asylums open to periodical visitation; and last, but not least, the establishment of a Convalescent Hospital at Witley within the last few years;—these important events I must content myself with merely enumerating, but I cannot close without expressing the satisfaction with which we must regard the present management of the hospital, all the more striking when we recall some of the past pages of its history; nor can I avoid congratulating the Resident Physician and the other officers of the institution upon this result.

I am much indebted to Mr. Gardiner, of St. John's Wood, and to Mr. Crase, of Dulwich, for permission to examine their splendid collections of prints and maps of London. My best thanks are also due to Mr. Coote, of the Map Department of the British Museum, and to Mr. Overall, of the Guildhall Library, for their valuable assistance.

Notes on the Reparative Power in Insanity. By J. A. Campbell, M.D., Garlands, Carlisle.

(Read at a Quarterly Meeting of the Medico-Psychological Society held in the Hall of the Faculty of Physicians, Glasgow, March 3rd, 1876.*)*

The short notes which I am going to bring before you refer more directly to the power of repair of bony structures and soft tissues in fractures and wounds, occurring in cases of insanity; and I have the less hesitation in calling your attention to the subject, because I see by the last "Commissioners' Report" that during 1874 twenty-six fractures occurred in the Scotch Royal and District Asylums. I hope, therefore, to hear some useful remarks on the subject from the members present.

Case 1.—August 3rd, 1868. R. C., male, æt. 44 years. A general paralytic. At an early stage of the disease, while walking in the airing-court, was kicked in the chest by a fellow-patient (a clergyman of the Church of England, of great energy and agility), who fancied R. C. was the devil, and gave as his reason that he intended to kick him back to hell. R. C. was immediately taken in, examined, and found to have fracture of more than one rib on the right side—the sixth and seventh, at least, between their sternal attachments and angle. A strip of Emplastrum Roborans was put round the chest and a flannel roller above this. During the first week after the fracture his evening temperature rose once to 100°, but never above it. There was no apparent discomfort—he took his food well and lay quietly. The bandages were removed at the end of a month; his ribs seemed firmly united.

The patient died in May, 1872. At the post-mortem the sixth and seventh ribs of the right side bore evidence of old fracture, and had a mass of bony matter between them, though not quite uniting them by bony union. The fifth rib was rough and thickened, with some nodules of bone at its edges; but on sawing it along, it showed no appearance of having been fractured.

Case 2.—T. B., male, æt. 33 years. Admitted October 10th, 1871; labouring under acute mania. On June 6th, while amusing himself by playing at leap-frog over a fellow patient, came down on his right hand, fracturing his radius close to its articular end above wrist. The arm was put up in pasteboard splints, but as he was constantly wetting his arm, and making water on it if he could not wet it otherwise, wooden splints were substituted. He was most restless, and though a canvas sleeve was sewed over the splints, he managed on several occasions to take the splints off; but they were replaced each time,

and when finally removed at the end of six weeks, a good union, as regards position and firmness, had taken place.

Case 3.—G. S., male, æt. 66 years; labouring under melancholia; for many years an inmate of the asylum. On September 22nd, 1872, a general paralytic fellow patient stumbled against him and threw him down; he fell on his right arm, causing a comminuted fracture of humerus at its middle third. The fracture was put up in short wooden splints. The day after, as the hand was œdematous, the splints were taken off and reapplied. The splints were kept on for seven weeks, when the humerus was found quite united by bony union.

Case 4.—H. T., male, æt. 57 years. A general paralytic, admitted December, 1869. On May 28th, 1873, he had for some time been so paralysed in the lower extremities as to be unable to stand, and was confined to bed, without a bedstead, in a single room with a half shutter up. He was found lying opposite the window with his left femur fractured at its lower third. It was put up in a starch bandage, and he was restrained by sheets; but as he was continually wet, the starch bandage was found useless, and the next day the fracture was put up in poroplastic splints, and a little extension applied to leg. The patient was restrained by sheets for six weeks and five days, except for two hours daily, when his bedding was changed, his back washed and rubbed with carbolic oil. When the splints were removed the femur was found firmly united, with much new bone about the union, with shortening of leg to about one and a half inch. This patient is now alive—a general paralytic, with his disease of more than six years' duration.

Case 5.—C. D., female, æt. 65 years. Chronic mania. Noisy and restless. October 21st, 1874. Was to-day pushed over by a fellow patient, fell on left shoulder, fractured left clavicle. Her left arm was fixed across breast and supported at elbows. Patient was kept in bed. Fracture united firmly, and in good position, within a month,

Case 6.—N. T., male, æt. 80 years. Chronic mania. While working, fell off the edge of a dung-heap and fractured his right clavicle. He would not allow any treatment, so he was let alone. He was continually moving his arm about. Clavicle united, and he was at work within six weeks.

Case 7.—July 1st, 1874. J. F., male, æt. 58 years. Chronic mania. Had necrosis of proximal phalanx of index finger of right hand. I removed the finger at the metacarpal joint, and dressed the wound antiseptically. In spite of very bad treatment from the patient, who tore the dressings off and used the hand as if it was well, the wound was perfectly healed within three weeks.

Case 8.—M. M., female, æt. 39 years. Chronic mania. June 16th, 1875.—Had been in the asylum for four years; two months ago had complained of pain in right knee, for which various modes of treatment had been resorted to—rest, blisters, and lastly the actual cautery. She had been getting nourishing diet, stimulants, and iron and

quinine; but the knee had gradually become swollen and more painful, and the patient had fallen off in condition. Acting on the advice of our consulting surgeon, I removed the leg by Carden's operation above the knee joint. Antiseptic dressings were used, and in this case the patient was most careful of the stump.

July 1st (fourteen days after the operation).—The patient has done well; the stump is almost completely healed, and, except along the ligature—where, till they came away, there was daily a drop or two of pus—the flaps simply stuck together at first, and united without any suppuration. Bodily health improved; is much fatter.

Case 9.—J. R. P., male, æt. 31 years. Epileptic mania.

This patient took numerous fits in succession, and then for some time remained in an exhausted state, with vitality lowered and circulation feeble. During his comparatively lively stage he had in some way hurt the fourth toe of his left foot. He had been in bed for some time on account of this when the ungual phalanx necrosed and came away, but the toe got no better, and the foot was blue and swollen. On May 18th it looked worse, so I removed it. The patient got tonics and stimulants, but was in a low state of vitality. The line of section was almost healed, when an abscess formed in the sole of the foot, which was opened. The wound at last healed, all except one point, when an abscess formed over the ball of the great toe. This was opened, carefully washed out with solution of boracic acid, and dressed daily, but the foot got worse.

On June 20th, after making some exploratory incisions, and consulting with Mr. Page, Carlisle, I removed the foot by Syme's operation. The patient lay still for several hours, but then got much excited, became restless, and before the medical officer reached him had caused considerable hæmorrhage by the rough way he used his stump. He was at once restrained by sheets, and the restraint retained for thirty-four hours. Considerable oozing took place the first night and day after the operation, but after that healing went on rapidly, and on the 1st of August (a period of five weeks after the operation) the stump was healed.

Case 10.—T. J., male, æt. 51 years. Epileptic mania; always in feeble health. November 3rd, 1875. Had disease of right ankle joint for some time; after consultation with Mr. Page and Dr. Maclaren of Carlisle, it was decided to remove the foot by Syme's operation. I did so, but found caries in the centre of the tibia. After sawing off its articular surfaces, I turned up the periosteum for about an inch, and sawed off another slice, but found the bone still diseased. I then gouged the centre of the bone, but found it diseased for at least an inch in the centre of the shaft; so I amputated through the lower part of the middle of the leg, making a long anterior flap, and put up the stump in carbolic dressings. The patient was very restless, got out of bed, and had to be kept under the influence of chloral at night; during the day sitting with his leg bent, and would not lay it down.

The flap united well; at the end of six weeks the line of section healed, and the stump was firm and serviceable; but an abscess formed above the edge of the tibia, and remained discharging small quantities of watery pus. It seems now quite healed (February 28th). The patient is still in weakly health.

Cut Throat Wounds.—In six cases of this nature treated at Garlands healing took place rapidly. In two cases the trachea was opened into. In one, reported by Dr. Macleod, in the "Journal of Mental Science," July, 1875, the pharynx was opened into, and the epiglottis divided, and in one case the tongue was cut away from the hyoid-bone.

In 1870 I reported in the "British Medical Journal" a case of fæcal abscess connected with the caput cœcum, which discharged at a point in the upper part of right groin. The patient recovered and is still in Garlands Asylum.

Scalp Wounds.—Though I have seen a large number of very serious scalp wounds caused by epileptics falling in fits, or by attacks of fellow patients, I have never, except in one case, and that an elderly man in an advanced stage of general paralysis, seen any erysipelatous drawbacks to healing; usually shaving a small portion of the scalp, drawing the edges of the wound together with adhesive plaster, and putting some dry lint over it, being all that is needed, the wound healing by first intention or scabbing.

Excluding general paralysis and epileptic insanity, in the other forms of insanity, while the digestive powers are good and the patient taking a fair amount of nutriment, repair, as regards fractured bones, or divided soft tissues, takes place quite as well as in sane patients; in cases of fracture where there is considerable restlessness, there is more swelling round the fracture, and union seems speedier. Considering the difficulty of treating fractures in insane patients, I have been more than once surprised by the excellence of union as regards position and freedom from shortening that I have noticed in such cases.

In epileptics and general paralytics healing power of skin wounds is at times greater, according to my experience, than even in perfect health, during the period that epileptics are free from taking fits, and while general paralytics are at the stage that they eat ravenously and are getting fat.

In epileptics, after a succession of fits, and in general paralytics, in an advanced stage, or in an early stage after epileptiform fits, vitality is so much lowered that bedsores

may appear after lying in bed one night, and remain without any healing going on till the nervous system rallies.

In general paralysis the inequality and uncertainty of the power of repair are marvellous, while the digestive apparatus remains nearly always efficient to the last; death of structure without outward cause may take place in one part of the body while fat is being laid on in another. The peculiarities in regard to healing and death of structure in epileptics and general paralytics are, of course, due to the diseased trophic nervous action affecting the blood supply and nutrition of the tissues.

The Plea of Insanity in Cases of Murder—Cases of Macklin and Barr. By D. YELLOWLEES, M.D. Edin., F.F.P.S.G. Physician Superintendent, Glasgow Royal Asylum.

The two following cases, which were tried at the Glasgow Circuit Court, in May, 1876, seem of sufficient importance to deserve record and comment in the "Journal of Mental Science." In both the facts were undisputed, and the interest centred in the mental condition of the prisoner.

James Macklin, aged 29, single, a labourer and fireman, deliberately shot his mother in their own house near Airdrie, on 17th December, 1875, killing her on the spot. He immediately ran away, and spent the night in the fields to avoid the police; next morning he borrowed an old table-knife at a roadside cottage three miles from his home, and having sharpened it on a piece of slate cut off his scrotum and testicles, returned the knife, and was subsequently found by the police lying at the foot of a coal heap almost dead from hæmorrhage.

The wound healed very quickly, and without a bad symptom. He told me that he intended to have killed himself rather than be hanged, and he thought this was a better way than cutting his throat.

The prisoner's mental condition is succinctly described in my evidence, which I quote from the "Glasgow Herald" of May 10th, 1876:—

Dr. Yellowlees, Superintendent of Gartnavel Asylum, deponed—I saw the prisoner on two occasions. I came to the conclusion that he was naturally somewhat silly or imbecile, and that he was labouring under various delusions. These delusions were chiefly with

reference to one subject, namely, that about three years ago he had gone to a certain doctor to be treated for a particular disease; that the doctor had subjected him to very extreme and unnecessary torture under the guise of treatment; that the object of that torture was to change his religion and compel him to become a Roman Catholic; that the torture was instigated by his mother, who was in collusion with the doctor, and had for a long time had improper intimacy with him; moreover, that his mother was in the habit of having improper intimacy with other men as well, who came to the house while the prisoner and his brother were at work. He thought, further, that the ill-usage to which he had been subjected had ruined his health, and he said that the cruelty he had endured and the misconduct of his mother weighed constantly on his mind, and it was bound to be seen to somehow. The delusion was such that it would probably have led to violence. I think the deed of which he is accused was the direct result of the insanity under which he laboured.

By the Advocate-Depute—In addition to the suspicions about his mother, the prisoner had delusions about the doctor.

By the Court—The opinions about the medical man were insane delusions. They were the interpretation put by a weak mind on what I have no doubt had been done to him.

The Lord Justice-Clerk—From your experience and examinations of insane persons you can easily discriminate between real and feigned insanity?

Witness—Not easily at all times, but in this case I have no suspicion of feigning. It is not an unusual phase of insanity that ideas of the kind described should be taken up about particular individuals; and the weakened mind that could not correct false impressions at one time may allow them to be formed equally at another time, so that similar delusions may be taken up with regard to other people.

The natural imbecility was quite obvious. As his mother described it to one of the witnesses, he had always been "thick-witted;" but he possessed the shrewdness and humour often associated with this condition, and as the deficiency did not lead to misconduct nor unfit him for work, many of his neighbours had never observed it.

The origin and gradual growth of his delusions were very interesting. He said that while treating him for gonorrhœa, the doctor had one day asked him why he was a Protestant, and why he did not come to the Roman Catholic Chapel with his mother. This led to some conversation on the opposing faiths, a subject on which the prisoner's mind had been previously awakened, as his mother was a Roman Catholic, while his father, whose creed he followed, had been

a Protestant. While this matter was uppermost in his thoughts, he was subjected by the doctor to great pain, apparently from a urethral injection; and it occurred to him, not at the moment but subsequently, that surely so much suffering could not have been inflicted to promote his recovery, but must have been connected with the previous discussion, and designed to make him become a Roman Catholic, like his mother and the doctor. Then he became convinced that the doctor would not persist in so torturing him unless instigated by his mother, and that her visits to the doctor about her own ailments were merely a blind to conceal this collusion. A casual remark by the doctor concerning another woman next led him to suspect not only collusion but improper intimacy—notwithstanding that his mother was about 70 years of age; and this suspicion, once entertained, soon extended to other men, so that he gradually grew into the belief that his mother was at once cruel and depraved, and had occasioned him both torture and disgrace. These feelings found expression eventually in threats and abusive language, and in occasionally ordering his mother out of the house, as he could not bear to see her after what she had done. At last, after three years' gradual growth, they overpowered all other considerations, and culminated in her murder. The doctor must have narrowly escaped the same fate, for he said he would have killed his mother and the doctor, "and a dozen of them," rather than have endured such things.

The result of the trial was never doubtful. The prisoner was found to be insane, and ordered to be confined during her Majesty's pleasure.

The Lord Justice Clerk (Lord Moncrieff), in summing up the evidence, very carefully expounded the legal tests of criminal responsibility. The following extract is from the report in the "Glasgow News" of May 10th, 1876:—

If Macklin was responsible for his actions, then the duty of the jury, however painful, was clear enough. But it was said on his behalf that he was not of sound mind when he committed this offence, and that really was the plea that, apart from its importance to the prisoner and the public, gave this case a very peculiar aspect. He would say a few words on what he thought necessary, so far as the legal or scientific aspect of the case was concerned. It was one he had had occasion frequently to consider, and he would state what were the views which he thought had the greatest weight among jurists of the present day. A man is not responsible for his actions if he be of

unsound mind, but if he be not of unsound mind, or if it be not proved that his mind is unsound, then, although he be of feeble or excitable mind, or of variable temperament, driven about by jealousy, or pride, or self-conceit, or anger, or temper, none of these infer insanity—unsound by reason of disease. What were the indications from which unsoundness of mind may be inferred? He could lay down no general test which could be applied to solve such a question. At one time lawyers were apt to avoid all difficulty by inquiring whether the prisoner knew right from wrong; and as, in point of fact, except in acute mania or idiocy, there are very few lunatics who do not know right from wrong, in the sense of being capable of forming and even acting on the distinction, much unreasoning inhumanity had been the result of this unscientific maxim. If it were said that he could form a sound judgment on the subject of moral duty, that was only stating in another form the problem, and not solving it. He would suggest to them what he thought a far safer, and a more constitutional and a more reasonable ground. Soundness or unsoundness of mind was a fact which had to be judged of not as a question of law or of science, but on the ordinary rules which one applied in daily life. One took the assistance of legal and scientific views, but the jury were as good judges as any lawyer or doctor of whether a man whom they met in daily life was sound or not. If it turned out that he was able to conduct himself with propriety in the ordinary relations of life, not excluded from the confidence of his fellow-men by reason of distrust of his sanity, they had advanced not the whole of the journey, but nine-tenths of it, towards their conclusions. In this case it did not appear that anybody ever doubted the soundness of mind so much as to withhold from him any employment. The prisoner was a good workman, and seemed to have been an intelligent companion. Of the general evidence the jury were quite as able to judge as he himself was. He had said that they had advanced nine-tenths on the journey towards a solution, but there was a further step, on which the difficulty and the importance of the case rested. The chief question remained—if this man laboured under an insane delusion. That he laboured under a delusion about this matter was perfectly clear, but the question was whether he laboured under any insane delusion. If he laboured under any insane delusion, then without doubt his mind was not sane or sound, even although the insane delusion might exhibit itself against only one particular person.

These views show a wonderful advance on the "unscientific maxims" and "unreasoning inhumanity" of other days; but they also show that the insanity of the physician and the insanity of the jurist are very different, and should never have been confounded. The physician is concerned with the brain and its function, the jurist with the public and its safety. The physician asks if the brain is

healthy in its nutrition, its repose and its working; while the jurist cares chiefly to enquire if the man be "able to conduct himself with propriety in the ordinary relations of life," and be credited by his neighbours with such ability.

When this enquiry of the jurist is answered in the negative, perhaps insanity may be safely inferred; but the converse is by no means true, as this very case sufficiently proves. Macklin was a sober, well-conducted man, and the main support of his widowed mother; as a fireman, he was careful and attentive; and, notwithstanding his natural silliness, many of his neighbours and fellow workmen had never seen anything peculiar about him. Yet this man had for years been brooding over imaginary wrongs, and dangerous delusions had been secretly and gradually acquiring such strength in his mind that they at length broke out in fatal violence.

This "habit and repute" test, therefore, utterly fails, and when a test which is said to guide us nine-tenths of the way is thus found wanting, it is obviously unsafe; it not only does not guide but it misleads. Even when the presence of "delusion" is added to the "habit and repute" test, the criterion remains defective and unsafe. The most dangerous lunatics often have no delusions, and it is in emotional insanity, which these tests ignore, that terrible crimes most frequently occur.

All such special tests must disappear like the "unscientific maxims" formerly accepted, and in every case the broad issue must be raised—Was this deed the result of disease, and did the disease so dominate in the prisoner's mind as to control and determine his conduct?

The next case which was tried before the same Judge on the following day, was a very different one.

Thomas Barr, aged 36, picture dealer and book-hawker, a widower with four children, was married for the second time in October, 1874, to a woman who was 14 years his junior. The couple led a most miserable life, the wife complaining of constant harshness and frequent violence, the husband of constant negligence, and frequent unfaithfulness. The wife left her husband's house 17 times during the 17 months of their married life, and usually sought refuge with her mother. On the last of these occasions Barr went on the afternoon of March 1st, 1876, to his mother-in-law's house, forced an entrance in spite of resistance, and fatally stabbed both

his wife and mother-in-law with a pocket-knife. The mother was killed on the spot; the wife died seven weeks afterwards from the effects of the wounds. The murderer hastily escaped by train, and eluded pursuit by assuming a false name and keeping in out-of-the-way places, but was eventually captured a fortnight afterwards in Aberdeenshire.

The apparent motive for the crime was jealousy. Barr made the foulest accusations against his wife, and asserted that her misdeeds were countenanced, or at least winked at by her mother, who harboured her against his will.

None of these accusations against Mrs. Barr were proved to be well-founded, and all the evidence at the trial was to the contrary effect. Barr could not at first name any individual with whom she had been guilty, although he spoke of several whose names he did not know; eventually he named one person, by whom the allegation was positively denied at the trial. His wife, in her dying deposition, also solemnly denied that she had been unfaithful.

It is said, I believe with truth, that Barr imputed unfaithfulness to his first wife also. He was evidently a man of a naturally jealous disposition, and of a hasty, impulsive, excitable temperament. None can know what cause, or whether any cause, gave rise to his jealousy of the second wife, but it seems to have grown until it filled his whole mind, until every trivial occurrence was construed into a fresh wrong and aggravated the morbid mood by which it had been misapprehended. One thoughtless remark seems to have hastened the catastrophe. Barr and his wife frequently took their meals at a certain eating-house, and a few days before the murder he went to ask if she had been there. One of the waiters foolishly answered that they were wondering whose wife she was as she had been there with two different men. Here at last, he thought, was the *proof* of her wrong doing, and his jealousy became fiercer than ever.

The following extracts from a letter written by Barr to his wife's brother on the day before the murder shew his state of mind, and how completely the demon of jealousy possessed him.

I suppose you are silent because you have no defence on behalf of your sister? Would any man or woman stand such calumny if they could disprove it? I charge your sister with being in improper company, under degrading circumstances. So much so that parties ran to the windows to see how they went down the street. Would you like two swells with tall hats to be taking day about with your wife.

Come now be a man. Would you like I would take as good care of your wife as you have of mine ? I can prove you helped to keep her from under my control. . . . When I went to tell your mother facts she raged and raved and said it was not true. It is true. I can prove it, and will. . . . I will bring to light the worst case of persecution ever a poor soul had to suffer, cold-blooded murder, disgraced for all time by a d——d scheming villain. I told her she was not cheating me. I knew all, though I could not prove it till now.

The following extract from the declaration emitted by the prisoner further shews his feeling towards his wife, and gives his version of the murder :—

I found that when she left me she pretended to go to her mother's house, and I found that under her mother's care, and that of her brother, she was keeping improper company with drunken men. Her conduct made me mad. I lost my reason. On the 1st of this month I went into her mother's house with a forgiving spirit. Both my wife and her mother attacked me. They seized hold of my collar and of my watch and chain, and tore the necktie off my neck My wife acknowledged her adultery, and she said the child she was then carrying was not mine, and she would not allow me to be the father of it, on account of my delicate health. She said she would not have strong children from me. She said that often. After they attacked me, and after my wife had said that, I do not know what occurred, except from what I have seen in the newspapers. I fled from the house, and ran I know not whither.

While in prison he wrote to his dying wife a letter full of foul accusations and curses, from which a very short extract may be tolerated for the sake of the revelation it gives of the writer's mental condition.

How dare you come back and lie with me after publicly prostituting ? Are you aware your body is not your own, but mine ? If I could draw down all the curses of Heaven at once upon your whorish head I would do it. But you can sit and laugh because you are a woman. So was Eve. Curses upon you ! I will curse you with my dying breath. Before Heaven you are heart-lazy, a glutton, a drunkard, a whore, a murderer, a deceiver, a brute, a villain, a very Hell.

The only facts elicited at the trial which bore on the prisoner's mental history were that his father had been very excitable and impulsive, and that his paternal grandfather had been insane for five years before his death. This evidence was permitted by the Court, though not formally allowed as a matter of law.

Dr. Robertson, who was the other medical witness for the Crown, gave the following evidence. This and the subsequent quotations are from the "Glasgow Herald," of May 11th, 1876 :—

Dr. Alexander Robertson, Superintendent of the City Parochial Asylum, interrogated—You have had great experience in cases of insanity ?—A. I have had 20 years' experience, and made it a special study. I was asked to see the prisoner. I saw him for the first time on 16th March, and I saw him again yesterday. I was with him about an hour and a quarter on the 16th March, and yesterday about half-an-hour alone, and about a quarter of an hour with Dr. Yellowlees. Q. What opinion did you form in regard to the state of his mind ?—A. I thought he was an irritable, excitable, very jealous minded man, but I did not see any symptoms of insanity either past or present. I have heard the evidence led to-day. Q. Does what you have heard confirm your opinion ?—A. Yes ; it corroborates my opinion entirely as to the character of the prisoner's mind.

I was unable to speak so absolutely, especially after hearing these letters, which were not shewn to us until they were read at the trial. Having intimated my belief that the letters showed "some degree of mental disturbance," I was not called by the Crown but by the prisoner's counsel, and gave the following evidence:—

Dr. Yellowlees—I am superintendent of Gartnavel Asylum. I have paid considerable attention to the subject of insanity. I examined the prisoner Barr on the 15th March, and again yesterday. On the first occasion he was somewhat agitated in manner, but there was nothing about him to indicate mental disturbance. His intelligence seemed above the average. He told me a great deal about his wife, about her misconduct and unfaithfulness. I had at that time no means of checking what he said as to its truth. Q. From the evidence you have heard to-day, what is your opinion as to these jealous statements he made ?—A. That these suspicions seem to be unfounded. Q. Would you say that he was suffering under delusions on this point ?—A. I would call them unfounded suspicions which gradually grew in strength by being brooded over so long. I also heard the letter read by the Advocate Depute, addressed by the prisoner to William Sloan, the brother of the deceased. It expressed very much the same suspicions which Barr expressed to me. Q. Did you think the statements in the letter without foundation ?—A. They had no foundation, if I am to judge from the evidence I have heard.

The Lord Justice-Clerk—That is a question for the jury.

Mr. Wallace—Have you noticed nervousness and excitability in him on the occasions on which you attended him ?—I think he is an excitable, irritable man, but I did not see any—at least, not much of

it. Q. When a man is suffering from these unfounded delusions, has he full control of his actions?—A. It depends altogether upon the degree to which he believes these delusions, and whether they be mere unfounded suspicions.

The Lord Justice-Clerk—You have not said they were delusions.—A. I have not, my lord.

Mr. Wallace—Assuming that the ideas were utterly unfounded, does that not put them in the category of delusions?—A. They are unfounded beliefs. Q. Are such unfounded beliefs not likely to lessen the control which a man has over his actions?—A. It depends upon the extent to which they are believed. A man may have an unfounded belief which does not influence his conduct, but he may brood over it until it becomes overpowering and dominates all that he does. Q. These beliefs, unfounded as they are, may so influence him as to deprive him of control of his actions?—A. More or less.

The Lord Justice-Clerk—May a sane man's belief not influence his conduct? Does it not do it every day?—A. I say it may more or less affect his control over his conduct. Q. Acting on an unfounded belief is surely the normal state of humanity. We are all liable to be mistaken in our opinions. Does what you say go beyond this, that this man believed what he really had no sufficient ground for believing?—A. I think it does. Q. To what extent?—A. I do not think he merely had an unfounded belief, but that he had brooded over that belief until it influenced his conduct very greatly. Q. It became morbid?—A. Yes.

Mr. Wallace—Has the fact which was spoken to by last witness as to the state of the prisoner's grandfather not a bearing upon this question?—A. It renders it more likely that this man has an excitable brain and a temperament more readily excited.

The Lord Justice-Clerk—Is that not the question that was disallowed?

Mr. Wallace—Did you find the prisoner suffering under any form of disease when you examined him?—A. He has the appearance of a man labouring under consumption. I do not know whether he is or not, but he has that appearance. Q. Is there such a thing as phthisical insanity?—A. There is a form of mental disturbance often associated with lung disease in the form of phthisis, called phthisical insanity. Q. Does this form of mental disturbance exhibit itself in the earlier stages of consumption?—A. Usually in the earlier more markedly than in the latter stages. Q. I suppose if this man is in consumption he is in the earlier stages? A. In the earlier stages.

The Lord Justice-Clerk—I presume the mere fact that this man had suspicions in regard to his wife's conduct, although these suspicions were not well founded, is not of itself an indication that he is an insane man?—A. No; but if these suspicions are long brooded over, the whole tone of the man's mind becomes altered thereby, and then

it becomes a morbid condition. Q. Is there anything unusual in a suspicion of that kind being entertained by a man although his mind is not unsound ?—I think it is very unusual that they should go to such an extent.—Q. To what extent ?—A. To the extent, for example, of involving his mother-in-law in the suspicion—to the extent of supposing that she aided and abetted her daughter's misconduct—to the extent of supposing himself the most persecuted man who ever lived in the world. Q. You are assuming that there was no foundation for all that he felt. But assuming that the mother-in-law had persuaded the wife to live separate from him over and over again, is it an indication of insanity that he should be irritable on that subject ?—A. No; supposing that the mother-in-law could have done what he imagined. Q. But if she had done what I have suggested, would you think the person insane who resented that ?—A. That would not be insanity. Q. Supposing the fact was that they did not live happily, that he did not treat her well, that the mother-in-law interfered and took her daughter away, if the husband resented that, is there anything in all that ?—A. Nothing.

The defective mode in which scientific evidence is often taken was curiously shown in the fact that I was never asked the crucial question whether, in my opinion, this morbid condition was such as to destroy the prisoner's self-control and impel him irresistibly to such a deed. Crown counsel feared I would go too far in the prisoner's favour, while the prisoner's counsel knew I would not go far enough for his purpose, so my full opinion was never elicited. Scientific evidence must always be hampered when given by way of question and answer.

It was argued for the prosecution that the deed was the result of reckless passion, and that laws were made in order to repress such crimes; while for the defence the plea of insanity was strongly urged, founded on the deep and causeless jealousy, the sudden and ill-contrived way in which the deed was done, the hereditary tendency to mental disturbance, and the likelihood of phthisical insanity.

Lord Moncrieff's charge to the jury contained the following clear and admirable comment on the prisoner's mental condition.

I shall now state what I think are the only propositions necessary for me to state in order to guide your judgment in this matter; and it might almost be said of them, as I laid down in the case yesterday, that the question of sanity or insanity, soundness or unsoundness of mind, is simply a question of fact, to be judged of by you upon ordinary rules and the intercourse between men and men in daily life. It is not a question of law, as I said, or a question of science. It

would be most unfortunate were it either the one or the other. The tendency of the lawyer would be to find all men sane, and the tendency of the medical man might be to find all men insane. But the real question you have to consider is whether, as regards the prisoner at the bar, he was or was not of unsound mind. Now, unsound mind in a man means that his mind is diseased, and that he is not capable of conducting himself in the ordinary relations, or, at least, in some of the relations, of life. I said yesterday, and I say again, that the power of judging between right and wrong is not an accurate or philosophical test of the soundness or unsoundness of a man's mind, because there are many men in lunatic asylums that can judge perfectly well of right and wrong—that is to say, can judge of moral obligation and duty, and they do it every day; but the question is whether they can form a sane idea of right and wrong. And, indeed, I do not feel it desirable to put it in that way at all, because what is right and what is wrong would be a question to solve. The true question to consider is whether this man's mind was diseased; whether he was the victim of unsound thought—by which I mean thought of a mind that is not sane. Now, it is for you, with the assistance you have from the evidence, to say whether—whatever may have been the impulses working on this man, whatever his power of moral restraint might be, whatever the strength or weakness of his will, whatever the power of his passions—it is for you to say whether that man was or was not responsible for his actions. The crime which we are trying is the crime of murder, and you must know perfectly well that those impulses and passions that have generally given rise to that crime are impulses and passions that overcome a man's better nature for the time. The more deliberate cases of murder arise almost uniformly from these impulses, either from the hope of gain, or from the desire of revenge. And in either the one or the other, if you were to balance the advantages to be gained against the risks to be run, or the moral enormity of the offence, of course no man of sane or sound mind, in one sense, would commit the crime. That is not what is meant by the absence of legal responsibility; and indeed the world would not go on if it were, because, as I have said, the more atrocious the crime the less the man has to resist those impulses that ought to have deterred him from committing it, and the more does he give way to the impulses that he ought to have suppressed. It is quite true, as Dr. Yellowlees stated, that a man, by brooding over an unfounded conclusion, may lose his moral restraint, and, forming a wrong conclusion, act upon it. But, alas! gentlemen, it is vain to say that a man shall not be responsible for his actions because he has formed a wrong conclusion, and has allowed it to weigh upon his mind. I cannot say that because his conclusion rests upon things that are supposed to be indicative of other things done in secret and without witnesses and incapable of proof, and because he allows himself to be possessed with that feeling, therefore he should not be held responsible for his actions.

If, however, you should be of opinion that the man was acting under a conclusion that was not only unsound in the way of not being well founded, but that it was a conclusion he had formed because his mind was insane, that, no doubt, if you find ground for it, might amount to insanity; but if is proved that he suspected his wife without a cause, and that, being a man of violent and irritable temper, he would brook the interference of his mother-in-law no longer, and chose to vent his passions in this way, there is not only here no case of freedom from responsibility, but I can see no approach to it. Now, gentlemen, I have stated these views to you, because, while you cannot help commiserating the unfortunate prisoner at the bar, you will see at once how it would go to break the bonds of society, and how it would admit principles destructive of the proper power and regulating effect of law altogether, were such a theory as I have indicated to be sustained without the real ground and foundation on which alone it must rest. In bringing these observations to bear on the facts, I have to say that it has been too much assumed that this notion of jealousy by the man of his wife was the main cause which he had for the state of irritated passion in which he undoubtedly was. But you will remember that from the date of their marriage they lived unhappily, and not solely on the ground of Mrs. Barr's suspected infidelity. There was another ground, and that appears from one of the letters. There was a former family, and there were disputes on that ground. It was said that Mrs. Barr was unkind to the children. Whether she was so or not I cannot tell, but I do find in one of her letters some expressions regarding the antecedent history of the family.

[The letter was here read.]

Gentlemen, I think that shows that there was in this unfortunate household an element of unhappiness apart from jealousy—namely, the children—and also that one of the causes that stirred him up to this act was the determination of his wife to leave him. She went to her mother's, and the mother harboured her, and beyond question it was on the mother's advice that this was done. Therefore, gentlemen, I fear that the evidence in this matter, as far as it was gone into, has supplied a motive. It was not a sudden ebullition of passion, but a long-working and sustained jealousy—a fever of imagination—arising on the one hand from a desire to live happily with his wife, and on the other hand from an inability to control his temper—a state of mind not at all unlikely to lead to such a lamentable result. But, gentlemen, that is not enough. If you should be of opinion that there is nothing more in the case than that, I am very much afraid you cannot say the prisoner at the bar is not responsible for his actions. Gentlemen, I don't wish to press this too strongly. You have heard the evidence, and everything I have said is entirely subject to your opinion in the matter, for, as I have said, the question is, whether judging him by the ordinary rules applicable to ordinary life you do or

do not think he is responsible. On the other hand, I must say, for I am bound to say so, placed as I am in reference to the law and those who are under the law, that although you have no proof here to meet the grounds of this jealous feeling, it is a stretch upon the fact to assume that the man had no foundation for his opinion—I mean in his own mind. I think myself that when the poor woman on her death-bed declared that she had been faithful to him she spoke the truth; but it does not follow that there may not have been things occurring which, without the presumption of insanity, might have had an effect upon the jealous temperament of this man. As to the insanity of the grandfather, I have doubts as to how far that can tell on the case before us. I really think that although the grandfather's mind was unhinged by the loss of money which his son had caused him, that is not an element which you could possibly apply in this case. Now, gentlemen, I think I have said all that is necessary in order to enable you to come to a verdict. Do not leave out of sight the fact, which in a case of this kind none of us can afford to leave out of view, that you are trying a man for his life. Every reasonable doubt that you can entertain must be thrown into the scale in favour of the prisoner; and if, upon this view of his legal and moral responsibility, you are of opinion that he is insane, or if there is reasonable ground for hoping that he was insane, you will give him the benefit of such a conclusion. But if you hold that although the man was of violent temper, and brooded over his fancied calamities until he lost control of himself, yet that he was just as sane as far as soundness of mind is concerned as any other criminal who commits acts of that kind, I am quite sure that however painful your duty may be you will bravely and conscientiously discharge it.

After half-an-hour's deliberation, the jury unanimously found the prisoner guilty of the double murder, and that he was of sound mind when he committed the deed.

Barr made a short speech after sentence was pronounced, asserting that he had no intention of murder or violence when he went to his mother-in-law's house, and that he was not responsible for what he had done there.

He was executed on 31st May. It is said that before his death he became very penitent, and was greatly changed; but he did not withdraw the accusations of unchastity against his wife, nor admit that he deserved to die, but maintained that he never intended murder, and had lost all power of self-control when he did it, so that he was not responsible.

Barr did not labour under phthisis, as was at first assumed. Even if he had been phthisical, the mental disturbance sometimes connected with the development of tubercle is very

rarely of such a type as to constitute a successful defence in a case of murder.

A few days before his trial he had, or said he had, strange visions. He told the warder that he had seen a child with a hugh head in a cradle, and he told Dr. Robertson and myself that he had seen a skeleton in his cell. We could not regard these as genuine hallucinations of insanity; they were either wholly feigned, or were the memories of troubled dreams, such as his anxious position might well occasion.

The chief question raised by this case is a very important one. Can any emotion, or passion, or desire become so intense and so extreme as, in itself, and without any further morbid symptom, to constitute insanity? A physician will answer Yes, a lawyer will answer emphatically No. The physician has seen terror, pride, depression, suspicion and jealousy so extreme, that he must call them morbid, and it is a mere question of verbal definition whether such morbid conditions are to be called "Insanity" or not. The lawyer scouts the idea that such a morbid condition of mind can constitute insanity; to him insanity is co-extensive with irresponsibility; he asserts that such extreme emotional conditions are but signs of an ill-regulated mind, and expressions, or, at most, exaggerations, of natural character; and he declares that no one would be safe if the mere intensity of an emotion were a sufficient excuse for the violence to which it led.

With his limited definition of insanity, and as a guardian of the public safety, the lawyer is right. Yet what is homicidal mania but a morbid desire to destroy? and what is suicidal mania but a morbid desire to die? It is the very intensity of these morbid desires which compels their recognition as insanity; and they cannot be explained away as signs of an ill-regulated mind, or exaggerations of natural character, for they occur in persons who are neither habitually cruel nor habitually desponding.

An emotion then *may* become so intense as to be morbid, and so morbid as to constitute insanity, even in the legal sense of the word.

At what point a natural emotion becomes morbid in intensity, or insane in character, only Omniscience can perfectly determine. There are, however, several considerations which may help us, though not infallibly, to a decision in such cases. A mind in which one emotion has acquired insane intensity will probably have a prior history of nervous

instability,* or of inherited predisposition to insanity; there will probably be no reasonable cause for the intense feeling, or no sufficient motive to inspire it; above all, the insane feeling is not likely to concentrate itself wholly upon one subject or one individual, but will, in most cases, find various outlets, and will be the habitual attitude of the mind towards every thing or every person around it.

Let us apply these considerations to Barr's case. There can be no doubt that he had, both from habit and by inheritance, an excitable nervous temperament. As to the cause of his jealousy, although none was found, and although the dying wife asserted her innocence, it is of course quite possible that there may have been circumstances which seemed to his mind a sufficient cause, and which, if known, might deprive the jealousy of much of its morbid character. It is, however, chiefly in the last respect, that Barr's suspicions came short of the insane type; they had but one direction, and one object; there was no poison in his food; no whispered conversation about him; no malign influence exerted upon him; no secret conspiracy to ruin him; it was simply that he suspected his wife of unfaithfulness, and he blamed her mother for protecting her.

However intense this feeling might be, there was certainly no good reason to think that it had destroyed his self-control, and impelled him irresistibly to the fatal deed. There was no sufficient ground for deeming him legally insane, and it would assuredly be most perilous to society if a man might murder his wife and mother-in-law with impunity, provided only that his jealous suspicions were sufficiently deep and strong.

Cases may occur where such morbid emotional conditions should modify responsibility, and therefore mitigate punishment, but this principle cannot be accepted as a general rule. Evil passions uncontrolled are the most fruitful source of all crimes, and too often without the excuse which insanity affords.

An Arab Physician on Insanity.

The following account of the symptoms and treatment of insanity, as known to Arab Physicians, is taken from the Persian Medical Work "Tibb i Akbari," written by Muhammad Akbar, about the middle of the 17th century. The "Tibb i Akbari" is a translation from the Arabic of the Sharh ul Asbāb wa Ullāmŭt, a commentary written by Nafis bin Awaz, in the year 1450, on the Asbāb wa Ullāmŭt, a medical treatise by Năjăb ud din Unhammad of Samarcand, an Arab Physician, who wrote about the middle of the 8th century.

The subjoined arrangement gives the names of the different types of insanity and the order of their description in the "Tibb i Akbari:"—

I.—Soudā ā Tabee.
- 1. Souda.
- 2. Janoon.

II.—Murrāē Soudā.

III.—Mālīkhōlia ā Marāki.

IV.—Dīwāngī.
- 1. Kutrib.
- 2. Mania.
- 3. Daul Kulb.
- 4. Sadar.

V.—Haziyān.
- 1. Mibdā ā illut dimāgh { with six subdivisions.
- 2. Mibdā a illut Marak.
- 3. Būkhārāt Hād.

VI.—Raoonut.

VII.—Himak.

VIII.—Ishk.
- 1. Harām.
- 2. Pak.

IX.—Nisyān.
- 1. Zikr.
- 2. Fikr.
- 3. Takhil.

Muhammad Ukbar defines insanity as "a state of agitation and distraction, with alteration or loss of reason, caused by weakness or disease affecting the brain."

1.—"Soudā ā Tabee originates in constitutional disease, causing fevers to ascend from the body to the brain, and terminates in unconsciousness." (Dementia ?)

The symptoms met with in this form of insanity are of three kinds.

1st. When the patient shows great carelessness, as regards clothing, cleanliness, attention to the bodily requirements and the calls of nature, the pulse being astonishingly irregular, the skin coarse, and presenting a black colour, and the urine thick.

2nd. When the memory is impaired, with a childish merriness of heart, and unprovoked laughter, a rapid pulse, and congestion of the eyes.

3rd. (Met with mostly in the young.) When the patient manifests intense anxiety, and suffers from a constant dread of something unknown, these symptoms being associated with extraordinary movements of the hands and feet, leaping, beating the ground, &c.

When there is a combination of the preceding three classes of symptoms the disease is named *Souda.*

Souda becoming chronic ends in *Janoon.*

In *Janoon* the patient is extremely restless, sleepless, taciturn, shows great antipathy to mankind, is violent, and at times roars like a wild beast. His skin is dry, the heat of his blood is generally diminished, there being at the same time occasional loss of speech.

Janoon is a most unfavourable form of insanity. The word originally signifies to beat the earth with the hands and feet and to fight.

Treatment in Soudā ā Tabee.

In the early stage of the disease bleed and purge, nourish and purify the blood, regulate the system, and endeavour in every way to establish a good condition by giving nutritious foods, the use of baths, and liniments, and milk rubbed on skin of head and body. As articles of diet, meat of the first quality, wheat, and good butter are advantageous. The patient's taste as to what he would like to eat should be consulted, and every care taken to make things savoury, and to have them thoroughly well cooked in butter. Sweets and dry fruits, with almonds, are recommended. Cooling drinks, such as are made from milk of almonds, sweetened with sugar candy, are extremely useful, as are also sweet grapes, apples, and water melons, which, in addition to their cooling and nutritious properties, have the effect of strengthening the brain and powers of speech. Whey, which contains much nourishment, should be given freely.

Change of climate is highly necessary, and in the selection of a suitable place, care is to be taken to avoid *in every possible way* things likely to cause irritation, so that the mind may have complete rest. The mental powers are to be strengthened by surrounding the patients

with all things likely to give pleasure ; *e.g.*, soft music, gardens having planted in them trees and fragrant shrubs, with shady places here and there in which refuge can be taken from the heat, &c.

By the use of measures such as these, sleep may be brought on. Sound sleep is the best known remedy for this disease, and far preferable to all medical treatment.

The general health having been regulated, the patient is to have no restrictions placed on him, except only such as are absolutely necessary for his protection.

Previous to the patient's going out for exercise, a glass of whey should be given him, and a place for his exercise is to be selected where the air is fresh and pure, where there is no noise or brawling, he at the same time being surrounded with all obtainable beautiful things, which by giving him pleasure may strengthen his mind. To give pleasure to these unfortunate men, although the ancients and moderns affect to despise it, is the only remedy for their cure.

Shaik lá Ajab (an Arabic writer) says regarding insanity, "Be it known that of all remedies, to strengthen the heart and brain is the safest and most sure, guiding the mind and actions ; do nothing to frighten a patient, and let him select his own employment. Make the senses a special subject of treatment, and occasionally give partial intoxicants. Rest and fresh air are required for the miserable men afflicted with insanity. They should be shown every possible kindness ; in fact, they are to be treated by those under whose care they are placed *as if they were their own offspring*, so as to encourage them to bestow their confidence, and to communicate their feelings and sufferings. *This will at least be a relief to those unfortunates, and a charity in the eyes of God.*"

Having done all that is possible to strengthen the brain and mind by avoiding anything likely to cause vexation, pain, sorrow, or disturb the rest, and the patient still continuing hot-tempered, intoxicating (*i.e.*, mirth-producing, soothing and desirable) drugs may be tried along with a soft bed to rest on (luxuries).

Drink, composed as follows, may be given :—

Rose flowers, ʒvi. ; Sad Kofi ; Karan Mustaki ; Sumbol, tib. ; Asaroon *aa* ʒiij. ; Kusfah ; Zurnab ; Saffron *aa* ʒiij ; Kaklah ; Basbasa ; Jozboa *aa* ʒj. ; Amlah 9 (in number). Preparation Amlah ilb. boiled in water 7lbs., till reduced to 3lbs., strained and mixed with ½lb. honey, the mixture to be boiled, and the above-mentioned drugs powdered, added, and dissolved. Keep the solution for two months and then use. It will give pleasure to the mind, assist digestion, induce healthy sleep. Caution: only pure drugs are to be used in the preparation of the above, as the constitution of those who will take the mixture is extremely sensitive. (Several other prescriptions are given.)

II.—Murrāē Soudā.

A form of insanity, having its principal seat in the head, but generally connected with disease existing in some other part of the body. It is generally found in men who devote nights and days to study of Law precepts, and is a very unfavourable form of disease. Rufus, an Arab Physician, associates this form of mental disease with Philosophy, and in this he agrees with the writings of Plato. Tibri, an Arab Physician (?), states that this disease attacks men who devote their lives to science and art. Tibb i Akbari does not limit the disease, but regards it as a common form of insanity.

Symptoms.—The person suffering from Murrāē Soudā is loaded with cares, and constantly full of doubts. When he walks he always looks on the ground; his head and face are thin, whilst the rest of the body is of medium size; his eyes appear sunken; his pulse is varied, sometimes weak, fast or slow; his urine is thin and clear. Previous to these symptoms appearing, the patient is anxious and sleepless, and should he be exposed to the sun or have suffered from sunstroke, the disease is rapidly developed. Indigestion, and over-spiced foods, by sending heat to the brain, as also eating too many onions, are regarded as producers of this disease.

Treatment.—Where there is plethora, bleed from temporal artery or cephalic vein (note whether the blood when it settles be black, red, or mixed), and if the drawn blood be black, continue the bleeding till such a time as the blood comes of a pure colour. The bleeding should, however, be moderate, as excessive blood-letting causes debility. If the blood drawn be of a mixed colour, bleed but seldom, and when it is red and pure stop the bleeding, as its continuance will only weaken the brain, for, with blood of a healthy character, it may be assumed that no bodily disease exists. When the patient is very restless, before resorting to blood letting, try the effect of some of the prescriptions given as beneficial in Soudā ā Tabee. Do nothing to agitate the brain, avoid violent purgatives, give nourishing drinks, also flesh, fish, &c. As a cooling drink, a milk made from the expressed juice of wheat, poppy seeds and almonds, mixed with sugar candy, may be used, and the same milk may be used as a liniment to be rubbed on the head. The non-stimulating oils recommended in the chapter on Epilepsy, may also be used as liniments. They will cause the eyes to water. Water composed of Shaser, Mukushar, Nelofar, and Burg-Kah, is also to be dashed on the head, &c.

The patient should bathe frequently in fresh water, live in a temperate place, surrounded with many trees and shrubs, plants and roses. Whatever is injurious to the general health, such as fasting, cares, excessive cohabitation, and such things, should be avoided.

Medicines that are strengthening, combined with nutritious food, are to be employed.

III.—Mālīkhōlia ā Marāki.

This form of insanity is caused by the humours, *or by Stomach?* or by Nasirak of Tahal.*

The humours are collected, and the heat of the body passes from the limbs to the brain.

Another name for this form of Insanity is Nafkhae Mālīkhōliā, and sometimes Nafkhae Marāki. Nafkha is the name of that particular form of air or vapour which the angel Gabriel is said to have blown or caused to pass from his coat sleeve into the windpipe of Mary the Mother of Jesus, for the purpose of impregnation (!!!). Marāk is the name given to a special kind of heat resident in the body imperceptible to the touch, but of great intensity. When this Marāk slowly ascends from the body to the brain it destroys the soul of the body and darkens the intellect.

Symptoms of Mālīkhōlia ā Marāki.

Sour taste in mouth, great thirst, voracious appetite, the food does not nourish the body, much spitting, pain in the chest, indigestion, the stomach being sometimes hard, and at other times tender and sensitive.

The genitals are hot, there is frequent priapism, and great desire for sexual intercourse, with incapacity for its proper performance.

The general health is bad, and if not early attended to, there is great increase of the mental symptoms, the sufferer is always present with evil, loses all sense of shame, all power of reasoning, imagination and action, and ends by becoming completely demented. If the bile be the humour affected, the patient will be quarrelsome and dangerous to others; if the saliva, he will be quiet, and have the appearance of being drunk.

Treatment.—When the signs of inflammation are present, purge, bleed, and let the patient have a diet composed of milk. The bleeding is to be regulated by the patient's strength, and violent purging is to be avoided, as vomiting and purging in this form of insanity are adverse, and should be at once stopped if they occur.

When there is no tendency to inflammation, the strengthening treatment already given is to be used.

Should the stomach be swollen, it is to be fomented with oil of roses, Sumbul and Mastaki.

* An exact translation, but meaning unknown to translator.

II.—Dīwāngī or various forms of Insanity.

1. Kutrib.

The term Kutrib has no exact signification, being the name of a small animal that is constantly on the move, here, there, backwards, forwards, sideways, &c., and it has been made use of to represent a form of insanity in which great restlessness is associated with the mental symptoms. The name is also given to a jackal, and as the patients sometimes howl like jackals, the term has been employed to designate their disease.

Symptoms.—The patient is always morose, continually on the move, never resting for a minute in one place; his judgment is defective, his speech absurd, has suspicions that men are about to kill him. These suspicions lead to his hiding during the day in woods and amongst tombs, only appearing at night. These suspicions are not always present. The countenances of patients suffering from this form of insanity have a melancholy appearance, as if they were constantly lamenting. They also attack men in the desert places which they frequent; they move on all fours, like quadrupeds, or stand on their heads. Sometimes they lacerate their bodies with thorns and stones. (*See* Mark's Gospel, chap. v.) There is in this disease dryness of the tongue and heat of body.

Treatment consists in bloodletting at the outset, the administration of cooling drinks, regulation of general health by such medicines as are suitable to the patient's temperament, and by attention to diet. Removal from all sources of irritation or anxiety, fear or discomfort. Promote healthy sleep. Compel the patient to be constantly employed, it being of the utmost importance to get the patient to work.

Failing this treatment, "Shaik" ? ( ) advises that water should be constantly dashed on the head, and the patient prevented from sitting in the dark, *i.e.*, secluding himself, at the same time giving all sorts of medicines to cool the brain. If this treatment be persevered with, recovery may be confidently expected.

2. Mania, a Greek term, equivalent to the Arabic "Janoon Tabee," or to what is termed by Razu, an Arab writer on the subject, "Janoon Haeeg."

Symptoms.—Persons suffering from this disease break and tear whatever they come near. They rush into places where men are congregated, not for the sake of society, but simply to gratify their desire for mischief and destructiveness.

The treatment for this form of insanity is some one of those previously given as suitable for insanity.

3. Daul-Kulb is a form of insanity in which the destructiveness and mischief manifested in mania is associated with irregular manifestations of gentleness and fawning, after the manner of dogs; hence the name. It is also to be noted that if a healthy man is bitten by a person suffering from Daul Kulb, the healthy man will speedily die with symptoms exactly similar to those which manifest themselves in a person that has been bitten by a mad dog. The cause of this form of insanity is said to be the bile.

When the disease is caused by the bile affecting the brain, the patient is at first thoughtful and silent. When he does speak it is difficult to understand him, and he may continue speaking for a long time. When in a fit of rage he becomes unmanageable. He is emaciated, and his colour is changed into black. Later on there is great mental anguish; one minute he is violent and unmanageable, and the next quiet and sorrowful. A swelling of the brain exists in this disease.

The treatment consists in regulating the patient's health, giving nourishing food and medicines that will strengthen the brain and heart, combined with perfect rest, and removal to a cold climate,

4. Sadar. (A Sooryam word, signifying Janoon-mufrit) said to be mania associated with swelling of brain.

Symptoms.—Sleeplessness. Melancholy and distraction of mind, heaviness of head, terrifying dreams arouse from sleep. The patients frequently beat themselves, they answer questions in a curious way, *i.e.*, give unmeaning replies; they forget everything; their eyes are red, heavy, and have an appearance as if something had been put into them. The urine is white and thin; there is frequent shivering.

Treatment.—Give in this disease the medicines recommended in Sarsam. The hands and feet should be tied. The advantages of restraint are, 1st, that the patient may not show restlessness; 2nd, that his brain may have rest; 3rd, that he may be prevented from killing himself or others.

Tibree (?) states that he saw two men in Tibristan who, after killing many men and women, committed suicide by hanging themselves from trees.

V.—Haziyān, a disorder of judgment, resulting in the loss of the power of thought. It has three subdivisions.

1. Mibdā ā illut dimāgh.

Manifesting itself by the mind magnifying whatever is presented to it, and leading to actions that are outrages on society; to habits that are animal; to displays of opposition; to absurd conduct, laughing, dancing, &c., without reason, and caused by Soudaê damwee; to acts of violence, restlessness; to abstinences from society, concealment of face; to sleeplessness. Sometimes these mental symptoms are associated with inflammation of brain, eruptions on head, and fever.

2. Mibdā ā illut Marak,
   Said to be due to the loss of Spermatic fluid.
3. Būkhārāt Hād,
   Said to be due to heat from the bones ascending to the brain. The symptoms are ? and the treatment is that of ?

VI.—Raoonut and VII. Himak.

Are forms of insanity in which the thoughts are disordered, and the power of making use of the mental powers entirely lost. The patients who suffer from these forms of mental disease do all sorts of silly things, useless work, or will not work, their whole conduct being childish. It has been noticed that, along with the above symptoms, there is restlessness, sleeplessness, and a dryness of the eyes.

Treatment the same as regards food, rest, &c., given as of use in the other forms of insanity, as regards medicines give, those recommended as of use in Nisyān.

VIII.—Ishk.

The term Ishk is taken from Ishka, a creeper that twines round a tree, gradually causing its death.

The mental symptoms are, grief and weeping, avoidance of society and seclusion, with constant concentration of mind on the object loved; anxiety, fear, silence. Associated with the mental symptoms are dryness of blood, with a varying pulse.

Treatment.—After an examination of the patient's constitution and temperament, prescribe the diet recommended in Mālīkhōlia, also such of the drugs of use in that form of insanity, as may appear suitable. In addition to the above,

the patients must be amused and kept merry. Sometimes it may be advantageous to decry the objects loved, or, again, to confine the patient along with his mistress, or some other woman, so that he may, by association, be led to form correct judgment, and conquer his condition.

Marriage, where it can be accomplished, is the best of all human treatment. It is particularly necessary in this form of insanity that the patients be not allowed to be idle, so as to furnish them with leisure to brood over their own thoughts, but that they should be compelled to work.

It is not known to man how love causes insanity, and whatever is written on the subject is vain. Physicians have failed to trace the origin of the disease.

Allah 'hōōma Urzukna. God keep it far from us.

Ishk is subdivided into

1. Harām, or Insanity produced by impure love.
2. Pak ,, ,, ,, pure love carried to excess. The symptoms and treatment are those already given.

IX.—Nisyān, or Loss of Memory, has three subdivisions, viz.

1. Zikr.
2. Fikr.
3. Takhil.

Symptoms and treatment unknown. *J. G. Balfour.*

CLINICAL NOTES AND CASES.

Two Cases having certain points of resemblance to General Paralysis of the Insane, but without Insanity; and Occasional Memoranda of a Third Case. By W. T. Gairdner, M.D., Professor of Medic... in the University of Glasgow.

The cases hereafter detailed from the journals of the Western Infirmary, Glasgow, are those of two patients ...b-mitted personally to the observation of the members of the Scottish Branch of the Medico-Psychological Association, on May 5th, 1876; and the discussion thence arising will be found reported in this Number of the "Journal of Mental Science." I have added some particulars of a third case, referred to by Dr. Clouston during the discussion, from loose memoranda made at the time; but I have not endeavoured to give this last case in anything like a complete form, as

materials are wanting, or, at least, could not be easily obtained under the circumstances. It is very difficult, of course, to convey in words the impression given to the mind of the observer, in the first two cases, as to the absolute integrity, to all appearance, of the strictly mental functions; but in the case of S. D., I can most truly state that after more than two months' watching of him in hospital, not a single particular was observed tending to indicate the slightest deviation from a normal condition, whether of the intellect, or of the emotions. S. D. is, moreover, a man very much above the average of hospital patients, and responds readily and naturally to all the tests which can be applied, in conversation and otherwise, to elicit the qualities of a well-educated, intelligent, and well-balanced mind. T. H. is a man of inferior social position, and of a much less cultivated, as well as, I think, lower organisation than S. D.; nevertheless he is not deficient in shrewdness, and in a certain humorous faculty which, in his case, is perfectly under control, and serves to display to some advantage what might be called a rude and coarse, but certainly not an insane mind. Both patients have seemed to me entirely free from the kind of exaltation or extravagance so characteristic of the delusions of general paralysis, and equally removed from the other extreme of melancholia or morbid depression. They are both keenly alive to their own bodily complaints, and able to take an intelligent and rational view of everything bearing upon them. With these preliminary remarks, I shall leave the notes taken in hospital of these two cases to speak for themselves.

CASE I.—*Defects of articulation and gait for two and a-half years, followed by imperfection in the minuter combined movements of the fingers (occupation, watchmaker). Sensibility intact. Doubtful trace of right portio dura paralysis. Startings, but no considerable pains, preceding the impaired movements. A temperate man, with no morbid tendencies to excess, either sexual or alcoholic. Physical conformation robust. No fever.*

S. D., æt. 5[illegible] watchmaker, admitted on 2nd February, 1876, complaining of weakness in the limbs, difficulty of walking, and defect in the power of articulating words. A stout, muscular man, of healthy appearance, with well-marked *arcus senilis.* Has always enjoyed good health till the present illness. Difficulty in walking commenced two years and a-half ago; startings had been present for a long time previously, but no serious pains. About a month later some of the more delicate manipulations proper to his handicraft became difficult to him, and he had at last to abandon them altogether. It is eighteen

months since the defective articulation began to be observed; and ever since it has made very gradual progress. At times he feels as if he would choke in swallowing his saliva; but there is no persistent or considerable dysphagia. No irregularity in the axial movements of the two eyes; no diplopia at any time. Vision, as well as hearing, taste, and smell, appear to ordinary testing to be perfect. No inequality of the pupils. Slight difficulty in attempting to whistle is apparent to patient himself, and questionable signs of paralysis of portio dura on right side were discovered soon after admission in presence of Dr. Yellowlees.* Tactile sensibility is unaffected throughout the body. [This statement, made in the first instance in general terms, was afterwards tested in every possible way with the same result. The sense of weight was so delicate that he could with perfect ease and certainty distinguish half-a-sovereign from a sixpenny piece; and he distinguished weights placed upon either foot with ease down to half an ounce. There was no loss either of cutaneous or of muscular sensibility in the lower limbs.] Patient is easily fatigued in walking, but there is no real paraplegia, and the muscular activity and power of the lower limbs are apparently quite unaffected, except as regards progression. The bladder is not paralysed, though perhaps a little irritable in the earlier part of the night, before he falls asleep. The sexual functions are normal; or, at least, if morbidly affected at all, it is in the direction of slightly impaired, but not lost, energy. There does not appear to have been any kind of abuse of the generative organs, and patient never had syphilis. He is married, and his wife had a miscarriage soon after marriage. He believes that she suffered some injury to the uterine organs interfering with procreation, as she has never had any children since.

The organs of the chest and abdomen give normal results to physical examination. The bowels are regular. Pulse rather feeble, 88 per minute. No fever. The family history gives nothing remarkable, and nothing can be elicited as to prevalence of nervous disease in the family, unless it be that a half-brother (son of his mother, who herself died at the age of 84) is at present hemiplegic, by a recent stroke, at 74 years of age. The state of the intelligence, and of the mental functions generally, has been sufficiently indicated above.

The *defect of articulation* is not easily reduced to any precise form of expression. There is no single word, or ordinary combination of vowels or consonants, which fails to be produced with tolerable precision when his attention is carefully given to it; but yet there is a manifest *thickness* of utterance, and a constant disposition to slur over consonants when he is speaking unguardedly. He himself gives "sixpence" as a word which he feels to be as awkward to pronounce as any; while, on the other hand, such words as Constantinople, hippopotamus, perpendicular, are, on the whole, well pronounced; the

* See the discussion in the Report of the Quarterly Meeting.

tendency to slur being greater in the lingual than in the labial consonants. All the rougher movements of the tongue are perfectly accomplished, and there is no deviation.

The *defect in progression* is described in considerable detail in the Journal, but the following may suffice to convey its general character. On a level surface, and when free from agitation, patient can walk, when left to himself, without any very obvious disorder of movement, but perhaps with more appearance of deliberation than is strictly normal. His difficulties are increased by turning, by walking on a narrow base, or with closed eyes; under such circumstances, and particularly in attempting to walk straight on the breadth of one or two planks, he often lurches over, and *almost always towards the left side*. He says that this has been so all along. There is none of the stamping peculiarity, or extreme non-coördination proper to locomotor ataxy; and the inability to walk with the eyes closed is much diminished after a little practice. He experiences greater difficulty in descent than in ascent.

Although, as stated, the more delicate manipulations proper to his occupation have become impossible to him, he can handle money, and pay it from one hand into another, without any apparent want of precision of movement. In using the dynamograph he can employ a great amount of pressure with the hand, and the resulting pencil tracing on the instrument is not appreciably different from the normal. When, however, he spreads out his fingers and maintains them in this position for some time, there are obviously abnormal, though slight, tremors and lateral movements of an involuntary kind in the individual fingers, especially in the left hand, and in the ring finger. His handwriting, which we have had a good opportunity of comparing with a MS. written before his illness, betrays a distinctly tremulous character, but nowhere so great as to cause obscurity in reading it.

An ophthalmoscopic examination by Dr. Thomas Reid reveals only congestive changes in the retina, more or less on both sides, but they are such that Dr. Reid is disposed to regard them as having relation with the morbid alterations in the nervous system rather than with overwork or other local disease of the eyes themselves.

The treatment was partly by a mixture of strychnine and gentian (which appeared to him to do a little good), partly by galvanic continuous currents applied to the sympathetic (on the advice of Dr. Finlayson), and afterwards by Kirby's phosphorus pills. It cannot be said, however, that any permanent benefit resulted from the treatment. He left the hospital after more than two months' residence, on the 14th April.

Case II.—*Headaches for seven or eight years (occasional). A single slight quasi-epileptic seizure in the midst of otherwise good health, five years ago. A more decidedly epileptiform attack five months ago,*

succeeded by very gradually progressive lesion of motility, manifested chiefly in the gait and the articulation. No distinct paralysis, and no further epileptiform or other spasm. Tremulous movement of fingers, and unsteady handwriting, but firm grasp. Slight tremors of fibrillæ of tongue. No anæsthesia, nor abnormal sensibility. History of sexual excesses in married life, but no syphilis, and no impotence. Habits temperate as regards alcoholic drinks.

T. H., æt. 45, miner, sent by a practitioner from the country for examination, but not admitted to hospital; the suspicion entertained was that it might be a case of "locomotor ataxy." Subject to headaches for seven or eight years, regarded as ordinary "bilious" headaches, and concurring with costiveness. Otherwise health good up to about five months ago, with exception of something like an attack of sudden unconsciousness five years ago, and a more positive sudden seizure of some kind five months ago, during which he bit his tongue considerably on the right side, but seems quite confident that he felt and knew everything that happened. Nothing more can be elicited about this fit except that it seems to patient to be the starting-point of his present disease, while neither the headaches, nor the former attack referred to appear to him to have in any way affected his health; and the headaches indeed have been almost absent since the present symptoms began, nor has there been any new sudden nervous complication. For five months he has had a very gradually increasing instability in gait, and a disorder in the articulation, together with such an amount of want of control over the right arm as to incapacitate him for work; all which disorders are dated pretty accurately from the seizure above referred to, though not, like it, of sudden onset, but of gradual and almost imperceptible increase. He has never been so much disabled as at present.

The *disorder of motility*, in so far as it affects the lower limbs, consists of a general instability of gait, with an occasional tendency to lurch over to one side, exactly as in the case of a drunken man, but without the slightest apparent disorder of the consciousness, or of the intelligence. He has been able to walk from the Queen-street Station to the Infirmary, a distance of nearly two miles, with some difficulty, but still with a sense of increased, rather than diminished freedom in the use of his limbs as a consequence of the exertion. He experiences increased difficulty and uncertainty in walking upon a narrow base, but still without the slightest tendency to *stamping*, or any of the more erratic movements of locomotor ataxy. In standing, he prefers a broad base, but is not wholly unsteady even when the two feet are close together. The equilibration is considerably less perfect with the eyes shut, and is accompanied, after a time, by a swaying movement, which ends in his tendency to fall over; but he can walk several steps even with the eyes shut, proceeding cautiously, and with full knowledge of the surroundings. There is no marked increase of unsteadiness after standing a considerable time with the eyes open; and there are no

tremors in the muscles of the lower limbs. In the right hand, on the other hand, there are distinct tremors of the fingers, specially observed when the thumb is closed upon the two first fingers; but when this is most considerable, it is never more than the movement of a few muscular fibres at a time; and, as far as it can be observed, not predominating in any particular set of muscles. The handwriting is very decidedly affected, not so as to be illegible, but shaky and tremulous to a marked degree, and on comparison with MS. written before his illness, it is in a larger character, more apparently elaborated, and at the same time much more unsteady. Notwithstanding this tremor as regards the minuter movements of the fingers, the grasp of the right hand is quite steady and firm, and the register with the dynamograph is equally good as with the left hand, the tracing being normally straight in both cases.

The cutaneous sensibility, both of the upper and lower extremities, seems perfectly preserved; there is no sensation of cushioning between his feet and the floor, no numbness; he can distinguish easily by weight, and with the eyes shut, between a half-sovereign and a sixpenny piece.

The defect of articulation may be described generally as a thickness of speech, affecting both the labial and the lingual consonants. There are no marked tremors of the lips, and the tongue is protruded normally in all directions, but slight abnormal tremulousness is observed on several occasions in the muscular fibrillæ of the tongue, as examined on the dorsum.

He says, in answer to a question, that his memory has been bad for twenty years, and that "it was novel-reading that spoiled it"—a rather strange confession for a miner; but there has not been the slightest appearance of any lapse in his narrative as tested in presence of his wife, nor has there been the slightest manifestation of undue emotional tendency or exaggeration; but, on the contrary, a clear, sharp, and in a certain sense, accurately logical view of his own position.

There has been nothing resembling, in any degree, the sharp, or "lightning" pains of locomotor ataxy, nor, indeed, any well-known pains, with the exception of some stiffness of the knee, and pain in bending it, apparently rheumatic; a little also of pain and stiffness in the back on rising in the morning. There has been complete control over the sphincters throughout, and no important disorder of micturition or defecation. Urine normal.

He had a gonorrhœa at 19 years of age; married at 20, and had a large family of healthy children by his first wife. No history of syphilis at any time. His present wife is childless. His habit all along has been to have frequent sexual intercourse with his wife, and in the first years of his married life there seems to be no doubt that he indulged in this to great excess, but without at any time being sensible of directly bad effects. Of late he has been more moderate, but

the generative power and desire are obviously unimpaired, or even more active than in the average of healthy men at his age. As regards alcoholic liquors, his wife's testimony and his own concur in representing him as a very temperate man. He never cared for whisky, and for many years he has been nearly an abstainer.

Dr. Reid examined the eyes, and found them hypermetropic, all the other lesions discovered being apparently related to this condition. His vision has been long rather indistinct, for ten years, at least; he thinks it has been rather more so of late; but diplopia, strabismus, &c., have been absent throughout.

The treatment adopted was, in the first instance, by iodide of potassium, 20-40 gr. doses, under the idea partly of reducing the almost abnormally developed sexual desire. Afterwards Kirby's pills were given, but they seemed to disagree, and produce diarrhœa; the patient spontaneously reverting to the iodide, which he believed had done him some good. Strychnine and gentian in combination were also employed, partly with, and partly apart from the iodide. It is difficult to say whether any good effect resulted, Galvanism was not employed, as the patient lived at too great a distance to allow of its regular systematic use.

Remarks.—The resemblance of these two cases, in many respects, to the general paralysis of the insane, was fully admitted by the members of the Medico-Psychological Association, to whose observation they were directly submitted. A group of cases of the latter affection in various stages, selected for me by Dr. Yellowlees from the large field at his disposal, enabled the students of the clinical class in the Western Infirmary to recognise this resemblance, especially as regards the articulation. As the cases do not, in their present stage, illustrate clearly any definite question connected with cerebro-spinal pathology, I shall content myself with recording the symptoms and history here. Any one who has studied personally, or in Duchenne's elaborate description, the type now so well characterised under the name of locomotor ataxy, will have no difficulty in placing these two cases quite apart from those so designated. The entire absence of the peculiar jerking and stamping movements, and of anæsthesia in the lower limbs; the absence also of the "douleurs fulgurantes" in the early stage, and of all the special ocular symptoms of Duchenne's disease; the presence, on the other hand, of defects of articulation, which are almost never observed in locomotor ataxy, form a group of distinctive characters, amply sufficient to establish the diagnosis. The epileptiform antecedents, in the case of T. H., may, perhaps, be considered to point to cerebellar paralysis as a

possible diagnosis, but there is little else to recommend this view of either case; no local pain, little, if any, well-marked vertigo, no sickness which can be viewed as characteristic, the headaches in the case of T. H. purely occasional, chiefly frontal, and ceasing with the invasion of the more serious symptoms. Lastly, notwithstanding the presence of muscular tremors over a limited area, the cases do not present definitely the features of the types of "sclerose en plaques disséminés," as described by Charcot and Bourneville. I have, therefore, thought them worthy of record in this Journal.

The following very imperfect, but still, I think, more or less valuable memorandum relating to a case which excited in no ordinary degree the sympathy, as well as the medical interest, of a wide circle of friends, may be added here, inasmuch as the remarks of Dr. Clouston have already indicated the resemblance, in many respects, of this case to the two preceding. The subject of it was a medical practitioner of singularly clear judgment and profound insight, who, during a career of twenty years as a surgeon, had acquired a local reputation of the highest order, and whose devotion to his profession and to his patients secured him the personal affection, as well as respect in a high degree, of all who knew him. Without encroaching on the domain of private friendship, I may be permitted to say that few things in my professional experience have been more painfully and sadly instructive than to watch the approaches of insidious nervous disease in one who confided to me his inmost thoughts and feelings, and who up to a late stage, at least, of the disorder, could not but be regarded as eminently qualified, by his enthusiasm in pathological studies, to appreciate the character, and foresee the end, of his own case. One other remark I will venture to make, for the sake of those who may read these notes with a knowledge of the personal history involved in them. Cherishing my friend's memory as I do, I believe that certain misunderstandings which occurred towards the close of his useful and honoured life were brought about by external causes acting on a diseased brain. But in no other respect, perhaps not even in this respect, could the subject of the following notes have been pronounced technically insane, even up to the latest period at which I had any cognizance of his symptoms.

Case III.—X., a practitioner of surgery, was known to me from the time of his early manhood as a remarkably active, modest, sound-minded, and in every way most estimable and loveable man. The only

considerable bodily infirmity to which he was liable was a tendency to diarrhœa, which, however, did not at all interfere with his general health or good condition, and even at times seemed to act as a safety-valve, especially when, as often happened, he was engaged in pathological researches involving the risk of septic poisoning. He consulted me about this on one occasion when he entertained an idea of going to India; but about the same time, a good opening for practice occurring at home, he abandoned the idea, and with it all serious questions connected with the diarrhœa. He continued in very active practice, without any appearance of impaired health, till about the year 1871, when he himself grew more or less anxious, on account of certain sensations in his head, accompanied, as he thought, by a somewhat disabling amount of deafness in the left ear, and by a consciousness as if of something impending which might tend to arrest his career of usefulness and work. It was very difficult, even for a confidential friend, at this time, to get from him any clear idea of what the actual symptoms were. He believed that his memory was becoming impaired—but all that could really be perceived by any one else was that his own confidence in it was shaken. He complained, if I remember aright, of noises in his left ear, and was acutely sensible of the diminished distinctness of his hearing, which was originally, like all his other senses and faculties, extremely perfect. He was exposed at this time to some domestic calamities, which seriously weighed upon his mind, and afforded a presumption that he might, under the influence of these mental causes, be taking too serious a view of his own symptoms. A year afterwards, the presumptions of fatal disease were much stronger; he was evidently the subject of some progressive form of slow paralysis. His articulation was affected; there was slowness and hesitancy, with manifest thickness of utterance both of the labial and of the lingual consonants. Still, this symptom varied so much from day to day that I was told that on the occasion of his consulting one of the most distinguished London physicians the flaw in the articulation was imperceptible, and the whole of the symptoms appeared to that eminent authority to admit of a favourable prognosis. To myself, on the other hand, and subsequently to Dr. Warburton Begbie, as well as to all of those medical friends who were most constantly associated with him, the facts of his case seemed most ominous and the ultimate prognosis very gloomy. I have rough and brief notes taken at this time of the following symptoms; and I particularly remember being strongly impressed with the clear and unexaggerated account he gave of them, and the apparently just and well-balanced estimate which, notwithstanding much suppressed emotion, he obviously formed of his own case.

"Articulation like that of general paralysis; labials first, then linguals, perhaps palate. No affection of voice; no aphasia. Slight tremors of tongue fibres; no deviation or loss of power; uvula straight.

"Deafness—originally in left ear—with great noise, which afterwards ceased. Then deafness in right ear, without noise. Hinton,

who examined the ears, pronounced no local disease, unless, perhaps, of labyrinth—recommended a holiday in Switzerland, with residence at not less than 4,000 feet above the sea level. [X. had returned from his Swiss tour at this time, decidedly worse.]

"Vision perfect throughout. [As he had been a considerable smoker, though in no other way intemperate, I questioned him as to the effect of tobacco. He said he was not conscious of its having done him any harm, but that he had become aware of a comparative inability to smoke much as his disease advanced. The disposition, too, to smoke had almost ceased.]

"Giddiness like that from too much wine—a *temporary*, but not a *momentary* sensation, often quite absent, and varying in amount, like the fault in articulation, from day to day. Feeling of weakness in the muscles of the legs and thighs, with uncertainty of gait, but not much liability to fall, except when giddiness comes on suddenly. No marked peculiarity of gait to an observer, and no trace of locomotor ataxy. He fancies that at times he does not quite know where he puts his feet; there may, therefore, be muscular anæsthesia, but there is no want of sensibility of sole of foot. These phenomena in the limbs are only of three weeks' standing. There is no twitching, or sudden starting, and no pain; he has had, however, at times what he describes as 'thrills' in the muscles both of arms and legs, like the feeblest possible Faradic currents—these often when he awakes in the morning.

"Writing is difficult to him—MS. alters from day to day, and sometimes in the course of a single letter. [I could not get him to give me a specimen of his MS. without exciting undue susceptibility.]

"Memory impaired; according to his own impression decidedly so. [He never varied in his statements on this point, but, according to most of his friends at this time, little or nothing wrong was manifest to them in ordinary intercourse. My impression is, that having an originally powerful and exact memory for details beyond most people, he had got into the habit of trusting to it unduly, and had begun to find himself at a loss as to circumstances which most people would have committed to paper. But in regard to this, as to other mental phenomena, it would be very difficult to fix absolutely the beginnings of what could be fairly called morbid changes. There was certainly no loss of memory such as to lead to inconsecutive thought, or uncertainty as to the details of his own case.]

"Intellect otherwise quite sound. Emotional manifestions (?) [Once or twice, during a long conversation, he manifested considerable emotion; but not, as I thought, in excess of what was natural under the circumstances. Considered in relation to the theory of general paralysis what was most striking was the exact apprehension manifested of the bearing of all these medical details, and the evidently complete self-mastery which enabled him to look facts in the face without disguise, and without flinching.]

"No pain throughout, unless on one occasion in the evening (pro-

bably accidental); pain referred to occiput. He also speaks of a feeling of anxiety or uneasiness about the diaphragm after much conversation."

It only remains to be stated at this stage of the case that my friend assured me positively that there never had been any syphilitic infection. He had tried arsenic, iodide of potassium, and other remedies, and at one period appeared to derive a certain amount of relief from the use of port wine as regards the noise in his head. He used this, however, as a medical prescription, and was never addicted to excess. In his Swiss journey he employed various narcotics, viz., hydrate of chloral, opium, and bromide of potassium to procure sleep; but he afterwards abandoned all of these, and did not complain of sleeplessness at the time of my visit. He said he always felt better after a meal, but could not take wine without a certain sense of increased giddiness and instability.

Such was the state of X. in the autumn of 1872. In November he was seen by Dr. Warburton Begbie, who wrote to me as follows:—"I have seen poor X. He has been rather improving since your visit—speaking and walking better. His case is, however, a very anxious one. General paralysis is the disease which is threatened; the defective articulation is distinctly of the kind met with in that disease. I do not think his memory is materially affected; he is, however, emotional, and much depressed. I agree with you in the recommendation of a trial being given to electricity. Further—and I agree to order cod liver oil, with dilute phosphoric acid." [The gentleman referred to here was the one of all X.'s professional friends who had been most intimately associated with him in business; and who, with many others, took exactly the same view of the case that we did. Indeed, I do not know any one who saw him, being accustomed to observe cases of general paralysis, who was not similarly struck by the resemblance of the motor lesion to what is observed in asylums; but it was necessary, of course, for obvious reasons, to be very guarded in the expression of this view.]

Although X. was at this time living many miles away from his practice, and professedly in seclusion; although, I believe, he was deeply depressed about himself, and, from the medical point of view, clearly foresaw his end, he was by no means unable for, or finally severed from, medical work. He saw many patients after this at various times, and prescribed for them intelligently; he co-operated with others, and gave every indication of sound medical judgment and good diagnostic discrimination, but he could not do the smallest surgical operation, even the attempt to do one causing intense prostration. This fact will explain the following letter, describing in some measure the first of a series of cerebral attacks of a dangerous kind, well known in connection with general paralysis of the insane. It was written by the professional friend and associate above referred to, and bears date 6th December, 1872.

"I am truly sorry to have to send you a very much worse account of poor X. T (another attached medical friend, in practice where X. was staying at the time) wrote to me last night asking me to go over to-day to see him, and I have just returned. On Wednesday he visited some patients with T., and entered into their cases with his usual acuteness; afterwards dined with T, then went to ——, and there to bed. Yesterday morning his brother took him his letters, and found him asleep. His sister went in two hours afterwards, and could not awake him, although he had evidently read his letters. T was sent for. Throughout the day he remained in a stupid state, and could scarcely be got to speak a word. When I went into the room he looked hard at me, then put out his hand, took mine affectionately, and his eyes filled with tears. I asked him a few simple questions, but failed to get a reply. I then said, 'You cannot,' 'your head?'—he nodded. 'Have you pain?'—a shake of the head. 'Perhaps you can write better than speak?' He said, 'Yes.' I then gave him a pencil, and in answer to questions he wrote most distinctly 'No'—'singing in my head.' 'How do you feel?' I asked. 'Well.' I asked him to examine his brother's hand, which has boils upon it; he did so, skilfully. Then I asked whether he thought they should be opened, and he said distinctly, 'No.' I replied, 'I know you would not if they were yours,' and he smiled. All the functions were right—pulse over 100, head rather hot, looks much changed—possibly a little drooping of one lid. The end is evidently nearer than we anticipated." After this he was even worse—"so ill," as his friend T. wrote on the 9th December, "that —— scarcely expected to see him again alive when he left him last night. The bad symptoms were stupor, gradually increasing (not coma, however), difficulty of swallowing, and very shallow respiration. He did not speak a word for twenty-four hours, although he seemed conscious of what was passing around him. There has been no approach to delusion."

From this state he gradually emerged, but there was an intervening period of "delirium, very much like that of typhoid fever, or acute tuberculosis." He was closely watched by many attached medical friends, and on the 23rd December it was reported to me that "X. continues well. *His mind is perfectly clear*, except that he remembers nothing that occurred during his severe illness. But he remembers things that happened on the day preceding it—even small things that any one might have forgotten. His speech seems considerably better than before, and he hears more distinctly. He is very thin, and has little muscular power, but is improving in both these respects. He seems much more hopeful about himself."

During 1874 X. failed gradually both in body and mind. He had an extreme disinclination to exert himself, and any unusual exercise was followed by an altogether disproportionate weariness and sense of exhaustion. In this, his case was very like a certain stage of general paralysis, when the motor energy is very small, and soon ex-

hausted. The only thing in which it differed from those typical cases of the disease was his consciousness of the exhaustion. He had several "congestive attacks," like the one described, and in 1875 became so weak and helpless that he was entirely confined to bed, and had to use a water mattress to avoid bed sores, thus showing that the trophic system was deeply involved in the advancing nervous degeneration. During the last months of his life all his mental power was quite gone, and there was almost complete paralysis of the limbs, as well as of the pharynx. He died in the end of 1875.

Notes of a Case of Sporadic Cretinism, with an Account of the Autopsy. By Fletcher Beach, M.B. Lond., Medical Superintendent of the Clapton Idiot Asylum.

(Read before the Medico-Psychological Association, at Bethlem Hospital, May, 1876.)

The notes of the following case of "Sporadic Cretinism"—the name given to this class by Dr. Hilton Fagge, in contradistinction to endemic cretinism—will, I hope, from the comparative rarity of the disease, be interesting to members of this Association. My experience in connection with this disease has been exceptionally fortunate, for it has fallen to my lot not only to see, I think, altogether eight cases, but to make four post-mortem examinations. Autopsies on cases of sporadic cretinism are apparently very rare—only five are on record. Of these two have been made by Mr. Curling, one by Dr. Hilton Fagge, and two by myself. Accounts of them will be found in the "Pathological Transactions of London." The fatty tumours—the special characteristic of the disease—are, in this case, larger than I have before seen. The photographs exhibited were taken shortly before death.

The following is an account of the case:—

M. H., a girl, aged 15 years, was transferred to the Clapton Idiot Asylum from Hampstead Asylum on the 8th of May, 1875, and died March 26th, 1876, of bronchitis.

The history of the case is unfortunately very meagre. On the form which accompanied her admission into the Clapton Asylum the only fact of importance was that she had been "idiotic from childhood." As her address was unknown, it has been impossible to gain any other particulars. This is unfortunate, as information as to the causation of the disease is much wanted, especially with respect to the part which in-

temperance may play in producing it. Of the eight cases which I have had the opportunity of seeing, six were born of temperate parents, while the remaining two not only had intemperate fathers, but these had been intoxicated at the time of coition. At present my experience, as far as it goes, does not point to intemperance as the sole cause of the disease. Of seven cases related by Dr. Hilton Fagge, in four the parents are stated to have been temperate, while in the remaining three no statement is made on the point. Dr. Langdon Down, however, holds that the disease is due to intoxication of one or both parents at the time of the procreative act. Further information must be obtained to settle the question.

The following was the child's condition :—

"She was 38 inches in height and weighed 3 stone 3lbs. (without clothes). She was exceedingly well nourished, having a considerable amount of fat in the abdominal walls. During the time she was resident in the asylum she got much fatter, and there was marked obesity at the time of her death, the abdomen measuring 26½ inches in circumference at the umbilicus. The head was large, flattened at the top, and spreading out at the sides, measuring 11 inches longitudinally, 10 inches transversely, and 19 inches in circumference. The anterior fontanelle was not yet closed, there being a small depression evident in that position. The sutures, however, were well united. The hair was black and coarse, and fairly abundant. The face was broad. The forehead was 2 inches in height and 4 inches in breadth. The distance between the forehead and the chin was 6 inches, and between the chin and auditory meatus 5 inches. The child was a brunette, and her countenance, which was not at all vacant, was often lighted up by a bright smile. Eyes hazel, with long black eyelashes. Nose pug-shaped. Lips exceedingly thick and generally slightly apart. Gums healthy, and the teeth regular and in good condition. Arch of palate not flattened. Ears and tongue of normal size. Cheeks full and flabby, at times flushed. No goitre, and apparently no thyroid gland, but well developed swellings on either side of the neck above the clavicles. The arms and legs were short and curved; the former measuring 10 inches from the tips of the shoulders to the wrists, the latter 16½ inches from the anterior inferior spinous processes of the ileum to the external malleoli. The hands and feet

were short and broad—the former measuring 4 inches, the latter 5½ inches. The skin of the body was thick, and over the arms and legs easily separable from the subjacent muscles. The labia were well developed."

She was of a very cheerful disposition, and though she did not say much, she would shew by her manner her appreciation of any amusement that was going on. She went to school in the asylum, and could say her alphabet, spell a few words of three letters, and write from dictation two letters. She could add to 5, count to 50, multiply 2 to 12, and could distinguish three colours. She could hem a little. From this it will be seen that she had a certain amount of intelligence. She was cleanly in her habits; her appetite was good, and she slept well. She had menstruated two or three times.

At the autopsy the scalp was found to be thicker than normal, and easily separable from the cranium, to which it was attached by loose connective tissue. On inspecting the cranium, the anterior fontanelle was found to be not yet closed, there being a piece of membrane of the accompanying size and shape in that position. The sutures were well united, their lines of union, however, being evident by congestion. The calvaria was removed with some difficulty, in consequence of the firm adhesion of the dura mater to the anterior fontanelle and sagittal suture, as well as a little to each side of it. On examining the bone, there was seen to be slight bulging inwards of the frontal, and bulging outwards of the parietal bones. It was symmetrical. It was thicker anteriorly and posteriorly than laterally, being ¼ inch in width in the former positions. On removing the brain and looking at the base of the cranium, the foramen magnum was found to be smaller than normal, and on each side near its margin was an elevated rim, the space inclosed being triangular in shape. The cerebellar fossæ were flattened and the middle fossæ deep. The anterior fossæ were normal. The sella turcica was narrowed from before backwards, and the clivus, or inclined plane formed by the union of the basilar process of the occipital with the sphenoid, was very steep. The suture between the sphenoid and occipital bone was soft and cut with the knife. The anterior and posterior clinoid processes were on the same

level. The base of the skull measured internally $6\frac{3}{8}$ inches antero-posteriorly, and $4\frac{1}{2}$ inches transversely.

The brain weighed 34oz. The convolutions were exceedingly coarse, measuring half an inch in width. They, as well as the sulci, were well marked. The posterior lobes of the brain entirely overlapped the cerebellum. There was no congestion of vessels, and little fluid in the ventricles. The pons and medulla were small, the latter corresponding with the small size of the foramen magnum.

A portion of the brain was submitted to my friend, Dr. Savage, for microscopical examination, and the following is his report:—

Cerebral Convolution of Cretin.

Pia mater thickened and adherent.

Vessels tortuous.

Cortical layer thicker than usual.

Pyramidal cortical corpuscles normal, with rather large nuclei.

The corpuscles in the more superficial layers are surrounded by larger spaces than usual.

No general wasting and no signs of inflammatory change.

GEO. H. SAVAGE.

The trachea showed no sign of a thyroid gland, but in each posterior triangle of the neck was a large fatty tumour (exhibited). The tumours were not encapsuled, so that there was some difficulty in defining their limits. They sent processes beneath the sterno-mastoids and downwards beneath the clavicles. In colour they were slightly pinker than the surrounding fat.

The heart, liver, spleen, and kidneys were normal. The lungs showed the usual signs due to bronchitis. The omentum contained a quantity of fat. The ovaries were larger than normal.

The specimen shows the trachea and attached muscles, and the fatty tumours.

The appearances found in the base of the skull in this case correspond in great measure with those found in a case of endemic cretinism, in which the inspection was made by Professor Virchow, especially in the fact that the clivus was steep; but differ from those present in two cases brought before the Pathological Society by Dr. Hilton Fagge and myself, in which the clivus was nearly horizontal,—this condition also being present in autopsies made by Nièpce,

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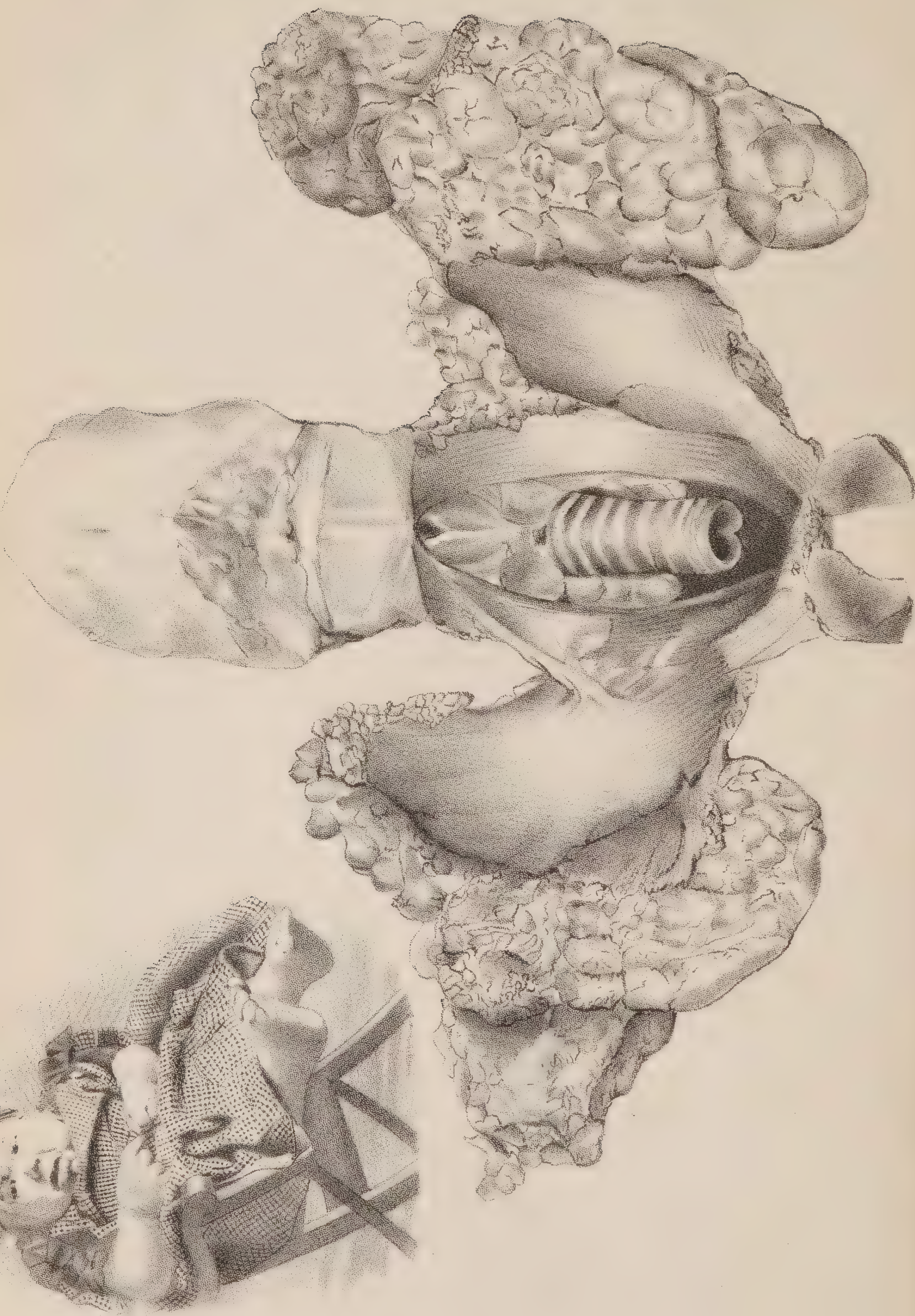

Iphofen, and other continental observers. The elevated rim round the foramen magnum noticed in this case, and in the two cases just alluded to, and which at the time of bringing my case before the above Society I considered unusual, I have since found to be not at all uncommon in the skulls of idiots.

Though atrophy of the thyroid body usually takes place in sporadic cretinism, yet there are exceptions to this rule. Two cases are on record in which bronchocele was present—one mentioned in the third edition of "The Manual of Psychological Medicine," by Drs. Bucknill and Tuke; the other, in "The Pathological Transactions for 1874," by Dr. Hilton Fagge. The fatty tumours, however, are always present, and they may therefore be considered the special characteristic of sporadic cretinism. So far as I know, they do not occur in endemic cretinism.

The accompanying Plate exhibits a photograph of M. H., and a drawing of the trachea, showing the absence of the thyroid gland, and the fatty tumour on each side.

OCCASIONAL NOTES OF THE QUARTER.

The Relations of Drink and Insanity.

At a recent meeting of the Rugby Temperance Association, the following speech was made by Dr. Bucknill; in reference to which the succeeding correspondence took place between Dr. Bucknill and Dr. Clouston :—

"Dr. Bucknill, in seconding the resolution, said the question of temperance was one in which he took great interest; in fact, no one could fail to do so who had any regard for the welfare of his race or the progress of his country. He had something specially to say upon one point of the resolution, and should therefore pass over the results of drink in brutality, female degradation, and reckless prodigality, and apply himself to it as a cause of disease both in body and mind. It would be difficult, within any reasonable time, for him to give an outline even of his experience as a physician of the insane, with regard to the production of insanity by intoxicating liquors. It not only produced insanity directly, but by its effects upon other organs which react upon the brain, and by

a variety of causes—by domestic brawls and discomfort to which it gave rise—and it also produced insanity to a frightful extent by leaving it as a fearful inheritance to the children of drunkards. In the production of diseases of the body, he feared the common notions of the disease-producing powers of alcohol were too much confined to what was seen in thorough drunkards, in people who abuse drink to such an extent that they frequently became drunk. But physicians know that that was scarcely the greatest evil. A man who never got drunk, who was never perhaps drunk in his life, might yet drink too much every day, and so shorten his life and weaken his health, thereby stealing away that which was the labouring man's best possession, and which too often the wealthy man could not enjoy—the blessing of healthy existence. He had heard the Revd. Mr. Venables speak with emphasis and enthusiasm of the part which members of his profession were taking in the crusade against intemperance, and he wished he could supplement it by saying that the members of his (Dr. Bucknill's) profession were taking a wise, patriotic, and useful part in the attack upon the great vice of our age and country. But he was afraid that just now members of his profession were taking hold of the stick by the wrong end, and were considering drunkenness not as a cause of disease, but as a disease in itself, which to his mind was a very great mistake. If drunkenness was a disease, it was not a vice, and could not be dealt with by education, and repression, and attempts to reform, but must be dealt with—as indeed many of his profession proposed to deal with it—by establishing hospitals for what they called the unfortunate drunkard. They said, "Poor fellow, he can't help it; he must be placed under medical treatment, and have all the comforts and luxuries he wants, until he is cured." That was not his view of the case. He believed drunkenness to be a fruitful cause of disease, but not in itself a disease; and he looked upon inebriate asylums as an unfortunate attempt to coddle drunkenness, and patch up a wide and fruitful social mischief. Last year he was in America, and took a great interest in visiting the institutions for the promotion of sobriety. He might mention that at the great Centennary he was in Boston, when a crowd of perhaps 150,000 persons went to Concord and Lexington, very fairly to congratulate themselves on the victories their grandfathers won over ours. He mixed with the crowd, and must say they were very disorderly—the police

had to make themselves scarce—but he did not see, the whole of the day, in that vast crowd, one man the worse for liquor. He visited many of the American inebriate asylums, and he came to the conclusion that the gentlemen confined in them were generally rather proud of their position, and felt themselves interesting subjects of enquiry. As far as he could observe, they were there under a very lazy and shameful pretence of curing a disease which did not exist, by remedies which were not applied. They had only to walk outside the walls of the institution to the nearest liquor-shop, and get as much liquor as they chose to buy, and they could take liquor into the asylum with them. A friend told him that he went into the inebriate asylum on Ward Island, for New York, and visited the rooms of four of these unfortunate inebriates, every one of whom was enabled to offer him a choice of spirits. He was not surprised to hear that there was not a very friendly feeling in America between the teetotallers and the supporters of these inebriate asylums. On the previous day he received a report of the American Association for the Cure of Inebriates, and in that he found a letter from Mr. Carsten Holthouse, a physician to a private institution for inebriates in London, who said with reference to the relations which exist in this country between teetotallers and the promoters of these asylums :—

"As regards the bearing of the temperance world generally towards the undertaking—it is not unfriendly; the more moderate abstainers are decidedly favourable; while the prohibitionists only say, 'You are beginning at the wrong end—providing for the manufactured article, instead of putting a stop to the manufacture.' This section of the temperance people forms, however, but a small portion of the community in this country, and I feel confident that Sir Wilfrid Lawson will never get his Permissive Bill carried in the present generation, and I am still more sure that if he succeeded, it would fail in its object and be evaded in every possible way."

Dr. Bucknill continued, that if the teetotallers were friendly towards Mr. Holthouse, their friendship did not seem to be warmly reciprocated. These gentlemen were urging very constantly and persistently on the Legislature a change in the law which would enable doctors to treat drunkards as poor diseased people—not as he would deal with them, as vicious people, to be repressed and reformed; or to deal with the question as a great social one, upon which the lines of their educational system should be very much directed. He very

earnestly hoped that the Rugby association, and the great one to which it was allied, would set their faces against the view of drunkenness as a disease. Habitual drunkenness is not a disease, though it causes all manner of diseases; but in itself it is a vice, and ought to be treated as a vice. The habitual drunkard is a man who likes to drink whenever he can, and who can drink whenever he likes."

Royal Asylum, Morningside, Edinburgh,
20th April, 1876.

My Dear Dr. Bucknill,—Many thanks for your kindness in sending me the newspaper containing your speech on Intemperance. I confess I was startled at the heresies you express on the question. It seemed as if you were pulling down one of the pillars of our temple.

So far as our case-books here reveal the facts, the following are the answers to the enquiries contained in your note:—

1. Intemperance is the "assigned cause" in 13 per cent. of our admissions here. (112 in 878 of all classes during 1873, 1874, and 1875.) But of these 878 cases, 310 were put down "unknown," under the head of "causation." If that number is taken off, it leaves 568 with assigned causes for their malady, 112, or 20 per cent. of whom were caused by intemperate habits. But these "unknown" may mean, either that nothing was known of the history of the case, or that his history being known, the cause of the insanity was unknown, in fact, there was no cause to be assigned. In the latter class of cases it was known that intemperance was not the cause, and therefore they ought not to be taken off the whole number, and the percentage of cases caused by intemperance would not be as great as 20 per cent.

We are as careful as possible about getting the histories of our cases here, but as you well know there are, from various reasons, among such a crowd of admissions as we have here (over 300 a-year) many cases where our information is false, or imperfect, or wanting altogether.

2. I have gone over the last cases admitted here, until I got 100 said to be caused by intemperance. The following are the heads I put them under, and the numbers under each head:—

a.	Heredity to insanity	21
b.	Heredity to intemperance	6
c.	Previous attacks of insanity . . .	23
d.	Other bodily causes also present . .	19
e.	Mental ditto ditto . .	5
f.	Cases purely alcoholic	40*

* The total of 114 results from the fact that in some of the cases more than one "cause" was assigned, *e.g.*, previous attacks and heredity.

The numbers under *b* are not reliable, questions not having been put on this point in regard to many of the cases. I may say that I knew all these cases myself, so that there is otherwise a fair approach to accuracy in the numbers.

It seems to me, however, that the existence of heredity, or previous attacks, &c., does not much affect the question of intemperance causing mental disease. But for an original instability of brain function of some sort, it would take powerful causes of any kind to produce insanity, and I fancy few asylums would be needed—or few prisons either, for that matter.

If I might be pardoned for presuming to criticise your views, I would say that in the first place you did not fairly represent the opinions of the medical profession when you told your Rugby audience that we all were considering drunkenness not as a cause of disease, but as a disease itself. I don't know any medical man who considers all drunkenness to be a disease, or the result of disease. Most of us do consider that there is a certain kind of drunkenness which is a disease, and not merely a vice. I think you imply that this vice is hereditary, and that it is disease-producing. I confess I cannot myself in all cases distinguish what is vice and what is disease in my drunkard patients, any more than in many of my other insane patients. There seems to be much truth in the idea that disease, its seeds and potentiality, is the vice and sin of the body in many cases, and that the real moral vice and sin are, in those cases, its result and expression. I cannot see that our considering drunkenness as a disease in certain cases, should in any way tend to the disuse of attempts to stop and cure it by "education, repression, and attempts to reform." No one says that it is a disease which was always an actuality. It was in all cases at one time of life a mere potentiality, requiring many circumstances to bring it into being. Your measures tend to prevent this, and no sensible man would say that they are the least important. But when the evil germs have grown, is there not room, is there not necessity then, for the disease-theory and the disease-treatment? Can any one deny that all the "repression and attempts to reform" in the world will fail to prevent the neurotic drunkard, whose drunken father was insane, from drinking himself to death, so long as he passes gin-shops every day with money in his pocket? Can any medico-psychologist say that the inhibitory power of such a man over his desires and cravings is as great as that of the average sane man? or that these desires and cravings are not morbid and abnormal both in their strength and direction? Is not the utter and blind disregard of consequences itself a sign of disease, and strictly analogous to the madman's conduct? Is not the loss of inhibitory power over the appetites as great in those cases as over the muscles in chronic alcoholism, and from the same cause, viz., weakening of the controlling powers of the higher brain centres by alcoholic poisoning?

I so far agree with your views in the practical treatment of all such

cases, that along with removing temptations to drinking, I always tell the patient (the sinner—I beg your pardon), that except he wishes to be cured, and tries his best to be cured, no power on earth will cure him. The fact is your "vice" is always present along with my "disease." I yield that point; but I object to your ousting my disease-theory from the case altogether! I don't see that the practice of American inebriate institutions should make us ignore the facts of nature. It is but natural that the first attempt to deal with this most intractable vice-disease should be uncertain in its result. My notion is much more in the direction of setting up Botany Bays for them, where a change of climate and life would combine with the absence of temptation and with hard work in the open air to alter their morbid constitutions. Then you can't deny that half of them are fools from the beginning, and the other half become fools by their indulgences. They are usually (I mean my diseased drunkards) facile, sensual, irresolute liars, devoid of the rudiments of conscience, self-control, or true affection.

I am, my dear Dr. Bucknill,

Yours very faithfully,

T. S. Clouston.

Dr. Bucknill, F.R.S.

Hillmorton Hall, Rugby,

April 27th, 1876.

My dear Dr. Clouston,—Your welcome letter has been food for much thought, but if I do not sit down to answer it until I have found definite answers to some of the questions in it, it will be a long time before you get an answer.

First let me thank you for so kindly taking so much trouble to answer my questions about the Statistics of Insanity. I think I will save all I have to say on that subject for the present, and begin with answering, as well as I may, your very fair and weighty criticism on the opinions I expressed at Rugby about habitual drunkenness.

And, first, let me say that those opinions were expressed in an unprepared speech made to a popular audience, upon which I desired to impress a broad conviction. On a different occasion I might have taken greater care to define my position. I do not wish to excuse myself for anything that I did say, but to give a reason why I did not enter into nice distinctions.

Really I think our opinions differ very little, as we might expect, looking, as we do, at the same class of phenomena from the same physiological point of view. I use the word physiological in preference to the word materialistic, which conveys a false impression, if not an imputation.

There is one, and only one, point of fact upon which perhaps we differ—namely, the opinions which have been put forward by medical men on the nature of drunkenness. If you will read Peddies and Bodington's papers on the subject (read last August, before the British

Medical Association, at Edinburgh), you will, I think, see that I was justified in my statement. Dr. Bodington especially is very precise in his declaration that all habitual drunkenness is a disease, and that there are not two kinds of habitual drunkenness, but that "the cases are, one and all, cases of dipsomania, of irresistible, uncontrollable, morbid impulse to drink stimulants." The American Association for the Cure of Inebriates, composed of the Superintendents of Inebriate Asylums, at their first meeting issued a *Declaration* of principle, in which the prime article of faith announced was that "Intemperance is a Disease;" and at all their subsequent meetings, the papers read appear to have been mainly directed to the support of this dogma. And all I have said and written on the subject has been aimed at the mischief which I thought likely to arise from this unqualified opinion. I never supposed that you, or indeed any man able to bring a practised habit of thoughtful consideration upon a large observation of vice and mental disease, could adopt such an opinion without wide reserves and exceptions; but such a man with his appreciation of quantitative and qualitative truth is not likely to appear as an agitator for a great change of law of doubtful wisdom upon a platform of disputed fact.

I think there is very little difference of opinion between us, if any. I fully recognize the cases you mention—the men who are "facile, sensual, irresolute liars, devoid of the rudiments of conscience, self-control, or true affection," and habitual drunkards withal, as "diseased drunkards." I see that our dear old friend Skae, in the short, but pregnant evidence which he gave before Dalrymple's Committee, maintained the same view [Question 610]. He said, "In speaking of dipsomaniacs there are other symptoms of insanity besides the mere drinking. They are entirely given to lying; you cannot believe a word they say when under the influence of drink, and they will very often entertain a dislike to their friends, which makes them dangerous." I should like to add to this, that, according to my experience, if you are able to watch these cases for some time, you will see short outbreaks of mania not due to drink; and I regard them as a true class of lunatics whose cure is extremely difficult. Perhaps, if there are a sufficient number of them in the country, it would be well that they should be placed under care and treatment in a separate asylum, the management of which might be especially adapted to their peculiarities, and in which they might be detained during a longer period of convalescence than other lunatics, in accordance with a recommendation which I think has been made by the Scotch Commissioners.

But these are not by any means the kind of men I have met with in Inebriate Asylums, nor the kind of men on behalf of whom Dr. Peddie and Dr. Bodington advocate an important change in the law of the land. The Inebriates [what an abominable euphemism this is!] whom I have seen in these asylums have been as devoid of

any real signs of mental infirmity as any set of men I ever saw living together in common. And when Dr. Mitchell visited Queensberry Lodge to ascertain whether "any lunatics in the ordinary sense of the word, were there," persons of such a description were not found.

But still more convincing evidence that Inebriates do not correspond with our "diseased drunkards," is to be found in the vaunted results of treatment. Dr. Willard Parker, at the last meeting of the Association for the Cure of Inebriates in the United States, read a paper, the title of which was "Why Inebriate Asylums should be Sustained;" in which he compared the results of treatment in the Binghampton Inebriate Asylum with those obtained in some of the best lunatic asylums in the United States. At Binghampton there are one hundred beds, with an average number of patients of about eighty, and during the year one hundred and thirty-seven patients were discharged *cured;* while at the New York State Lunatic Asylum there were five hundred and eighty beds, and only one hundred and eighty-two recoveries. You would not expect to obtain such results as the above among diseased drunkards, whatever might be the mode of treatment; and to expect it from the system in vogue in Inebriate Asylums of indolent luxury and *laisser faire* would be in itself almost a sign of imbecility. Either the common run of Inebriates you find in these special asylums are not diseased, or their cure is a philanthrophic perversion of fact, or both. Probably both, and when philanthrophy sows falsehood broadcast, the furrow produces no crop of annual weeds, but deep rhizomes of untruth, which must be grubbed up with infinite pains and labour.

I think I am perfectly justified in arguing the Inebriate Asylum question mainly upon the practice of the United States. "The Lancet" has said of one of my statements, "It is absurd to draw from such facts any inference, except of the worthlessness of the statistics of failure which come to us from the other side of the Atlantic." But is it not fair to draw from such facts, also, some inference regarding the statistics of success? The evidence of the success obtained by the Americans in the cure of drunkenness was the main influence which decided the character of the Report of Mr. Dalrymple's Committee, and the lines of his Bill were laid upon their precedent; and that very Inebriate Asylum for the City of New York, from which I drew the absurd inference, was one of the institutions cited as a model for our imitation. Up to this very moment the men who most loudly demand a change in our law largely affecting the liberty of the subject point to the statistics of success of the American Inebriate Asylums for the cure of drunkenness as their most weighty argument. Moreover, the Superintendents of the American Inebriate Asylums have taken upon themselves a peculiar position as our instructors. They have banded themselves into an association for the propagandism of their dogma that "Intemperance is a Disease;" and this Association sent a deputation of two of its most prominent mem-

bers to inform and instruct our legislators respecting the great advantages which we might derive from imitating their proceedings. I think, therefore, that I am perfectly justified in making their practice and their public statements the butt of my criticism.

I feel differently towards the medical men and others who have established Inebriate Asylums in this country. They have had the wisdom or the modesty to refrain from any public demonstration. They have pursued their difficult and unsatisfactory path in comparative silence, and they have received no subsidies from the public purse. They have, without much parade, established private boarding-houses upon temperance principles, in which, no doubt, some benefit is obtained by individuals, and through them by the public.

I feel, therefore, very little disposed to subject them to critical enquiry. When they step forward publicly to teach us the right way to cure the disease of drunkenness, and challenge comparison with the results of treatment in lunatic asylums, perhaps I may have something to say. At present I have only to wish them better success than I fear they have obtained, and to acknowledge the general modesty and credibility of their statements. For instance, in the debate upon Dr. Alfred Carpenter's paper on Dipsomaniacs, read before the Social Science Association, in March last, Dr. Ellis is reported to have said that "he had for the last fifteen years kept a private establishment for the reception of persons so diseased, and had had under his charge persons of the highest position—ladies and gentlemen of title; but his experience was that having passed a certain line, they were incurable." But when I see the American inebriate doctors deputed to teach us how to change our laws, vaunting the absolute cure of 34 per cent. of their diseased drunkards, and pushing their creed and their system with an unblushing propagandism, and even challenging our real psychiatry with damaging comparisons; when some of these institutions, moreover, are supported by public funds, and the gentlemen making these statements are public functionaries, then the position seems to be entirely changed, and anyone and everyone seems to have the right to enquire into the credibility of such statements.

It does not, therefore, seem absurd for me to mention, on the authority of Dr. Macdonald, of the New York City Lunatic Asylum, situated in Ward's Island, that on the occasion of a visit to the City Inebriate Asylum, situate in the same island, he went into the rooms of four of the inmates, and was by each of them offered the choice of spirits.

Nor does it seem absurd for me to state that when I visited the Washington Union for Inebriates at Boston, I was told by Mr. Lawrence, the resident superintendent, that his chief reliance, as a curative measure, was placed in earnest religious exercises, accompanied by temperance songs, supplemented occasionally with pills of cayenne pepper; that his patients had the run of the city, and that he had no means of preventing them from getting drunk out of doors beyond

their faithfulness to their word of honour. Nor was I surprised when I met with a man at Binghampton who told me that he had been under treatment at this Washingtonian Home, and that, notwithstanding the religious exercises and the word of honour, he and most of the other patients were in the constant habit of getting whisky at a snug spirit store close to the asylum.

Nor does it seem absurd to me to declare that at the great model Inebriate Asylum at Binghampton belonging to the State of New York, I was assured, not by one patient but by many, that they habitually got as much whisky as they liked by simply walking down to the outskirts of the town, just beyond their own grounds; and that the institution was good for nothing, except as "a place to pick up in"—that is, to recover after a debauch. Nor was I surprised to hear from Dr. Congdon, who has replaced Dr. Dodge as the superintendent of this institution, that he used no medical nor moral treatment. Dr. Gray, of Utica; Dr. Burr, of Binghampton, and another governor of the institution, whose name I forget, heard Dr. Congdon make these admissions to me, and I was told at the time that the impression made upon them was so strong that Dr. Congdon's reign would probably be a short one; which has proved to be the case.

Is it, therefore, absurd to draw the inference that if 34 per cent. of the inmates of such institutions are cured by a residence of a few months, without any real treatment, medical or moral, they have not been the subjects of disease of the brain, nor such patients as we mean when we speak of diseased or insane drunkards? That they may have been drunkards, and that they may have "picked up" and left the institution sober, may perhaps be conceded; but that they have been admitted with one of the most intractable and persistent disorders of the nervous system, and have been cured of it without the use of discipline or treatment, by leading for a brief time a life of indolent luxury, under a cloud of constant tobacco smoke, with cards and billiards, and only ostensible abstinence from whisky, this, if true, would be marvellous.

I must make an exception with regard to the Franklin Home for the *Reform* of Inebriates at Philadelphia, under the charge of Dr. Harris. This was the only place I saw in America where honest, earnest work was being done, not for the cure but for the reform of drunkards. Dr. Harris repudiates the idea of curing that which is not a disease, and his system is widely different from the no-system which I remarked elsewhere. I will endeavour to give a brief sketch of his method.

He has a set of three single rooms built apart, and which somehow have got the soubriquet of "the barque." When a drunkard—not a patient, mind, but a drunkard—is admitted, generally very drunk, often, indeed, very ill from the effects of a long debauch, Dr. Harris places him in the barque, and keeps him there in bed and in strict seclusion for three days—more, if need be, but three days are usually

found to be enough. While there he is at once cut off absolutely from strong drink, not "tapered off," but cut off short. He is also placed upon a limited allowance of water, namely, a pint a day. This is done to prevent vomiting—a frequent ailment with American whisky drinkers—and his strength is carefully built up with strong soups and other nutritious diet. At the end of the three days of solitary confinement in bed he is admitted into the residential part of the institution, to the influences of association with the other inmates, and to earnest exhortations to reform given him by the lay superintendent, and by members of the two committees—one of good men, the other of good women. At the end of a week, if he has picked up pretty well, he is urged to go to work again—not in the institution, but in the City—to face his enemy again, in fact, returning to the institution to sleep. If, as is very often the case, he has drunk himself into poverty and his family into distress, the members of the committees—whom I will not call ladies and gentlemen, for their work is above such terms—help him and his family with money and support, with strenuous help and comfort: and the man must, indeed, be a brute who is callous to such influences.

I will not say that the American is the most reasonable of men, but he is certainly one of the most reasoning, and, therefore, it will appear in no way strange that the inmates of the Franklin Home with whom I conversed manifested a very different tone of feeling to those whom I came across at other institutions. They were penitent and grateful. They leave the institution after a very short probation, and I have no doubt that a very considerable amount of permanent good is effected. Of course there are many relapses, but Dr. Harris discourages repeated re-admissions.

I should like to see institutions on Dr. Harris's principles established at Glasgow, Liverpool, or some other *foci* of spirit drunkenness in our country. They would need no change in the law, for Dr. Harris takes a written consent and indemnity from his drunkards on admission; and if so utterly drunk that they cannot give it, an action for false imprisonment would scarcely lie for their three days' voyage in the barque. It is a reasonable and earnest effort at reformation made without any false pretences, and when it does little good can scarcely do any harm. The drunkards are not coddled in luxurious indolence, nor impressed with the pernicious idea that they are interesting but helpless objects of social and psychological science. They are told the bare truth, and treated, indeed, with the pity due to sinful men by men whom circumstance has only made less sinful; but they are not pampered with false sentiment.

I mark as an important difficulty, what you say, that "you cannot in all cases distinguish what is vice and what is disease in your drunken patients, any more than in many other of your insane patients." Still I think you must often be called upon practically to make such a distinction. Most men have some vice, and many men have a prominent

vice. When such men, having been insane, have recovered from their insanity, the old vice remains, though the madness has gone, and you have to recognize that which it may perhaps seem rather paradoxical to call a healthy vicious state of mind. But so it is. At least I have found it so, and many a time have had the tough question forced upon me to decide whether pride, or falsehood, or moroseness in convalescence, was a part of the natural character, or the remains of mental disease; and I take it that, even during the disease, it is our difficult but essential duty to distinguish, as far as we can, the two elements of the mixed condition. When a religious and modest woman becomes blasphemous and obscene under child-bearing influences, we do not think her vicious, nor do we attribute all the bad language and misconduct of an insane prostitute to her malady. It is a difficulty which you propound, but it is one with which we are bound to grapple, and does not appear to invalidate the necessity of drawing a broad distinction between vice and disease.

What is that distinction? Where is the *crux?* The *dignus vindice nodus?* From the spiritualistic point of view the answer is easy; but what is the answer from our point of view—the physiological? As a guess at the truth, I would say that vice is a habit of the nervous centres of energizing in an emotional direction, mischievous to the well-being of the individual and of the community, but consistent with healthy nutrition, and not necessarily tending to diminish or destroy the vital activities of the individual. Disease I would define as a condition of some one or more parts of the organism, inherited or acquired, which always involves and implies an abnormal state of the nutrition of those parts, and does necessarily tend, if prolonged and increased, to diminish or destroy the vital activities of the organism. It will be no just objection to this distinction that passion may cause heart disease, and so death; or that a man may carry many local diseases to the end of a long life, terminated by the euthanasia of gradual decay. I think it gives us a fairly just idea of the brain condition in the two states of vice and madness, and supports my view of the way in which we may best prevent or oppose these two different conditions. In the one case by preventing the formation of the habit, or, if it be already formed, by attempting to establish a contrary habit—education and reformation. In the other case, by avoiding the causes of morbid change, or, if the change have already taken place, by endeavouring to re-establish a healthy nutrition—preventive and remedial medicine.

The relation of Drink to Insanity is extremely interesting and important, and so far as I know has never yet been investigated with any degree of thoroughness. In the following remarks, I am far from proposing to enter upon an investigation of this kind, and yet, perhaps, with your help, and that of some other kind friends, one may, without much difficulty, trace the lines of attack.

I use the simple English word Drink, meaning alcoholic drink of every kind; and not that of Drunkenness, because I believe that the

habitual use of more alcohol than is consistent with perfect health, although it may never at one time have been used to such excess as to cause absolute intoxication, is a fruitful source of all kinds of disease, more potent, perhaps, than a complete, but rare and exceptional, debauch.

We have no verbal signs which distinguish the habit of drinking from the state of intoxication, as the French have in *ivrognerie* and *ivresse*, but we may agree to use the word Drink to imply alcoholic excess in all its degrees and forms.

Now, it seems to me that Drink may bear two very distinct relationships to the production of Insanity.

It may be the direct cause of insanity as a toxic agent acting on the brain.

It may be one agent among many in the *evolution of insanity*.

If in the old chemical decomposition which delighted our wondering eyes in boyhood, we produce a zinc tree in a bottle, we get a fairly simple instance of the operation of a direct cause, and we say that the beautiful foliage-like precipitate is the effect of decomposition. But if we compare this simple product of chemical change to a real vegetable growth—to a fern, for instance, which it so much resembles—what a difference is there! The fern is evolved through countless acts of causation which cannot be estimated, and there is no one act of which the most advanced biologist can say—this is its cause.

There are no doubt many cases of insanity caused by alcohol, not quite so simple in their production as the zinc-tree, but still easy enough to understand. The toxic agent, acting on the brain substance, changes its organic composition and deteriorates its function, and we have insanity directly caused by Drink. These cases, I think, are only frequent in populations where heavy spirit-drinking is a common custom; and according to my observations they exhibit the symptoms of dementia rather than those of the more complex forms of aberration.

But what shall we say of those infinitely more difficult cases to understand, one of which is referred to in your able report which I have just received? "When a man with a strong family tendency towards insanity, who has drank hard previously, is thrown out of employment, and has not therefore sufficient food, and then becomes insane, it is very difficult to tabulate the exact cause of his disease." (P. 10, "Morningside Report," 1875.)

The distinction of causes into predisposing and exciting, remote and near, physical and mental, &c., will help us to investigate, but will not lead us finally to understand the curious and complex evolution of such a case. Take the drink element, it is predisposing in the early history of the case, exciting later on, it is remote to the insanity, near in the loss of employment, physical always, and yet a part and parcel of the mental state, and the intricate manner in which this red thread runs through the tissue of the life, can never be wholly unravelled. If the previous drink which did not cause insanity, had also failed to cause

loss of employment, with shame and grief, and semi-starvation, would the mental disease have been evolved?

The drink, as you have stated the case, is the proximate cause of loss of employment, and the remote cause of the insanity; but I think you imply that the drink is continued through all the stages according to the too common history, in which case the estimate of its influence becomes still more embarrassing. The evil begins in the inherited vice of the organism, and as it grows up we get new influences, forming a composition of causes; not applied once for all, but continuing and producing progressive effects, and the history of the evolution comes nearest to that described in the 15th chapter of "Mills' Logic."

"The case therefore comes under the principle of a concurrence of causes producing an effect equal to the sum of their separate effects. But as the causes come into play, not all at once, but successively, and as the effect at each instant is the sum of the effects of those causes only, which have come into action up to that instant, the result assumes the form of an ascending series; a succession of sums, each greater than that which preceded it; and we have thus a progressive effect from the continued action of a cause."

It is on these lines, I think, that we may most reasonably hope to get somewhat nearer to the fortress of truth in the more complex cases of the disease which we study.

With regard to Drink we may, perhaps, more conveniently arrange our notions and enquiries under the three following heads:—

1st. Drink causing madness directly.

2nd. Some other influence [as mental strain] causing drink-craving and madness as concomitant results.

3rd. Drink concurring and continuing with other causes, and producing a progressive effect, the end of which is the *evolution* of madness.

I by no means intend to assert that you can always pigeon-hole a concrete case satisfactorily in one or other of these compartments, for there will needs be some doubtful cases, and some hybrids; but the distinction seems founded in nature, and likely to lead to increase of knowledge.

We have much to learn yet, even about the simple direct cases.

I think we must assume, even in the more simple and direct causation of insanity [except, perhaps, from immediate lesions of brain, as by blows or sunstroke] that there is a certain condition of the organization which renders it possible. I entirely concur with what you say that, "But for an original instability of brain function of some sort, it would take powerful causes of any kind to produce insanity," &c. However powerful the causes, many people seem incapable of going mad in the first generation to which such causes are applied, just as I have known three-bottle port bibbers who have never felt a twinge of gout. Without assuming the existence of so marked a state as that which has been called the insane diathesis, we must, I think, premise a cer-

tain state of the brain which renders it liable, under efficient causes, to incur those changes of function which we call insanity. This ought, I think, to be considered a predisposing condition, not a predisposing cause; since a cause always produces an effect, but this condition is a barren soil, until the seed of mischief falls upon it. From this point of view, I do not consider heredity a cause, unless it be so strong that it would develop the disease under any circumstances; and even what are called predisposing causes from disease or accident, it would seem right to view rather as conditions suitable to the operation of causes. Thus, a man who has suffered from sun-stroke may be quite rational, if he is exposed to no active cerebral excitement; but to the end of his life a very moderate amount of drink will make him maniacal. The sun-stroke cannot be regarded as the cause of the mania. It has merely been the cause of a certain state of brain, compatible with sanity if the food be simple, but not if it be poisoned. I think the cases of mania à potu from small doses of the toxic agents, which are recorded by Dr. Hayes Newington, in the very interesting paper which you have so kindly sent me, are of this kind. I have myself met with many such cases, most of those I have observed having followed wounds in the head or sun-strokes, or, at least, life in hot countries. They are exceedingly interesting as examples of the brain-condition which I am referring to. I should certainly class the insanity in these cases as caused *directly* by alcohol.

I do not think these cases shift the bearings of the ethical question as you suppose. It cannot make any difference in the morality of the act of drinking, whether it takes a quart or a quartern of whisky to make a man drunk, or one bout instead of many to make him mad. If there be any difference, the greater guilt would seem to be incurred by the greater certainty of mischief, and the man who knows that he will be turned into a maniac by one carouse, is more culpable in his indulgence than those upon whom the evil steals with stealthy and uncertain steps.

I do not understand Dr. Newington to assert that these curious cases of mania à potu, from small doses of alcohol, are characterized by what is called drink-craving, irresistible desire, &c. In my own observations it has not been so, and the *upset* has generally come in some accidental manner. I have never doubted that drink can and does produce insanity directly; and that in some cases a much smaller dose of the poison than usual should be efficient does not seem to change the boundary of vice and disease.

It seems to me that my second pigeon-hole, built elastically as it ought to be, will hold a very considerable number of the cases of insanity roughly referred to drink.

The typical cases are such as one recently mentioned in a letter from Dr. Major of Wakefield, as " a pure case of recurrent mania which has been here five times, in whom one of the first symptoms of the onset of an attack has invariably been a craving for drink, which lasted

during the attack, and quite left her when this attack of mania was over."

I take it that most, if not all cases of real oino- or dipso-mania, are of this kind; the symptoms of mental aberration, however, being subject to some variation, being most frequently mild forms of mania, but yet not seldom bearing the mark of emotional depression, but never wholly free from mental disturbance. A sane dipsomaniac is a contradiction in terms.

Here, also, we must have a suitable cerebral condition, not morbid, but *morbific*. A condition compatible with at least temporary health, but susceptible to the influence of exciting causes, which are frequently extremely difficult, and, sometimes, in our present state of knowledge, impossible to recognize. There must be an exciting cause always and invariably for every change of function, for no change can take place without a cause. To say that such and such morbid changes are periodic, is only a verbal veil for our ignorance. It may be that in epilepsy there is a progressive alteration in the balance of certain forces, which needs the thunder-storm of a fit to restore the equilibrium; and in the typical forms of recurrent mania, some process of this kind may be going on during the interval of sanity; but even under this supposition, the final upset of the balance is the exciting cause. In many instances, however, of these recurring diseases, the exciting cause I have no doubt is of a more definite character; for, how shall we otherwise explain the fact that, with great care and quiet, the period is often passed. Very frequently it is a vexation or a passion, or an accidental emotional event of some kind or other. Not unfrequently it is some irregularity in the mechanism of organic life. How little do we know of the small events which may determine such changes? A fatigue, an indigestion, a sexual excess. Anyhow, a positive cause of some kind must operate, or the brain could never pass from a state of healthy into a state of diseased activity, however susceptible it might be, and prone to receive impression. When the exciting cause, whether it be obvious or obscure, has acted, drink and insanity are very frequently the concomitant results. The man drinks because he is insane, and he is the more insane because he drinks. Therefore drink is not a mere symptom of insanity, like incoherence of speech. It is a symptom, but unless interrupted, it reacts as a new cause, and it is not wonderful that undiscerning persons should mistake it for the real and original cause, which has been something quite different.

I am strongly inclined to the opinion that a large proportion of the cases of insanity in our pauper asylums in which the cause of the disease has been returned by the relieving officers as intemperance, are really instances of this kind. Up to the present time the lower class Englishman is pretty sure to resort to drink if he can get it, whenever he acts upon his unrestrained impulses, as when commencing madness blinds him to prudence and propriety. Moreover,

when he does give way to drink, it is not in the privacy of his home, but in the glare of the tavern gas ; and his intemperance becomes a notorious fact, which is very unlikely to escape the knowledge and attention of the poor-law officials through whose instrumentality he must be protected and relieved.

I know not what may be the case in Scotland, but in those counties of England with which I am best acquainted, I am convinced that if a lunatic of the lower classes has been drinking at all heavily, the relieving officer will be sure to know of it, and will be extremely likely to put down intemperance as the cause of insanity, whether it be so or not. It may be that the Scotch Commissioners are right in thinking that the percentage of insanity caused by intemperance should be calculated upon the admissions in which the cause has been ascertained and stated in the admission papers. But in England I think such a method of reckoning would be misleading. With all our etiological knowledge, there are yet many cases of insanity in which we cannot discover the efficient cause of the disease; how many more then in which the imperfectly educated apprehensions of relieving officers would be at fault! Hence this often long list of cases in which no cause has been assigned. But depend upon it, when the pauper lunatic has been drinking heavily, there never is any lack of an assigned cause, whether it be a real cause or only a symptom of his mental state. I do therefore think that the proportion of alcoholic cases admitted into asylums will come nearer to the truth, if compared with the total number of cases admitted, than if calculated upon those only in whom the causes of insanity are supposed to have been ascertained.

A curious and instructive table might be obtained by comparing the percentage of drink cases in the asylums in different parts of the United Kingdom with each other, and with the institutions of foreign countries, wherein reliable statistics can be obtained. I have only at hand at the present time very imperfect materials for such a table, but they seem to be sufficient to indicate the extraordinary amount of difference in the part played by drink in the production of insanity in different populations.

As a standard for comparison, let us take Morningside, in which you have been kind enough to ascertain for me that during the last three years 878 cases have been admitted, of which the causes are assigned in 568 instances. In 112 cases intemperance is the assigned cause, being 13 per cent. of the whole admissions, but 20 per cent. of the known causes.

A very fair comparison with Morningside will be the Richmond Asylum in Dublin, in which 53 cases are attributed to "Intemperance and Irregularity of Life," out of a total of 1039, of which number, however, the cause was "not known" in 687 cases—that is drink was the cause in 5·1 per cent. of all the cases, but in 15 per cent. of the known causes.

In the Friends' Retreat at York, there were 41 admissions and dis-

charges [including deaths], of which 32 had causes assigned; in three instances, the cause was intemperance, being 9·4 per cent. in the cause known cases, and 7·3 per cent. of the whole numbers.

In the Nottingham Hospital for the Insane, 34 cases were admitted, discharged, and died, among whom the probable cause was assigned in 29 instances, of which 7 were attributed to intemperance, being 25 per cent. in the cause-assigned cases, and 20·6 per cent. in the whole number. It does not appear whether the 15 cases of heredity are included in the 34 or have to be added to them.

Of the County Asylums in your own old Asylum for Cumberland, in 142 cases admitted, the causes were unknown in 64, and the cases attributed to intemperance were 6, or 4·2 per cent. on the whole number, and 7·7 per cent. of the known causes.

In the Devon Asylum, of 285 admissions, discharges, and deaths during the year 1875, the cause was ascertained in 238 instances, of which 20 were attributed to "Drink and Dissipation," being 8·9 per cent. of the ascertained causes, and 7 per cent. of the total number.

In the Dorset Asylum, out of 134 cases admitted and discharged, the cause was ascertained in 81 instances, of which 9 were from "Intemperance and Dissipation," being 11·1 per cent. of the ascertained causes, and 6·7 on the whole number.

In the Warwick Asylum, of 249 cases admitted and discharged [by recovery or death], the cause was ascertained in 206 cases, of which 32 were attributed to intemperance, being 15·5 per cent. on the ascertained causes, and 12·8 on the whole number.

In the Hants Asylum, 275 admissions and discharges contained 233 instances of causes assigned, of which 13 were attributed to intemperance, being 5·57 per cent. of the causes assigned, and 4·73 of the whole number. This proportion seems very small in the county which contains Portsmouth and Southampton.

It will be interesting to compare these percentages with those of American Asylums.

Dr. Kirkbride, in his Report just received, publishes the supposed causes of insanity of the 7167 cases admitted into the Pennsylvania Hospital since Jan., 1841; in 4301 instances, the cause was supposed to be ascertained, and in 637 of these cases it was intemperance [excluding opium and tobacco cases], being 14·78 per cent. in the ascertained causes, and 8·88 per cent. on the total number admitted.

In the State Lunatic Asylum for Pennsylvania, at Harrisburgh, 3821 patients had been admitted since the opening of the Asylum, of whose insanity, in 2065 cases, cause was assigned, and in 101 cases this cause was intemperance, being 4·9 per cent. on the cause-known cases, but only 2·64 per cent. on the total of the numbers admitted. A very remarkable difference in the percentage afforded by large numbers in the Pennsylvania Hospital, and in the Asylum for the same State. During the past year 178 patients have been admitted into the Pennsylvania State Asylum, of whom 104 had cause assigned, but in only three instances was that cause intemperance, being 2.88

per cent. of the cause-known cases, and only 1·63 per cent. on the numbers admitted.

At the State Lunatic Hospital, Northampton, Massachusetts, 150 patients have been admitted, in whom cause of insanity was assigned in 89 cases; in 10 instances that cause being intemperance, or 11·23 per cent. of the cause-known cases, and 6·6 per cent. of the total number.

In the Hospital for the Insane, Halifax, New Brunswick, the number admitted and discharged in 1875 was 188, in 78 of whom the cause was unknown; in seven cases the cause assigned was intemperance, being 7 per cent. in the cause-known cases, and 3·2 on the whole number.

In the Minnesota Hospital for the Insane, this year's report states that 1196 patients have been admitted since the opening of the hospital, of whom, in 852 instances, the cause was stated. In 57 cases the cause was intemperance, being 6·7 per cent. on the cause-known cases, and 4·8 per cent. on the total admissions.

I have only one more recent report at hand, which gives a Cause Table. It is that for the Criminal Asylum at Broadmoor, and this report differs from all others which I have seen in differentiating the cases attributed to intemperance : 15 cases are attributed to intemperance simply; 2 to intemperance and blow on head ; 1 to intemperance and hereditary predisposition ; 2 to intemperance and tropical climate ; 1 to intemperance and death of husband ; 1 to intemperance and domestic troubles ; total, 22 drink-caused causes simple or complex out of 70 cases admitted and discharged, of whom 61 were cause-known cases. The percentage of drink-caused cases among criminal lunatics is, as might be expected, very large, namely, 36 per cent. of the cause-known cases, and 31·4 per cent. on the whole number. I have only this day [May 11th] observed the distinction which Dr. Orange has made in his report between the simple and complicated causation of insanity from intemperance, and am much pleased therefore to find that I have the support of his opinions to the need of the troublesome enquiry which I have been asking you and other of my friends who have the means at hand to make into the etiology of insanity from drink. I am sorry that I have not yet received much of this information which has been kindly promised.

Dr. Duckworth Williams gives the last year's experience of Hayward's Heath for 1875, as follows :—

Males.

Drink simply	8
Ditto operating on hereditary tendency .	1
Ditto operating on pressure of business .	1
Ditto operating on family trouble . .	1
Ditto operating on debauchery . . .	1
	12

Female.

Drink [doubtful].	1

Dr. Parsey gives the experience of the Warwick Asylum on admissions only for 1875, as follows:—

	M.	F.	Total.
Admissions	67	87	154
1. Cases directly the result of the toxic influence of drink upon the brain	5	5	10
2. Indirectly with physical disease or mental trouble	2	2	4
3. With heredity *for insanity* .	2	0	2
	9	7	16

In three other female cases without heredity for insanity, one or both the parents were drunkards.

I am inclined to think that heredity from intemperance is a less important factor of insane drunkenness than it is generally supposed to be.

The children of drunkards are grievously exposed to other causes of brain-mischief besides heredity, especially to the influences of a turbulent home, and to want of food and proper care during the miserable years of a neglected childhood. It is remarkable that out of 800 idiots admitted into the Earlswood Asylum, Dr. Grabham has only found six instances in which it was stated that intemperance of the parents was the probable cause of the idiocy, and in two of these there was also hereditary insanity. He thinks that the truth in this matter may be often concealed, which is probable enough; but his facts form a striking contrast to those which have long been accepted on the highly respectable authority of Dr. Howe.

However influential in the conduct of life a truth may be, however wholesome its full force, it is morally wrong and practically mischievous for it to be overstated, which I fear has been done with regard to the heredity of drunkenness. Moreover, if it be admitted that the tendency to drink is transmitted from one generation to another, and that the children's teeth are set on edge because the parents have eaten sour grapes, it does not prove that such an inherited tendency is morbid, for vice also is heritable. As La Bruyère says, "Il y a des vices que nous ne devons a personne, que nous apportons en naissant, et que nous fortifions par l'habitude; il y en a d'autres que l'on contracte, et que nous sont étrangers."

Magnan's chapter on Dipsomania, in his remarkable work on Alcoholism, seems to support my view, although the eminent author accepts

the prevailing theory that dipsomania is a particular form of instinctive monomania, arising, most frequently, from heredity, while alcoholism is a simple state of poisoning, manifesting itself in the same manner in all, even in the brute as in the man.

This distinction will be admitted to be one which ought to be made, if facts exist in nature to support it; that is, if there be a class of lunatics affected with the instinctive monomania of drunkenness, with complete absence of other signs or indications of unsoundness of mind. It is remarkable, however, that when Magnan produces his evidence, it is destructive of this theoretical distinction. He says—

"Le dipsomane avant de boire, se trouve dans les conditions analogues à celles du melancholiaque; il est triste, inquiet, il dort mal, perd l'appetit, éprouve de l'anxiété précordiale; *c'est un aliéné ordinaire,* mais après quelques jours d'excès, l'intoxication se produit et le dipsomane se présente avec le délire alcoolique que nous connaissons; il a hallucinations pénibles, du tremblement, d l'insommie, de l'embarras gastrique, &c., et ce n'est qu' après la disparition des accidents aigus que le diagnostic se complète."

These remarks he supports by an interesting case which had come under his treatment at Saint Anne. A female patient, who, on admission, is pale, agitated, and crying from fear; she hears assassins who wish to strike her; she sees at her side the heads of the victims of Pantin; she believes herself covered with vermin, and shakes her garments; she hears the voices of her parents, &c., &c. Hands trembling, tongue white, epigastrum painful. No sleep. Hallucinations incessant. The delirium disappeared in five days.

One certainly would say of this patient, "*c'est un aliéné ordinaire.*" But the history of the case given was that for thirty years the woman at certain periods had become sad, interesting herself in nothing, incapable of work, sleeping ill, with no appetite, pain in the stomach increased by the sight of food; she has an ardent thirst, and drinks wine from the first day, getting it secretly; she drinks until she falls; she keeps up her drunken state for several days. After the access she reproaches herself, and re-commences her regular and sober mode of life. Formerly the attacks were separated by intervals of fifteen or eighteen months, and at this time drunkenness was the only symptom. More recently the attacks have come on every three or four months, and the alcohol acting more continuously, hallucination and delirium have been developed. She had attempted suicide.

Now allowing this history to be true, which, in one point is an immense assumption, what is there in the case to show that this woman was not a common periodic drunkard, falling very gradually under the dominion of her vice until it resulted in disease, and she became an ordinary lunatic? The one great assumption to which I refer is that during the long intervals of her attacks she was a sober woman. Let it be remembered that in this country and in France drunkards are

allowed by all who know them to be the most inveterate fabricators and deceivers in all matters and questions relating to their vice. In America it is different, and the word of honour of genteel inebriates is implicitly accepted by the confiding physicians who undertake their cure. For my part, I will never trust the word of a drunken man, still less that of a drunken woman, whether palliating their debasement or promising reform. All that M. Magnan records from his own observation about his alcoholic patients I receive with undoubting faith; but of all that he tells of what they have said about themselves I have the deepest mistrust, or unbelief.

Magnan borrows from Trelát's work another case, which, as he says, makes the distinction between dipsomania and alcoholism stand out very clearly. As it is considered a typical case and affords a good example of the credulous manner in which the drunkard's advocates accept apologetic inventions for sober fact, I shall give it in full :—

Dipsomaniac. Mother and Uncle Dipsomaniacs.

"Madame N—— a person of serious character. She had had during her life many establishments, which have always been wrecked from the same cause. Habitually regular and economical, she was seized from time to time by an *irresistible* access of inebriate monomania, which made her forgetful of everything—of interests, duties, family—and which ended by precipitating her from a position of ample means into one of complete ruin.

"One could not without lively compassion *hear her recital* of the efforts she had made to cure herself of an inclination which has been so fatal to her. When she felt her access coming on she put substances into the wine which she drank, which were best fitted to incite in her disgust at it. It was in vain. *She even mixed excrements in it.* At the same time she spoke insulting words to herself—'Drink, then, wretch; drink, then, drunkard; drink, villainous woman, forgetful of your first duties, and dishonouring your family.' The passion—the disease—was always stronger than the reproaches which she addressed to herself or the disgust which she tried to produce. In the last years of her life she was operated on, with success, for a strangulated hernia, and died afterwards of disease of the heart."

I am inclined rather to feel lively compassion for M. Trelât that he has become the historian of such a creature, than for Madame N—, though I wonder somewhat that an experienced alienist did not see that if Madame N— had actually mixed excrement in her drink she was probably quite insane. If she did this thing without the intention to deceive she was mad; if she did not do it she was merely false. Of course one cannot tell from the history which of the two it was; but I think that you or I should have ascertained without much difficulty, if we could have had the woman under observation.

By being mad, I do not intend to imply being in a state of *monomanie ebrieuse*, or the moral insanity of drink, but real aberration of mind, with appropriate intellectual and emotional and physical symptoms, the being *un aliéné ordinaire*, in fact, as M. Magnan puts it. *My position is briefly this—that what is called Dipsomania is either a vice leading to disease in the ordinary pathological sequence; or it is an actual and recognisable form of disease of the brain, with evidence of its existence more cogent than the mere desire for drink.*

With regard to the *irresistible* nature of the propensity which is supposed to prove its morbid origin and to mark it as a moral insanity, it is somewhat strange that the same quality has not yet been attributed to the opium-craving, with which it is most strictly cognate. One would say that the desire for his drug in the opium eater is far more intense than the craving of the drunkard for his dram, and that his sufferings are keener if the desire be not gratified; and yet so far as I know, Opiomania has not yet been invented as a new form of moral insanity. If there be such a form of insanity, it has been overlooked, in a manner one would not expect in the recent and most interesting paper on Opiophagism from the learned pen of late Commissioner Browne. Tobacco craving also is bad enough when an inebriate smoker has his pipe put out by medical ordinance; and I can answer for it that snuff-craving is no joke under the same circumstances. But these must be trifles compared with opium-craving, which, however, we know to be not irresistible even in its utmost intensity. Neither is drink-craving, if the motive for resistance be greater than the motive for indulgence. Bowring's story in "Bentham" is not so bad on this point—"A countryman who had hurt his eyes by drinking went to a celebrated oculist for advice. He found him at table with a bottle of wine before him. 'You must leave off drinking,' said the oculist. 'How so?' says the countryman. 'You don't; and yet methinks your own eyes are none of the best.' 'That's very true, friend,' replied the oculist, 'but you are to know I love my bottle better than my eyes.'"

The letter which I sat down to write to you, in answer to your interesting criticism on my little casual speech, has spun itself out into an article, which I hope will be acceptable for the pages of the Journal which you so ably edit; and if so, perhaps you will allow it to retain its epistolary forms which must be my apology for the freedom of style which I have permitted myself to use.

Believe me to remain,

Very sincerely yours,

JOHN CHARLES BUCKNILL.

Dr. Clouston.

PART II.—REVIEWS.

Philosophy without Assumptions. By THOMAS PENYNGTON KIRKMAN, M.A., F.R.S. London: Longmans, Green, and Co., 1876.

Mr. Kirkman has decided convictions, and does not hesitate to express them in plain-spoken language. He criticizes the principal teachers of the growing school of materialism in an unsparing fashion; and those who assent not to his propositions and arguments may not be at all sorry to see the views of these gentlemen assailed with vigour and vivacity. It will do no harm to put them on their defence from a philosophical standpoint. Their easy triumph over unwise theological opponents, or rather the triumph of scientific thought in their persons, has not been altogether good for them; some of them having raised their eyes so far above their feet that they seem not to see where they are walking, and evincing a self-sufficiency which becomes them as ill as it became the theologists whose bigotry they reprobate. It must be confessed that those who pursue the study of the physical sciences do appear, in their enthusiasm for their special work, frequently to lose sight of that which is the end of all science, and to propound as sufficient for human instruction, guidance, and conduct, that which is practically a negation of anything like a doctrine adequate to embrace the phenomena of human feeling and conduct. Men will have some faith to live by. Revolutions in human conduct do not appear to have come from the intellect in times past; again and again that which seemed the foolishness of the simple has confounded the wisdom of the wise; and it is not impossible that, when the students of physical science have made it all so plain that a wayfaring man, though a fool, cannot go wrong, if he will only keep his eyes open, some untaught person "out of Galilee," a friend of publicans and sinners, who happens to be inspired by strong moral sympathies, will stir up a wave of feeling which shall sweep over the paths, and hardly leave a trace of them behind.

Mr. Kirkman is indignant with the philosophers who set out with an assortment of abstract terms, which they neither define nor comprehend exactly, and insists that no man who undertakes to teach "ought to employ an abstract term,

much less an abstract trope, in which ambiguity is possible, until he has an exact meaning as well as use for it, and is ready to impart that meaning to the student whom he has prepared to comprehend it, or else to show him how to find the meaning for himself." It must be acknowledged that there is a sting of truth in the following remarks:—

David Hume wrote a famous chapter on the Idea of Necessary Connexion, which contains not a word of explanation either of the adjective Necessary, or of the trope Connexion, which appear in the subjects and predicates of his dogmas; except that in one page the trope is made more intelligible by printing it CONNEXION; and he proves it at last to be absolutely without sense. Of all the marshallers of abstract truths whom I know, Immanuel Kant is king. He goes out to sea with a wonderful display of bunting inscribed with generals and abstracts in *-ung* and *-niss* and *-heit* and *-keit;* and then, after steaming away for 273 pages, it comes into his head that a little definition may be useful; whereupon he runs up more bunting, and gives us the pleasure—and this is all he gives—of reading under his leading German terms their Latin equivalent is *-tus* and *-tio.*"

He is particularly severe upon Mr. Herbert Spencer, whose assumptions, inconsistencies, inexact employment of terms in a double sense, and errors he exposes with hearty vigour. The phraseology of this author evokes the following amusing comment:—

"Evolution is a change from an indefinite incoherent homogeneity to a definite coherent heterogeneity, through continuous differentiations and integrations." *Id est Anglicè.* Evolution is a change from a nohowish untalkaboutable all-alikeness to a somehowish and in-general-talkaboutable not-all-alikeness by continuous somethingelsification and sticktogetheration. Can any man shew that my translation is unfair? When that is shewn, I will make a becoming apology for the unfairness.

And again:—

I am convinced that he and his admirers are familiar with dozens of long words in -eity and -ality, in -ility and -ivity, and -ation, about whose definitions they seldom trouble themselves; especially those imperial terms, the differentiation, and the integration, and the co-ordination, and the re-differentiation of the simultaneities and the serialities, of the progressions, the coherences, the relativities, and the correspondences. Why in the world need they trouble themselves? Those long-tailed abstracts know how to take good care of themselves:

you may knock them about in heaps as you please; they never fail to tumble up as clear and perfect as when new from the mint, and at a glance you can distinguish them, and swear to them again. Time enough to bother yourself about exact definitions, applications, and verifications when you have finished philosophising in general.

But it is in a chapter on the Will, in which he criticises what Mr. Spencer has written concerning the doctrines of personal identity, and freedom of the will, that he comes to close quarters, and delivers some uglily effective thrusts. The following extract may serve as a sample:—

Here the reader may well ask, Is there nothing in this section besides the dogmatic assertions that you have quoted, with their decorations of absurdity—is there nothing like argument for the demolition of subsisting personal identity? I am happy to say there is one, though but one, argument: it is only a little one, and the reader shall have it, word for word. We read in this same section: "Either the *Ego*, which is supposed to determine or will the action, is present in consciousness or it is not." That is promising, and looks like close quarters; that is verily the way in which a good reasoner opens an exhaustive argument. He goes on: "If it is not present in consciousness, it is something of which we are unconscious—something, therefore, of whose existence we neither have nor can have any evidence?" That you say may pass for true, if it is not very profound. Let me entreat your attention to the remainder. "If it is present in consciousness, then, as it *is ever present*, it can be at each moment nothing else than the state of consciousness, simple or compound, *passing* at the moment!"* You all seem puzzled. I will give him a fair chance; I will read it once more. You are bothered still: you ask me whether there is not some printer's blunder in the third part; the very question I should ask if in your place. . . . How can the fact that is ever present, and not passing, be a demonstration that it is nothing else than what is passing at the moment? To all the wits I have this is deplorable nonsense. And if it were sense, where is the argument that he promised us in that logical flourish at the beginning? He wants to prove to us that the *Ego* is nothing else than the state of consciousness passing at the moment. And he proves it simply thus, by shouting out, louder than before, "It can be nothing else!" To me it is "helpless, hopeless nonsense all." Here we see what a figure Mr. Spencer cuts when, alighting from his balloon, he tries, what he does not attempt once in three hundred pages, to go in to a definite position on solid ground, aud handle his logical weapon at close quarters. He seems dreadfully puzzled about which is the right and which the wrong end of it.

* The italics are ours: we have placed them, in order to accentuate the contradiction which Mr. Kirkman fastens upon, because we have omitted some of his argument.

There is much more of the same sort, for which we must refer readers to the book itself. Nor is Mr. Spencer the only person whom the author belabours; Mr. Matthew Arnold, Professor Tyndal, and John Stuart Mill are hardly less severely handled. It is a pity, we think, for the sake of his arguments and the points which he makes, that his style is not a little less rollicking, and his language a little more sober and temperate; we have no sympathy with that affectation of courtesy in controversy which induces a person to flatter his adversary while pulling his arguments to pieces, as well as he can; but Mr. Kirkman's style will offend some readers, while others are not unlikely to think that he is joking, and to fail, therefore, to give the serious consideration which they deserve to some of his criticisms.

What is Mr. Kirkman's "Philosophy without Assumptions?" That is more than we can venture to explain in the space at our disposal. It might be described, not unfairly, perhaps, as a scepticism of everything, except certain so-called fundamental deliverances of consciousness. Here is a proposition which will indicate its nature:—"*The only force which is directly given and immediately known to me is my own will-force; and all my knowledge of other forces acting in the Cosmos is mediate, and found by me in logical inference.*" Mr. Kirkman, though a clergyman, has no fear of doubt; he out-doubts the physical philosophers, showing them that they make not a proper and thorough use of scepticism, and that they are vanquished with their own weapon when it is rightly used. Here are some sound remarks concerning doubt:—

> If you would learn to reason closely, you must learn to be a good doubter. Doubt, determined doubt, is the only key which unlocks the caskets of certain knowledge. We have so many lame philosophers because we have so few thorough doubters. It is not the spirit of doubt, as we bishops and parsons sing, which hinders the progress of truth and religion; but the spirit of assumption. Why have we all these disgraceful divisions, wranglings and heartburnings in science and theology? It is not because men will doubt too much, but because they will not doubt enough. It is because they hate the trouble of doubting in themselves, and resent its reasonable demands in others, that we are flooded with sham philosophies, superstitions, and infidelities.

Another quotation, which shall be the last, summarises the author's conclusions against the materialist philosophers:—

Here lies their blunder, that they conceive the stupendous forces of nature, and along with them other human will and consciousness, to be all alike, directly, separately, and independently, given to them. They fancy themselves beings of a superior world, floating in the air, and looking down on man and the surrounding energies all objectively submitted to them, alike human desires and human will, along with the other activities of heaven and earth, for their inspection and comparison. But the truth is, that no force whatever is given to them, but as a function of their own will—a function so to speak of the form $w.f. (w.)$, where w is the acting will-force—a function vanishing with w; that is to say, that if they were deprived of all consciousness and memory of will, no conception whatever of verified force would remain in them. Nor can they eliminate this w from their expression of any force, or from their reasonings about it. They may talk of the lightning's speed, or of the distance from earth of the furthest nebula, or of the living force of planets or of suns; but all these fine words are intelligible only because they suggest multiples of their own remembered will-effort. Will is not a force given to them externally among a number of other more commanding forces equally observed by them; nor can it be found or described as a resultant or product of such forces. The truth is, that no force of the external world is ever properly and directly observed, but rather inferred by them from their consciousness of baffled will.

The substance of Mr. Kirkman's book, when not purely critical, is a professed demonstration of this theory.

Philosophy and its Foundations: with an Appeal to Spiritual Psychology. London: Simpkin, Marshall and Co. 1876.

When we read some of the high-reaching metaphysical speculations which are contained in this essay, for which the author modestly begs a fair and serious consideration, in the evident conviction that he has thrown a flood of light upon questions that have so long perplexed the minds of men; when we see English men and women stand for hours to wait for, or rush in eager crowds to cheer frantically, a passing carriage because it contains two persons who are privileged by the laws of the country to style themselves Royal Highnesses, or read of the frantic rush which these same people will make to get possession of the cherry stones which a Royal Highness has spat out after eating the cherries;—we are so little in accord with the thoughts and feelings which animate beings who so think, feel, and act, so utterly insensible to any common sympathies, that we sometimes feel a grave doubt whether we actually belong to the

same species, and, if so, whether it be not to a morbid variety of it. If such sympathies be physiological, it is plain that the want of sympathy must be pathological, that is, if we are of the same species. The question then is, whether all human beings in a civilized land are really of the same species, or whether those who are almost always finding themselves in a miserably small minority are not branching off into the development of a new species, of a morbid or other sort.

The author will perhaps not thank us for placing him, though it be only for purposes of illustration, in the same sentence with those who made so mad a rush upon the cherry-stones; nor do we mean thereby to do more than indicate how far removed his line of thought is from what we can sympathise with. But when he speaks of something, or rather somebody, who "sits the Absolute *all-conditioned* on the bosom of the absolute *unconditioned*," we ask ourselves in despair whether such words have definite meanings, or whether we are intellectually deficient.

The unconditioned is neither subject nor object, but pure spirit as negation, manifesting nothing, and in itself capable of manifesting nothing; yet having the inherent attribute of potentiality or the capacity of manifesting the powers of positive condition when positive condition is introduced. The prime or primitive conditioned is both object and subject in one: the object being the foundation of the physical which is necessarily in him, and the subject being the cognition or mental counterpart thereof. We cannot separate the objective selfhood from the subjective selfhood, and yet we may well distinguish them. The cognition of all that is in self is the subjective appropriation of the objective. This, of course, constitutes absolute cognition; for if this objective selfhood constitutes primarily the absolute foundation of objective being in the universe, the cognition of this selfhood implies absolute knowledge. This selfhood is limited as to the essential form, but unlimited as to endless development of being from self:—the creation of objective worlds being but the phenomena of conditions combined and built together out of primordial and eternal personal subsistence; and the formation of minor subjective intellectualism being but the framework arising in immediate connexion with the objective economies with which they stand connected, and whose experience they possess.

This passage embodies the author's philosophy. To render it more intelligible to the reader, he goes over ground which has been often gone over, and gives a short account of the speculations which have been entertained on the same great subjects by some of the more prominent philosophers—

Descartes, Spinoza, Leibnitz, Kant, Fichte, Hegel, and Schelling.

His speculations are not all so high and abstruse as those we have quoted; and the reader, if he has the courage to go on, will find matters become more easy to understand. For the author is not a pure idealist, but will have his feet on some positive ground; he disavows the doctrine of pure innate ideas, and maintains "that all our ideas are directly or indirectly given us from the external world, or are grounded as intuitions formed by a combination of these ideas." The following passage will serve to show how firm a hold he keeps of fact even in his speculations:—

> Mr. Hume pronounces "the tie or connexion cause and effect to be arbitrary," but it is no more arbitrary than calling a spade a spade. We might call it a broad palm of iron attached to a handle of wood, for digging the ground; but this would only be an awkward attempt to point to the elements in combination for the serving of a purpose. In causality exists a *tie* of the elements, and in virtue of the tie we have the elements as factors, producing a result or a phenomenon as a totality. What the tie is in the conjunction, we can only explain by saying that, if the combination be a chemical one, *such is their affinity*; and if it be mechanical, *such is their fastening*. The inward idea is but an expression of the outward fact.

In the latter part of his essay he treats of mind and morals in their foundation, maintaining that the grand prerogative by which man is distinguished from the lower animals is the *intuition of relationships*. This power of vision in the lower animal is, as a rule, confined to *self;* in man, it is equally applicable to *not-self*.

The last chapter or section of the essay deals with Scriptural Psychology, and has far too many capital letters in its pages for our taste. It is all about *spirit*, *soul*, and *body*, showing what each of them is and how they are related to one another.

A Philosophical Treatise on the Nature and Constitution of Man. By George Harris, LL.D., F.S.A. London: Bell and Sons. 1876.

This treatise occupies two formidable volumes, one of which has 410, and the other 566 pages—altogether, therefore, nearly 1000 large and closely printed pages. Some notion of

the care and labour which has been bestowed upon its composition will be conveyed by the statement that the Index itself fills 62 pages. The author tells us, indeed, that he has devoted to it not merely the occasional leisure of a few years, but the attention and study of the best period of his life. "It was commenced during early youth, carried on through manhood, and only completed in his later days." And he goes on to say that "all literary works of man, like the living works of God, which grow up before our eyes, and are intended to endure, are produced by slow degrees, and by a gradual putting forth of shoots. The mushroom, on the other hand, which springs up in a night, fades in a day." For its purpose he has been observing all his life and drawing knowledge from every quarter, as the bee sucks honey from all sorts of flowers—from crowded courts and the solitude of the country; the varieties of travel and the casualties of a professional career; from the remarks of the vulgar, not less than the conversations and reflections of the highly cultivated; from the habits of the brute creation; even from the ocean's depths and the planets themselves; and, finally, from the sweet and engaging flowers of poetry, not less than the hard rocks and gloomy caves of philosophy and forbidding metaphysical discussion.

It would be a presumption, from which we shrink, to attempt to criticize in a few pages a work of this magnitude, which has such a vast scope as the entire nature and constitution of man, and which has had so long a gestation. Our readers will appreciate this hesitation when we inform them that on opening the first volume we came upon sections treating of the "Infinite Capacity of Spiritual Intelligence," the "Intercourse between Spirits," the "Intelligence and Language of Spirits." Descending from these higher beings to man, the author discusses at length all the faculties of which he is possessed, and their functions; and whatever the reader may think of the views propounded, he cannot fail to wonder at the industry displayed and the conscientious care with which all sorts and conditions of writers are quoted. As the author informs us, "during the progress of the present work, many hundreds of minds have been dissected by the author, and their various functions attentively examined while in full operation. This is nevertheless a species of vivisection which may be performed without cruelty or even pain, and of which the patient, however sensitive, is wholly

unconscious." Should any reader desire to see a vivisection of the author's mind, he must conduct it for himself; for we do not think that our results, if we ventured to undertake it, would justify so painful an operation.

The Mechanism of Man: An Answer to the Question, What am I? By EDWARD W. COX, Serjeant-at-Law. Vol. I. The Mechanism. London: Longmans and Co. 1876.

The design of this book is to show that there is something in man other than his material structure; a *distinct entity*, by which the material structure is intelligently controlled and directed; in other words, that man has, or is a soul. Serjeant Cox's faith in the existence of a soul was, he says, at one time shaken by what he calls the arguments of the great scientists of our time; he determined, therefore, to make for himself a laborious and careful study of the facts and phenomena upon which he supposes science to base its denial, and, as a result of that study, he proposes now to prove, in strict accordance with the methods and rules of science, that man is not an automaton, but a soul.

In the course of his scientific studies he has made acquaintance with the doctrine of the molecular structure of matter, and he immediately discerned in it the possibility of throwing a new and bright light upon operations previously unintelligible, and of explaining phenomena, before wrapped in mystery and marvel. For as matter is formed of molecules, so are molecules formed of atoms, and while our senses can perceive molecular structure they cannot perceive atomic structure; when matter, therefore, ceases to exist as molecular structure and becomes atomic, it is no longer perceptible—"*matter* is, in fact, *non-matter*, itself aggregated into the definite form we call *molecular*." But *non-matter* is as real as matter—is by no means a *nothing;* it is, in fact, matter which, by having been resolved into atoms, has become imperceptible, as Jack the Giant-killer became invisible by putting on his magic coat.

"If the molecules of which Mont Blanc is made were to be suddenly resolved into atoms, the mountain, without the slightest change in shape or bulk, would instantly vanish from our perceptions. We should cease to see it or feel it. We should even walk through it without the slightest con-

sciousness of its presence. But there it still would be as it was, in the same place, the same in size and shape—in every particle identical with the Mont Blanc that just before had confronted us. But because it is now *atomic* it is *immaterial*, and being therefore imperceptible by our senses, we should call it *Spirit*. If a prophet were to declare its presence, we might have faith in his assertion, but there would be no evidence to any sense of its actual existence. It would be to us a *spirit mountain*." Let the wave of an enchanter's wand combine the atoms into molecules, in an instant Mont Blanc would appear again, visible, palpable—a mountain mass of matter.

Look well to your footsteps, reader, for the astute and learned Serjeant is leading you by a way that ye know not into consequences which may occasion alarm, when they are perceived. Admitting his remarkable scientific discovery, you will be asked whether, when we cease to exist as molecular structure and become atomic, it is not permitted us to combine our atoms into molecules, and so make ourselves again perceptible to human senses? May we not be permitted to revisit the glimpses of the moon after "that fell serjeant death" has laid his arresting hand upon us? Well may Serjeant Cox let slip an anticipatory hint of triumph. "There are problems of Psychology that may not be so insoluble as they seem." For here is spiritualism justified by science, and Psychic Force demonstrated "in strict accordance with the methods and rules of science."

The Serjeant is a stern upholder of the importance of *facts*, and severely censures the scientists for their inability to distinguish exactly what is and what is not a *fact*. He would have them imitate the exact and critical procedures of law in the trial of a case. He is prepared, in accordance with his principles, to exhibit a genuine molecule of matter to anyone who may wish to have matter made visible to him in that form, or at any rate to exhibit some one who has actually seen it, although, with a lawyer's dislike to hearsay evidence, he would only resort to this latter kind of evidence under special circumstances; he is prepared, also, we believe, not to show the invisible atoms—seeing that they are imperceptible—but while demonstrating that they cannot be perceived in any way, to demonstrate at the same time their existence and their combinations, and how they may be walked through without the least consciousness of their presence.

He goes on, after settling what matter is and what non-matter is, to discuss the entire mechanism of man—tells us how we grow, how we live, how we sicken, and how we die; what mind is, what is its mechanism, and what are its functions; what the soul is, where is its dwelling-place, and what is its *shape* after death. Yes; the soul, he declares, must have some definite shape, and there is no reason why it should change its shape when it enters upon its new phase of existence after death. Has the hunchback a crooked soul? Has the amputated body an amputated soul? These are questions which he shirks not to consider and answer. The soul must have power, he demonstrates in accordance with the strict methods and rules of science, to penetrate the most solid substances: "it is as certain as any fact in nature that, if permitted to revisit this world, it could come into a room with closed doors and stand in the midst with even more facility than the material body when living could have entered through the doorway." Alas, poor ghost! that has attained not rest and peace in the grave, but art doomed for a certain term to walk the earth and give attendance at spiritual *séances*. Serjeant Cox is the president of a society which calls itself the Psychological Society of Great Britain: it is a society which certainly cannot lack material for investigation; for it is evident that its members must themselves furnish instructive studies in psychology.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *English Retrospect.*

We greatly regret that the following notice of Reports of Asylums for 1874 should have been postponed, through pressure on our space, till now:—

Aberdeen.—Dr. Jamieson, like many superintendents, objects to the number of incurable cases placed under his care. He says:—Observation tends to the conclusion that the operations of this hospital, as of others of a like nature, are liable to be influenced by a growing inclination to remit to the charge of an asylum for the insane various cases of mental weakness sometimes accompanying the latter stages of several physical diseases, which properly should be cared for at home, or be put under treatment in infirmaries and incurable hospitals. In particular the associated debility of body and dulness of mind, which

in so many is connected with advanced years, is too frequently sent to find its termination amongst the insane."

Dr. Jamieson does not say where he would propose to place such persons. It may be that there is as much true humanity displayed in prolonging the life of the incurably insane as in the management of acute cases.

Ayr.—There is nothing in this report calling for special notice, except the fact that three of the staff of servants entered the asylum as patients. One most striking omission in this report is the absence of the statistical tables of the Medico-Psychological Association. It is the only new asylum in Great Britain where they are not to be found. We would urge Dr. Skae to remedy this next year.

Berkshire.—This asylum, though opened so lately as 1870, is now almost quite full, and it is necessary to consider the question of enlarging the accommodation. When we consider that out of 101 admissions no fewer than 43 had been detained in workhouses for various periods, we can sympathise with Dr. Gilland in his protest against this system. He says:—"Upon this subject it may be remarked that the natural inference to be deduced from the experience of the last twelve months in this asylum appears to be that the asylum is yearly becoming more of a lazaret for the incurable and worst cases of mental disease that have already been sifted, so to speak, by a probationary residence in the workhouse, and that while curable cases are detained in those institutions to their manifest detriment for indefinite periods, some, who have become obnoxious on account of filthy habits, and others who are apparently in a dying state, are removed to the asylum, the latter at considerable risk, and with no other effect than to hasten the impending fatal result. And whether this bad system has been fostered by the recent enactment whereby the Unions will be recouped by the State to the extent of four shillings per week for each patient placed under asylum treatment, is a question well worthy of consideration, and one to which no doubt some would be inclined to give an affirmative reply."

The report of the Medical Superintendent extends to thirty-six pages. It is possible that greater brevity and less detail would secure more readers.

Bristol.—Typhoid fever having appeared in this asylum, it was found that the typhoid poison existed largely in the asylum water supply. During 1873 and 1874, 21 cases occurred, causing three deaths.

Plans for the enlargement of this asylum have received the necessary approval, and will shortly be carried into effect.

Cheshire, Macclesfield.—One or two subjects of considerable importance are noticed in Dr. Deas' report of twenty-eight pages. He

points out forcibly the evils of placing recent cases in workhouses. We have already given Mr. Ley's and Dr. Gilland's remarks on this subject, but from its importance produce further testimony in the same direction. He says:—"I have reason to believe that this objectionable practice still largely prevails in certain Unions—in spite of the capitation grant from the Consolidated Fund. A great deal is made of the undoubted fact that cases recover in the Workhouse wards; as well, it is said, as they would do in the asylum, and thus the workhouse and the asylum come to be regarded, as in some sense, rival institutions. The asylum may be better in some respects, but then it is undoubtedly more costly! As long as this feeling prevails, I doubt very much if even the Treasury bonus will have a very decided effect; and the asylum will still continue, to a large extent, to be reserved for the 'bad cases,' or those with whom the treatment in the workhouse has failed, whether viewed from a legal or a general point of view. The workhouse should either be an asylum *de jure* as it is *de facto,* or it should cease to be an asylum at all. I cannot help thinking that if attention were once fairly called to this matter, the public would be startled to find how systematically the provisions of the Lunacy Act are evaded; and that every day people are practically admitted into and detained in asylums without any legal formalities whatever. If it be granted that workhouses should not be used for the reception of recent cases of insanity, a legislative enactment would be necessary, forbidding in future any persons of unsound mind being admitted into a workhouse unless transferred from an asylum by a proper order. To meet cases where there was a deficiency of asylum accommodation, temporary licenses might be given to workhouses, to receive cases under a proper legal order and certificate."

Dr. Deas objects to special dormitories for epileptic and suicidal patients. He attempts to support his position by quoting Dr. Strange, and states further: "I laid certain considerations before the Committee, leading me to doubt the wisdom of such an arrangement; and my objection was two-fold—first, the plan was bad in itself as a principle of treatment, and secondly, that it would be extremely difficult, if not impossible, to carry it into practice, except to a very limited extent. In substance, I said that it was opposed to sound principles of treatment to congregate together, even at night, numbers of patients differing in every possible respect, except they could be all labelled as either epileptic or suicidal. I pointed out how great the differences were between the different classes of epileptics—some quiet and cleanly, some violent and degraded, &c.; and I specially dwelt on the impropriety of associating suicidal cases together, insisting that our aim should be to place them with lively, cheerful cases, or cases so sensible that their assistance might be useful, mentioning, also, the well-known fact that the suicidal impulse is undoubtedly infectious, and also imitative.

With regard to the practical difficulties I pointed out—first, the difficulty of finding any part of the asylum where the plan could be carried out, except very partially; and, secondly, the amount of moving of patients backwards and forwards which it would involve, the risks that would thus be run, and the discomfort which would be caused. The Committee endorsed these views; but the opinions of the Commissioners were in no way altered; and after further correspondence, the matter dropped, the Committee finally expressing their willingness gradually to increase the number of night attendants, so as ultimately to have one in each block. In two Reports, however, which the Commissioners have made since, on their annual visits, they again refer to the matter, and strongly urge some steps being taken to carry out their views.

"Now something has been done; and I wish to indicate exactly what it is, and how far I feel disposed to go in the direction indicated by the Commissioners. As I have already said, in one of the wards I have collected together a certain number of the worst class of epileptics, and some go to sleep in that ward from the infirmary, which is close at hand. These patients are themselves classified into two groups, and occupy two dormitories.

"One of the night nurses sits in the room between these; and her duties are limited to that ward, and to visiting No. 3 Ward, where the more violent patients are, in conjunction with the other night nurse. No suicidal patients sleep in that ward, as such. A similar arrangement is about to be made on the men's side. But although this is all the length I feel disposed to go, to meet the views of the Commissioners, I would go much further in another direction. There cannot be a question, I think, that the ordinary amount of night nursing thought necessary in an asylum is far too little, and had the Commissioners tried to institute a reform in this direction, I should willingly have backed up their suggestion. One great flaw in what I may call the 'epileptic and suicidal' plan, is that attention is solely paid to certain classes of cases to the exclusion of many others equally important and urgent. Moreover, to my mind, it is putting the cart before the horse, to bring the patient to the nurse, instead of sending a nurse to the patients. To do this, viz., to have a separate night nurse in each ward, while it would secure the main objects of the Commissioners, would at the same time accomplish many others equally important, and remove a blot from our asylum management.

"In very many cases of insanity, all the symptoms are much aggravated at night; and I have no doubt whatever that more systematic night nursing would not only promote treatment and recovery in recent cases, but would tend to tranquillity and contentment amongst the chronic ones, and thereby diminish difficulties, and save expense in the checking of destructive or uncleanly habits. To enumerate some of the duties which would devolve on such a night nurse: there

are the epileptic patients who must sleep in single rooms, even if you associate some together ; suicidal patients ; special cases of illness ; restless and sleepless cases. In attending to such, in giving nourishment to one, a drink to another, medicine to a third, covering up a patient who is restless, making the bed of another more comfortable, attending to the personal wants of those who cannot or will not help themselves ; and in many other ways ample work could be found, and I believe a great amount of good effected."

Such independence of opinion, expressed so argumentatively and temperately, "with reasons given," is a healthy symptom. Would that it were more common.

Cheshire, Upton.—Means are being taken to provide an ample water supply in case of fire, and the insurance on the building has been increased to £70,000. Various additions and structural improvements have been made at a cost of £3,000.

The following paragraph is interesting as bearing upon the subject of night supervision of epileptics, &c. :—" Now that we have had experience of the system of special night supervision for a period of nearly three years, I take the present opportunity of stating that I have found it fraught with great benefit to the patients of the character above mentioned, and that I cannot too strongly recommend it. In fact, since the introduction of the system here, there has not been a single instance of a patient dying in an epileptic fit during the night."

Derby.—We entirely agree with Dr. Lindsay when he says—" It is to be regretted that deception is still occasionally resorted to by those conveying patients to the asylum. The patient is told that he is being taken a trip to Scarborough, that he is going for a drive in the country, or that he is going to see a doctor and then return home. With the insane, as with the sane, honesty is the best policy. Candour and truthfulness should invariably be observed."

Concerning " Derbyshire neck," it is remarked that 11 females, being 12 per cent. on the total female admissions of the year, were affected with goître. It would appear, however, that the popular name really is a misnomer, and Derbyshire neck is more common in Yorkshire than in the county from which it takes its title. The disease appears to be most frequently associated with melancholia ; more than half of those admitted at Mickleover during 1874, suffering from goître, laboured under this form of mental disease.

A system of continuous night supervision of epileptics has been established. Dr. Lindsay reports that his experience of this arrangement is all in its favour, and that he has had no difficulty as regards the patients or attendants in bringing it into use.

Dundee.—The following paragraphs in Dr. Rorie's report furnish most important evidence on the question of the transfer of lunatics to the workhouse :—

"Of the patients who have left the asylum not recovered, 28 were transferred to the lunatic wards of poorhouses. As ten years have nearly elapsed since this means of disposing of the insane came into operation in this neighbourhood, a suitable opportunity is afforded of examining how far the expectations formed of this system have been realised. These wards were opened in the belief that many patients were in this asylum, and in that of Montrose, of so harmless and incurable a character that they could be maintained at less expense than was incurred in keeping them in asylums; and so advantage was taken of the provision made by the Lunacy Act of 1862 for the reception of pauper lunatics into lunatic wards of poorhouses who were not dangerous, and did not require curative treatment; and the mode of transfer selected was that of obtaining the sanction of the Board of Lunacy, granted on the strength of a medical certificate given by the Medical Officer of the parish. At first difficulties were experienced in deciding on the suitable patients, in consequence of the ambiguous nature of the statutory terms: for while, on the one hand, it was no easy matter to say when a lunatic sent to an asylum, and thus removed from the possibility of doing harm, ceases to be dangerous; on the other, it was scarcely to be expected that the parochial Medical Officer, at a single visit, could declare that the patients had or had not ceased to be capable of deriving benefit from asylum treatment. These difficulties, however, were overcome, but in a manner, it is to be feared, scarcely in accordance with the spirit of the Lunacy Act; for when it was proposed to remove patients to these wards, the plan hitherto adopted has been for the Inspector of Poor, accompanied by the Governor of the Poorhouse, to visit and examine all the patients belonging to their parish, and to select those considered to be manageable. The Medical Officer of the parish was then sent to re-examine and certify those selected, and the necessary sanction of the Board of Lunacy was then obtained. It will thus be seen that the selection of the patients has virtually rested with the Inspector of Poor and the Governor of the Poorhouse; and the result, it need scarcely be said, has been that, instead of the harmless and those not requiring curative treatment, the class of patients secured for those wards has consisted of the useful, manageable, cleanly, and orderly, and, in many instances, of convalescent cases, the burden of whose treatment during the acute and dangerous phase of their illness had been borne by the asylum; while the fatuous and paralytic patients, for whom little can be done in the way of curative treatment, have been systematically rejected, in consequence of the expense and trouble that would have been incurred in attending to their necessary wants. The patients removed have, therefore, been in a pre-eminently favourable condition; and it now remains to be considered whether the economy so much expected has been realised, and whether the patients themselves are benefited by the change or the reverse.

For many years statements have been made by the parochial authorities, from time to time, which appeared to exhibit an important saving in the maintenance of pauper lunatics in poorhouses, as compared with asylums; such as, that while 9s. 6d. per week was charged by the Dundee Asylum, the cost of the patients in the poorhouse wards was 5s. 6d. But a very superficial examination only was required to discover the source of fallacy; for while the 9s. 6d. charged by the asylum covered all expenses, the parochial rates were arrived at by excluding salaries of officials, attendants, &c., and by deducting a certain sum as representing the value of work done by the patients. More correct information has been recently published as to the actual expense incurred in keeping pauper lunatics in poorhouses, and it will be seen that it must be regarded as extremely doubtful whether any material saving has been effected at all, especially when the different character of the patients in asylums and those in poorhouses is borne in mind. Thus, at a meeting of the Committee of Management of the Liff and Benvie Parochial Board, held on the 26th May of this year, the Chairman reports, *inter alia,* as follows:—"About a week or ten days ago there was a communication from the City Parish of Edinburgh, requesting them to go very carefully into the cost of lunatics kept in poorhouses, with a view of bringing the matter again before the Exchequer. The Inspectors, at the request of the sub-committees, did so, and it was found that the cost of food and clothing in Dundee was about 5s. 4d., and in Liff and Benvie, 5s. 5d.; while the whole cost, including management, &c., was 8s. 4d. in Dundee, and 8s. 6d. in Liff and Benvie," or 6d. per week more than was charged by the Asylum when the lunatic wards were first opened.

"Now, will the result to the patients be found more satisfactory? In estimating the effects of the treatment of the insane, the most reliable test which can be applied is a consideration of the rate of mortality and of the causes of death. Valuable information on this subject is supplied in the Annual Reports of Her Majesty's Commissioners in Lunacy, and these returns show that from the 30th December, 1864, to the 30th December, 1872, 68 patients were admitted into the lunatic wards of the Liff and Benvie Poorhouse, and 150 into those of Dundee; and that of the former 19, and of the latter 40 patients have died, or 27 per cent. of the whole number; while the corresponding calculation for the Asylum gives 15·5, or, if the patients admitted in a moribund or confirmed paralytic condition be excluded, only 11·88 per cent. It is difficult to understand why so great a difference in the rates of mortality should exist, but in many instances it would appear as if the mere transference of the patients from the one institution to the other was sufficient to cause death. This seems to have been particularly the case in the male patients first transferred to the Liff and Benvie Poorhouse: 6 were removed in 1864, 8 in 1865, 2 in 1866, and 1 in 1867; 16 of whom were patients who had, while in the Dundee Asylum, for many years enjoyed good, and in some instances,

robust health; yet of these, 1 died in 1865, 2 in 1866, and 7 in 1867; 10 out of the 17, or nearly 59 per cent. of the whole, within a period of three years. This mortality was made the subject of a special investigation by the Board of Lunacy, but no adequate causes were elicited. It is worthy of remark, however, that a large proportion of the deaths in poorhouses have arisen from phthisis, pneumonia, bronchitis, diarrhœa, dysentery; diseases of comparatively rare occurrence in this Asylum, and generally considered to be the result of exhaustion, undue exposure to cold, and insufficient nourishment. 17 of the patients sent to the poorhouses were returned to this Asylum as unsuitable."

Dr. Rorie appends the following note to his report:—"In consequence of the discussion which has ensued since the above report was read, two tables have been prepared, and are appended; one showing the yearly mortality of the pauper patients in the Asylum and in the lunatic wards of the Dundee and Liff and Benvie Poorhouses, and the other the comparative mortality, corrected by Table XV.: both calculated on the average number resident. By this mode of calculation it is impossible to arrive at the same precision as when the mortality is estimated on the numbers under treatment: 1. In consequence of the patients in the lunatic wards of poorhouses being stationary, while those in the asylum are the reverse; 2. Because fully 50 per cent. of the asylum mortality occurs in the treatment of acute and recent cases, which are not received into the lunatic wards of poorhouses; and 3. In consequence of the patients removed to these wards being a select class. Whatever mode of calculation is adopted, the result would appear, however, to be the same, namely, that during the eight years ending 1872—that is, so far as statistics have been published—nearly double the actual mortality has taken place in the lunatic wards of these poorhouses than has occurred in the Asylum."

EDINBURGH: MORNINGSIDE.—Extensive structural alterations are here in progress or in contemplation, and a determination is expressed by the managers to place the establishment in harmony with the advanced views of the day.

Dr. Clouston reports concerning the cases admitted:—"The number whose malady was characterized by depression of mind was most unusually large. I find no fewer than 88 under the head of Melancholia, a number greater by 70 per cent. than the average number classified under that heading during the previous ten years, though, as we have seen, the excess of admissions this year was only 14 per cent. Many of the worst of these cases were more desperately intent on taking away their own lives than any patients I ever had. The ingenuity, determination, and persistence of this suicidal propensity in some of them would scarcely be believed by any one who had not experienced it. Some of them had, in addition, the impulse to destroy those near them; and the treatment and management of this combination of circumstances is, as you may imagine, attended with no small difficulty

and danger to all who have to do with them, and occasioned the greatest anxiety to myself. One patient tried to swallow everything he could lay his hands on, from the ink used by his fellow inmates of the ward to write their letters, to any small stone he could pick up. One day, before we knew his propensities, he swallowed 82 small stones, weighing 24 ounces, and was none the worse for it. He picked nails out of the wood-work, and tried to push them into his heart, and tried to starve himself so persistently for months, that he had to be fed with the stomach-pump. He required two attendants, one by day, and the other by night, to be with him all that time. Another man broke a piece of the tumbler out of which he was drinking, and inflicted a wound, fortunately slight, on his throat in a moment; and afterwards, when closely watched, would attack his attendant, to provoke him, he said, to kill him, so that he had to have two attendants all the time near him. We have had a number of such cases during the year, any one of which I should formerly have thought bad enough to be the worst case in two or three years."

The statement of the number of melancholics admitted during the year led to a lively discussion in the Edinburgh newspapers, as to whether this had or had not resulted from the religious revival movement under Messrs. Moody and Sankey.

Fife and Kinross.—So far as we know, no other asylum has adopted the "open-door" system, introduced here by Dr. Batty Tuke, three years ago, and continued by his successor, Dr. Fraser. In the report by the Medical Superintendent, it is stated that he has "no hesitation in saying that the introduction of this system will mark an era in the history of the treatment of the insane." Dr. Fraser describes the system as follows:—"As you are well aware, there are no high boundary walls surrounding the ground, and the entrance-gates stand always open. To make this system as clear as possible, let me suppose that a visitor calls and wishes to see through the asylum. He is received at the front door, which will be found open; he is then conducted through the whole of the male galleries, containing over 90 patients, and thence *via* the dining hall, through five of the other galleries on the female side, also containing over 90 patients, without *once* coming upon a locked door. Not only is there this free communication inside the house, but the outer doors of the main ground corridors, which open out on the terraces, are also unlocked. The male convalescent building, which contains from 20 to 25 patients, has its doors open shortly after 6 a.m. till 8 p.m. The inmates are, of course, on parole. Two galleries in the female department still remain under the old system of locked doors. Though not necessary for the majority of their inmates, yet the erratic and mischievous tendencies, as well as the excitement of some three or more in each division, render locked doors necessary.

"Greater contentment is, I believe, the result of the innovation I have

just referred to—the sense of confinement, or, in other words, of imprisonment, of which even a lunatic is conscious, is absent. The asylum is converted into a home and a hospital.

"A greater number of escapes and accidents would *à priori* be expected from this state of freedom. The escapes have been nine in number, and there are only two which can be attributed to open doors. Four accidents, none of any import, except the suicide previously detailed, have occurred during the year, but none in any way attributable to this system."

Inverness.—Dr. Aitken says a careful analysis of the dismissals has shown that in 6 cases the recovery was due to residence, in 6 to hygiene, in 6 to hygiene and medicine, and in 19 to medicine alone. In all these cases, it has been observed as in former years, in which medicine can unhesitatingly be set down as the principal element in the restoration of the patient, the recovery has taken place within a more limited time than in those who are indebted for their mental health to other influences available in an hospital for the insane. Thus, after withdrawing the exceptional case, whose excitement may be said to have exhausted itself after a residence of 6 years and 9 months in the Asylum, and dividing the cases into the various categories under which the different influences affecting the recoveries have been classified above, it has been found that those who owe their recovery to medicine were only resident, on an average, a little more than 5 months in the asylum; whilst on an average the recoveries due to hygiene and medicine were resident for 11 months and 2 weeks; those to residence 28 months, and those to hygiene alone 29 months. Another proof of the further beneficial effects of the medical treatment of insanity was accidentally brought out in considering the subject of readmissions, in which it was found that of those who had recovered under medical treatment, only 1 in 13 had returned to the Asylum; in those whose recovery was due to mere residence, 1 in 4 had returned; whilst of those who had been restored to reason by removal from exciting causes, most of them had to be again placed under supervision. Such a result is certainly encouraging, and points more and more to the necessity of asylums becoming in reality hospitals for the insane, not mere places of retreat after the disease has become incurable, hospitals in which treatment is actually carried out, and not mere communities of perfect discipline, in which the so-called moral treatment is abused, not used, and their end supposed to be obtained, and success judged of, by the comparatively large number of their employées. However therapeutic means act, whether in some cases they exercise a direct curative influence, or whether, as in the case of some remedies, they subdue the more violent symptoms, and others give the system time to recover its lost equilibrium, is a matter of indifference, the result is the same, the benefit to be derived is undoubted. The permanency of recovery from the use of drugs, in comparison

with the recovery from other influences, is an entirely new field of inquiry, and one deserving of thorough investigation in the present advancing state of experimental medicine as applied to the treatment of mental disease, and is a question which could not, perhaps, be settled by the statistics of any single institution, but only by observations extending over a long series of years. The evidence, however, obtained in this Asylum, and founded on nearly 200 recoveries, certainly gives the strongest support to the opinion above expressed of the happy influences of medical treatment. It is undoubted that the cases recovered by such means have had a duration of more than a month less, at least, than those calculated as attributable to mere residence, hygienic conditions, withdrawal from exciting causes, or the influence of mere moral discipline; and, such being the case, it can easily be understood how the curtailment of the destructive influences of mania, or the equally destructive loss of tone in melancholia, may be followed by the best results. and give an assurance of permanency in recovery which cannot be anticipated when the disease is more prolonged.

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2. *German Retrospect.*

I. *Recent Progress in the Histology, Physiology, and Pathology of the Central Nervous System.* By William Stirling, D.Sc.C.M., M.D., Demonstrator of Practical Physiology in the University of Edinburgh.

On Thermal Influences proceeding from the Hemispheres of the Cerebrum (Vaso-motor apparatus of the Cerebrum).—Drs. Eulenburg and Landois ("Centralblatt," No. 15, 1876) operated on dogs, and they found that young animals were specially well suited for their purpose. The estimation of the temperature was taken thermo-electrically by means of a Meissner-Meyerstein's electro-galvanometer. As thermo-electrical elements, two varnished Dutrochet needles were employed. After opening the skull and exposing the surface of the brain, the grey matter was destroyed by means of red-hot copper wires to the depth of 1-1½m.m. The animals were kept deeply under chloroform. When a certain portion of the brain was to be stimulated, the animal was curarised, and the brain was stimulated by induction shocks, two fine platinum wires serving as electrodes. The chief results were the following :—

I.—Destruction of certain regions of the anterior lobes of the brain, corresponding to the temporal region, caused at once a considerable increase of the temperature in both contro-lateral extremities. The increase of temperature occurred immediately after the complete destruction of the corresponding parts of the surface of the brain, often before the animal awoke from the chloroform and before it made

any spontaneous movement. The increase immediately after the operation may be 5-7°C, in other cases only $1\frac{1}{2}$-2°C.

II.—The thermal areas for the anterior and posterior extremities are separated from each other. The area for the fore foot lies somewhat more anteriorly, and somewhat external, close to the lateral end of the sulcus cruciatus. Destruction of the super-sylvian gyrus has no thermal effects.

III.—In successful cases, after the animal awakened from the chloroform, there was generally disturbance of motion, and it seems that the portions of the surface of the brain which have this thermal action must lie in the neighbourhood of the corresponding motor areas.

IV.—The increase of the temperature is in nearly all cases clearly pronounced for a long time after the injury, sometimes even for three weeks; generally, however, it returns to the normal on the second or third day. Localized electrical stimulation of the above areas, with sufficiently weak currents, is accompanied by a small and temporary diminution of temperature (0·2-0·6°C) in the contro-lateral extremities.

The authors are of opinion that these facts justify the conclusion that there is a vaso-motor apparatus in the grey matter of the brain, and that it partly represents the central terminations of the vaso-motor nerves which run in the pedunculus cerebri.

On the Functions of the Cerebral Hemispheres. C. Carville and H. Duret (" Archiv. de Physiolog.," 1875, p. 352, and " Centralblatt," No. 52).—The first part of this very extended research contains an historical review and criticism of the experiments hitherto made on the function of individual parts of the brain. The authors reject entirely, and with justice, too, the results of the experiments of Fournié (obtained by injecting chloride of zinc into the brain of the living animal). Even the results of Nothnagel's experiments they discard (dilute chromic acid).

The second part of the paper is devoted to an experimental criticism of the results of Hitzig and Ferrier: the idea of Schiff that the movements caused by stimulation of the surface of the brain are reflex, the authors regard as not supported by fact. They cite experiments performed on living and dead brains to shew that on a certain point of the surface of the brain localized currents extend both laterally and in depth. Two platinum needles connected with a very sensitive galvanometer were placed on the surface of the brain, or pressed several m.m. into it. On applying weak induction currents to certain parts of the surface of the brain, the galvanometer needle was more or less deflected. Nevertheless, a localized action of the current is to be assumed, in as far as stimulation of parts of the surface of the brain discharges different and quite distinct movements, when only weak currents are employed—a fact already sufficiently pointed out by Hitzig. With regard to the action of anæsthetics, the authors agree on the whole with Hitzig. A further series of experiments is given to

shew that the integrity of the grey matter is not necessary for the occurrence of circumscribed movements, experiments which were performed in a similar manner by Braun and Putnam. The experiments are new which prove that complete extirpation of the corpus striatum does not hinder the occurrence of movements on stimulation of the surface of the brain, and that distinct bundles of the centrum Vieussenii conduct the excitement from the brain to the periphery. Further, some results of Ferrier are corrected which were obtained by employing too strong a current. The extirpation experiments do not shew anything new. The authors come to the conclusion that the cortical centres are replaced after their destruction in the grey matter of the same hemisphere.

Further experiments are connected with elucidation of the functions of the corpus striatum and optic thalamus. Concerning the latter the authors confirm the experiments of Ferrier, according to whom electrical stimulation of these structures does not cause either pain or movement. In studying the function of the corpus striatum, one must specially bear in mind the nucl. caudatus and the corpus lenticulare. Electrical stimulation of the nucl. caud. yielded the authors the same results as Ferrier, viz., contraction of all the muscles on the opposite half of the body ; complete extirpation caused a great weakening of the opposite half of the body (frequently falling to one side), and a movement in a circle in which the animal always executed the same movements with the sound feet, and rotated around the affected ones like a top. On injuring the internal capsule complete paralysis of both extremities of the other side occurs. This occurs upon injuring the first two-thirds of the anterior portion, which lies immediately under the ventricular surface of the nucl. caud. Section above the same produces only incomplete hemiplegia. Destruction of the posterior part of the capsula interna (between thal. op. and nucl. lentic.) produces hemi-anæsthesia of the opposite half of the body.

The authors from their experiments attempt to locate the probable position of the different centres in the cortex of the brain in man thus : The centres for the different movements of the upper and lower extremities lie in the middle of both upper posterior central convolutions, in the middle of the anterior central convolutions, and in the whole of the upper temporal lobes.

The centres for the movements of the neck and head lie in the posterior part of the first frontal convolution, where they unite with the anterior central one.

The most probable centre for the muscles of expression and eyelids lies at the place of junction of the second frontal convolution with the anterior central one.

The centres for the movements of the tongue, jaw, and lips are found placed in the third frontal convolution (Broca).

Single centres for the movements of the eyeballs are placed, accord-

ing to Ferrier, in the gyrus angularis. The first tempero-sphenoidal convolution has probably a relation to the organ of hearing.

Lastly, the authors give a series of experiments which have a pathological importance; coma occurs most easily in extensive hæmorrhage into the centrum semiovale; perhaps with hæmorrhage on the convexity, and specially of the frontal lobes. If an intra-ventricular hæmorrhage stimulates the ependyma of the ventricle, tetanic convulsions of the extremities of the opposite sides of the body result. With hæmorrhage at the base, stretching towards the medulla, the phenomena of general tetanus are always to be observed at the moment of the attack.

On the Effects produced by Electrical Excitation of the Brain. Bochefontaine ("Gaz. Méd.," No. 35, 1875) stimulated, by means of an electrical current, the frontal convolution in front of the sulcus cruciatus, where it bends round the sulcus. The result was contraction of the spleen, of the small and large intestine, of the bladder, dilatation of the pupil, hyper-secretion of the submaxillary gland. If the submaxillary gland is separated from all its nervous connections, except the sympathetic fibres which pass to it, if the above part of the brain is stimulated, thick saliva flows from the canula, but in a much smaller amount than when the connection with the seventh nerve is intact. The same occurs during death by asphyxia, the poisoned blood acts like stimulation of the brain on the sympathetic fibres.

On the Influence of the Excitation of the Brain on the Beats of the Heart. Lépine ("Gas. des hôp.," No. 90, 1875) found that stimulation of the surface of the most anterior part of the cerebrum influenced the heart beats of the dog. If the *left* vagus was divided in a curarised dog and the *right* surface of the brain was stimulated, the number of heart beats was unchanged; if the left side, on the contrary, was stimulated, the number of heart beats was diminished, and the height of the pulse sank.

Syphilitic Disease of the Cerebral Arteries. O. Heubner (Leipzig, 1874. 8vo. pp. 238. Four plates. "Centralblatt," No. 22, 1875).—The spot in which syphilitic disease of the cerebral arteries most commonly occurs is the non-vascular part of the artery which lies immediately below the endothelium within the fenestrated membrane. At first several nuclei appear here imbedded in a finely granular matrix; then long spindle-shaped cells appear which, according to the author, do not arise from the vessels, but are developed from neighbouring parts, especially the endothelium; further development occurs partly by the increasing division of the pre-existing cells, partly by the further apposition of the proliferating layer of endothelium. The cellular proliferation always constitutes the greater part of the new mass, the inter-cellular substance the less; gradually the endothelial covering is raised from the fenestrated membrane, but almost always unilaterally; sometimes this occurs in so localised a fashion that actual tumours project into the lumen of the artery. In the mean-

time the proliferation increases, spindle cells are applied to spindle cells, and the lumen of the artery becomes narrower and narrower. The cells begin by close apposition to form a thick layer. Sometimes flat cells and giant cells appear, accidentally, round cells are to be seen, which wander in from without and appear to favour the nutrition of the new growth. The narrowing of the lumen becomes always more pronounced and leads at different places to thrombosis. The new formation begins to be organized and to undergo involution. In the first case a sort of vascularization is formed by the new formation of capillaries in the peripheral parts of the tumour, and a complete newly-formed fenestrated membrane appears under the endothelium in all probability proceeding from the latter. The whole new formation becomes differentiated into two layers, an inner one consisting of compressed giant cells, and an outer one of connective tissue formation. It is as if a new vascular wall was formed in the old artery such as we see at other places, *e.g.*, bones where syphilis leads to a genuine new formation of tissue by proliferation. In opposition to this process of organization in other cases *retrogressive* changes are observed. The new-formed tissue becomes poorer in cells, the inter-cellular substance becomes changed into fibrous connective tissue, and cicatricial contraction occurs, which lead to narrowing of the tubes. In fact, the vessel may become changed into a thin thread of connective tissue, which ultimately is torn asunder, so that complete obliteration of the organ occurs.

This syphilitic affection of the arteries is quite distinct from the atheromatous processes. The latter process always lasts many years, even, perhaps, tens of years, whilst in the syphilitic affection considerable disease of the intima leading to occlusion may develop in a few months. Further, the character of the atheromatous processes is not that of a new formation, but that of a genuine hypertrophy. There is only an increase of that tissue of which the intima consists. All further changes are of a retrogressive nature, such as fatty degeneration and calcification. The two diseases are quite different in their origin, result, and anatomical condition. Of course an atheromatous process may occur in the arteries of a syphilitic person. This occurs like atheroma, almost only in old persons, whilst the degeneration of the cerebral vessels in young individuals results from syphilitic new formation.

In the following chapter the author treats of the *physiological importance of the syphilitic arterial affection.* The normal circulation in the cerebral arteries is fully discussed. In as far as the importance of the syphilitic disease of the arteries depends essentially on the closure or narrowing of the lumen of the vessel, the action of this latter process is specially considered. By occlusion of an artery, a variation in pressure occurs in the cortex, and thus is explained the sudden loss of consciousness, apoplectic attacks, syncope, &c.; but as the circulation in the cortex is soon again restored, so the effect is only temporary.

Much more important, however, is the action of occlusion of the artery on the basal area supplied by it ; for the vessels, according to the author's investigation, are actual terminal vessels in Cohnheim's sense. We observe that here partly by infarcts, and partly by softening, deep lesions of the brain-substance and corresponding loss of the cerebral functions occur. For the most part, as the great ganglia are chiefly affected, we have to deal with motor disturbances, and with irreparable hemiplegia. As the closure of the vessels is generally sudden an apoplectic seizure is of frequent occurrence.

The effects of simple narrowing of the arteries are much more complicated. Here we have to deal with changes in the elasticity of the wall, caused by the appearance of new formations in it. The blood-current flows no longer in elastic, but in rigid tubes: thus, the movement of the blood in the network of the pia becomes slower, and consequently that in the whole cortex is affected. This leads to interference with the sensorium, &c. Here a gradual compensation may occur, and hence we see that such disturbances pass off.

The closing chapter consists of observations on the *pathology of the affection.* Etiologically it is of importance to notice that this disease occurs in the very latest stages of syphilis. The shortest time of its appearance after infection may be three years; once only half a year elapsed: then there occur cases where 4, 5, 12, and 20 years intervene. Only cases of pure disease of the arteries are taken into account. Generally the disease is extensively distributed, the anterior cerebral arteries being specially affected. Sex and age are quite irrelevant. The individuals were partly young (22), partly old (51). The symptoms are introduced by prodromal phenomena. Most commonly there is at first headache of great intensity, so that sleep is interfered with. Sometimes there was simple sleeplessness without headache; then vertigo occurred, and generally temporary disturbances of consciousness, a sort of epileptoid attack. The demeanour and temper are changed; intelligence and memory are temporarily weakened, and there are pronounced weakness and relaxation. Great excitability and often absent-mindedness sometimes precede the attacks.

The disease itself generally begins with an apoplectic attack, followed by an epileptic or semi-paralytic condition. At the moment of seizure the patient falls down unconscious, or there is only slight vertigo, nay, even sometimes no disturbance of consciousness at all. Paralysis of one side is one of the most common symptoms of syphilitic arterial disease. With few exceptions the cerebral nerves are free; generally the arm is most powerfully affected, and the leg somewhat less so. The course of the hemiplegia is constant when the fatal issue appears, soon thereafter. In cases of longer duration, it improves, and may even disappear. Unilateral contractions and unilateral pains were often observed, the former produced by the stimulation of the great ganglia.

The second chief group of phenomena is concerned with the effect

on the higher mental functions, *i.e.*, on the energies of the grey cortex; these disturbances occur in all cases. The characteristic thereof is the incompleteness of the severe phenomena.

Consciousness is affected, but not abolished; voluntary activity is impaired without all voluntary impulses disappearing; there is a condition in which the patient seems partly asleep, partly awake, and somewhat dreamy. Between delirium and delusion the understanding suddenly returns; speech becomes slow and stuttering; in some cases there is genuine aphasia; all these conditions may be completely healed after a time, and then reappear, such as occurs in no other disease of the brain; more rarely there are general convulsions, vomiting, fever.

The syphilitic indications are often found in other places in the form of gummata, ulcers of the skin, and affections of the mucous membrane. In other cases adenitis alone was present, or even no sign of syphilis. Death was sometimes accelerated by amyloid degeneration of internal organs.

Those cases in which the disease of the arteries is not pure, but is complicated with syphilitic new formations within the skull run a similar course, only here there are circumscribed paralysis of individual cranial nerves.

The duration of the disease varies greatly. Some cases were fatal in from 24 to 36 hours; others 1 to 3 weeks. Generally the disease lasted from 1 to 3 months, with specific treatment 6 months, even several years. The prognosis is always dubious: when coma occurs absolutely unfavourable; therapeutically energetic inunction and large doses of potassium iodide are indicated.

Experimental Investigations on the Simplest Psychical Processes.—S. Exner, Pflüger's Arch., vii., 601, viii, 526, xi., 403, and 581, and Centralblatt, 1874 and 1876.

The author's experiments relate to the time which is necessary "to react in a conscious manner to a sensory impression;" he calls this time the time of reaction ("Reactionszeit"). In order to measure this time the moment when a stimulus was felt, was indicated by means of the right hand depressing a board whose movements were written upon a revolving cylinder; the moment of stimulation was also indicated upon the cylinder. The author found that, as a rule, under conditions as nearly equal as possible, slow moving and studious individuals have the shortest time of reaction (the smallest value was 0.1295 sec.,) the stimulus being applied to the left hand. In order to obtain a short time of reaction, the greatest attention is necessary. The resulting contraction is then executed to a certain extent involuntarily. The sensorium is prepared by central changes for the reaction, and a certain time is required before these changes again disappear. Long-continued experimentation tends powerfully to exhaust one. If the stimulus is very strong, or if the sensation is new to the experimenter, the time of the reaction is very much shortened. The same

result is obtained if one is excited artificially, and then one reacts just like after a fright. The point of application of the stimulus is of very great influence. The sparks of light produced by passing an induction shock through the eye were constantly most rapidly replied to; from the right to the left hand more slowly than from the left to the right, and slowest of all when the toes of the left foot were stimulated. The time of reaction diminishes with the strength of the stimulus and with increased practice, and increases with fatigue. Tea and morphia had no effect; on the other hand, with a strong dose of wine the reaction was executed with unconsciously greater violence, and the time of reaction increased, whilst the experimenter believed that the opposite was the case.

The time of reaction, which in the author's experiments on different individuals varied from between 0,1295-0,9952 sec. [from the left to the right hand], yielded very constant results in the same individual, and is composed of several factors. The rapidity of the conduction in sensory and motor nerves, together with the time necessary for the discharge of the muscular contraction, are all known from the researches of previous authors. The shortest time of reaction with direct electrical stimulation of the retina, was not inconsiderably (0,0213 sec.) less than that by stimulation by means of the image of an electric spark. Nevertheless there are sources of error in these investigations, one of the most important being the impossibility of choosing stimuli of equal strength in comparative experiments. The sensory conduction of the spinal cord was estimated by comparing the time of reaction on stimulating the toes and stimulation of the fingers. The rapidity of the conduction is equal to 8 meters per sec., whilst the motor conduction—so calculated that at one time the signal was given with the hand at the other with the foot—gave a value of 11-15 meters. The time during which the centripetal excitation became converted into the centrifugal "the reduced time of reaction" was found to be equal to 0.0775-0.9426 secs. It determines the differences in times of reaction in different individuals and under different conditions.

In the above experiments, in which the reaction occurred after a momentary stimulus, the time of reaction indicates the error in the estimation of the time. It may be very nearly estimated in successive experiments (to 0.01 sec.) whether this error increases or diminishes. If a stimulus is applied to a sensory organ it does not act suddenly, but if we take care (*e. g.* in rhythmical stimuli whose succession can be easily learned, or in astronomical observations) to react so soon, that the moment of signaling coincides with the impression made on the organ of sense, the error is nothing, but the variations from this mean are very considerable. This agrees with the experience of astronomers that the "personal difference" becomes smaller when departing from the ordinary method, the *sudden disappearance* of a star is used as the moment of signaling.

In a second paper the author seeks to estimate the time which is necessary for the discharge of a reflex act. He selected the reflex time for marking, and produced this by a method fully detailed in the original, at one time by an electrical spark passed in front of the eye, at another by electrical stimulation of the fibres of the trigeminus. In the former case the reflex excitability was not only greater, but was subject to more considerable variations than the analogous time of reaction. In the latter case it was not inconsiderably smaller, but varied relatively more than the former. The reflex time became smaller with increase of the stimulus.

The author is also convinced that similar physiological processes are connected with the reflex and reactionary phenomena.

If strychnine is given to a frog, and its nervous system be stimulated by passing a slyte into it at different heights, then the contractions of the gastrocnimius whose movements are written on a revolving cylinder, follow after varying times. The time of reaction is greatest and tolerably constant on stimulating the cerebrum, and mid-brain; it becomes suddenly smaller after stimulation of the medulla oblongata, and with stimulation still further down it diminishes very gradually; again it becomes suddenly smaller on stimulating the point where the periphral nerve passes into the cord. From this the author concludes "that the result of a stimulus applied to the brain becomes accelerated in the cerebral ganglia, that after leaving these it traverses the spinal cord with considerable rapidity, and before it passes into the roots of the nerves it again suffers an acceleration.

Two successive stimuli acting upon an organ of sense, are only known not to be simultaneous when the time which elapses between the beginning of both does not fall below a certain limit. The cognisable difference in time between two such sensory impressions, the author characterises, are "the smallest difference." The smallest difference will vary according to whether the successive sensory impressions are applied to the organ of sense or to analogous elements of a paired organ of sense, or to elements of different sensory organs.

I. *Sense of Sight.*—The smallest difference on stimulating the same elements of the retina has been investigated by several authors. It amounts to about $\frac{1}{24}$ sec. from experiments on Plateau's discs; by electrical stimulation of the same fibres of the optic nerve this time is less than $\frac{1}{60}$ sec. The arrangement was so made that the central parts of the retina lay in the area of the greatest tension of the current. When the Neef's hammer of the induction machine made 60 vibrations per second, the impression of light was still not continuous. It is therefore obvious that the fibres of the optic nerve are less sluggish than the retina. In different elements of the retina the periphery conducts itself differently from the centre. Two points on the central part separated by 0.011 m.m. from each other, were stimulated by light from an electric spark, and the smallest difference was 0.044 sec. If the observer (Myope) removed to

such a distance that the two spheres of light around the sparks overlapped each other, the smallest difference with the same arrangement of the apparatus was only 0.015 sec., because in this case one obtained the impression of a movement, and the direction of such a movement is much more exactly recognised than the earlier occurrence of a spark.

The smallest difference is independent of the size of the pictures on the retina, of the distance from the retina, within certain limits, and also of the intensity of the light. For the peripheral part of the retina, with a certain distance between the pictures and the retina, an apparent movement was not to be avoided.

If the picture on the retina lay 3 m.m. above the other, as many below the forea centralis, the smallest difference was 0.055 sec., with lateral fixation 0.049 if one of the two signals was chosen as the fixed point, then the smallest difference between the centre of the retina and a point of the retina 6 m.m. removed therefrom, was = 0.076 sec.; if the observer fixed *with both eyes* the slit of a screen which was placed in front of the signals, and protected each eye from the spark, then the smallest difference = 0.017 sec. an apparent movement was noted.

II. *Hearing.*—Vibrations are intermissions which are made known to us by a group of sensory elements. Helmholtz says the vibrations between h ''' and c '''' can still be heard, there are 132 per sec., the smallest difference would therefore be 0.0075 sec. In as far, however, as in this case, 16 partly very weak vibrations of the tympanum occur between two pauses, Exner imagines that the time during complete pauses might be still smaller. A Savart's wheel, with only three adjacent teeth, which struck a piece of sheet iron, was turned with a velocity which increased till the double stroke became converted into a single one. The smallest difference for two stimuli of short duration was reckoned from the rapidity as = .002 sec. The crackling of two electrical sparks was heard separately when more than .002 sec. separated them. The smallest difference for different elements of the same ear is less than 0.1 sec., because Helmholtz's quaver sounded quite well when 8 to 10 shocks per sec. were given. Exner imagines that here also a smallest difference varying essentially, would be found if the two tones were only once sounded. The smallest difference between the two ears is 0.064. Two elastic balloons were struck one after the other, by means of an elastic spring. These balloons were provided with tubes which, by means of an adapter accurately fitted the auditory meatus, both springs were discharged by means of a pendulum. With regard to the senses of touch, taste, and smell, the author refers to the researches of other observers.

Smallest difference between dissimilar organs of sense.—As the signal for the eye an electric spark was used, for the ear the sound from a bell; when a sensory impression affected the eye and the ear simultaneously, the auditory impression was sooner felt than the visual one. The smallest difference in Exner's case was 0 16 sec. When the

visual impression preceded the auditory one—from the opposite 0·06 secs.—the visual impression occurs even somewhat later than the sense of touch. In another communication the author shews that the material changes which are the cause of different visual impressions—*e.g.*, after-picture—do not take place in one and the same part of the optic apparatus. By electrical stimulation of the fibres of the optic nerve it can be shewn that the positive similarly coloured after-picture must occur in the retina, and indeed all after-pictures take place in the retina. The retina is divided into two sensory zones; to these a third zone must be added in order to explain the phenomenon of the electrical rays of light (Pourkinje), which one sees on observing a burning coal in the dark; this coincides anatomically with the layer of nerve fibres. The phenomenon itself, according to Exner, results from the passages of the excitation from one channel to another.

Changes in the Cerebral Vessels under the Influence of the External Application of Water.—M. Schüller (" Deutsch. Arch. f. Klin. Med." xiv. 566, and " Centralblatt," no. 36, 1875) trepanned the skull of rabbits, and found that an obstruction to the out-flow of venous blood, disturbance of the respiration, or pressure on the abdomen, produced strong injection of the pia mater. After section of the vagi this effect was not produced, on account of the preponderance of the inspiratory movements. Fear and pinching, generally produced narrowing of the vessels, sometimes after previous dilatation. Ice applied to the exposed dura mater produced marked narrowing of the vessels, which was much weaker on the side from which the cervical sympathetic and the ganglion supremum were excised. Cold applied to the abdomen produced an instantaneous dilatation of the vessels of the pia on the uninjured side, and generally no change upon the injured side. A moist, warm compress on the abdomen, on the contrary, produced narrowing, which was succeeded by dilatation upon the compress cooling. Complete immersion, as a general rule, acted like a compress. The injection of cold, and generally also of warm water into the rectum dilated the vessels. Packing with the wet sheet, whereby the animals became sleepy, was followed by a very temporary dilatation, which gradually passed into constriction. Similar results were obtained during opium-narcosis, but not by dry packing. Rubbing of the abdomen or back is accompanied with constriction or varying changes in the calibre of the vessels, but in a weaker degree when the sympathetic and the ganglion supremum are extirpated.

The changes above described occurred also in curarised animals, although in this case the filling of the vessels of the brain was somewhat less pronounced. After section of the sympathetic at the second vertebra, there is a pronounced dilatation of all the vessels of the pia mater, and the application of water was without any effect upon it. Cold directly applied to the freely exposed cutaneous sensory nervous trunks which issue upon the back produced constriction; heat, dilatation of the vessels of the pia mater on the same side. Section of

individual cutaneous nervous trunks was accompanied by a temporary dilatation of the vessels of the pia on the same side.

The blood-pressure in the carotid, from manometric observations, rose rapidly when cold water was applied to the abdomen, and then fell considerably; with warm water application it was just the reverse, with flat variations.

The occurrence of all these phenomena is explained by the author through the changes in the supply of blood to the vessels of the pia in consequence of a constriction or dilatation of the peripheral current-areas in the skin. The movements of the heart and respiration are only indirectly concerned in the result, at one time assisting at another hindering. The reflex influence of the thermal stimulation of the cutaneous nerves upon the vessels of the pia mater is, according to the author, of subsidiary importance, and acts rather in an inhibitory manner. The second phenomena which occur with long duration of the stimulus, and which are exactly opposite to the initial phenomena, may be explained by the changes in the conditions in the cutaneous vessels and their consequences.

From the results of his experiments the author draws the following conclusions regarding the therapeutical employment of different applications of water to the human organism. It produces (1) a restitution of the normal vascular tonus (especially of the brain); (2) the restoration of normal blood and lymph currents in the brain; (3) diminution of overfilling of the brain with blood; (4) the restoration of the normal nutrition of the nerve elements; and (5) of the normal reflex relation between the cutaneous nerves and the brain. In the insane a "methodical" water-treatment is for the most part not to be trusted, because one cannot say how far the resistance of the cerebral blood-vessels is to be depended upon.

Changes in the Brain in Traumatic Inflammation.—L. Popoff ("Virchow's Arch.," xiii, 421, and "Centralblatt," no. 38, 1875) under v. Rechlinghausen's direction examined the brains of twelve individuals who died of abdominal typhus. In all there were changes of an acute active inflammatory character in the vessels, in the neuroglia, and in the ganglionic cells. In the first of these, viz., the vessels, the cells in the walls, or the fat and pigment cells applied to them, were in a state of proliferation, in the neuroglia division of the nuclei, and in the ganglion cells both active proliferation processes and penetration of wandering cells. The former manifested themselves in division and increase in number of the nuclei, then in division of the protoplasm, whereby the individual parts either did or did not possess a nucleus. With regard to the occurrence of wandering cells it is to be remarked that they lay partly round the cells (in the so-called perivascular spaces) and partly also within the nerve cells, and by the penetration of such cells, division of ganglion cells is often brought about. In the preparation these wandering cells fell out of the ganglionic cells, so that these latter appeared as if perforated. Beyond being in and

around the ganglion cells these wandering cells were arranged in rows around the vessels, and here and there along the nerve fibres, but still preferably on the ganglionic cells.

Essentially the same changes are to be observed in inflammatory processes, and specially in traumatic inflammations, which were produced in a variety of ways upon dogs and rabbits, only here the active changes in the nerve elements were more pronounced; whilst in typhoid fever the penetration of the wandering cells was in full operation before the proliferation phenomena in the ganglion cells occurred, and in addition many granule cells appeared which were quite absent in the case of typhoid fever. Very interesting are the experiments in which the author injected colouring matters, specially China ink, into the brain. This curious result was obtained, that a short time after the injection the chief mass of the pigment lay in the ganglion cells, which had evidently taken it up by virtue of their own forces, as wandering cells containing pigment which could have accounted for the pigment were absent, and as nothing similar could be produced in dead brains. At this time granule cells were still absent, but they were present in large quantities, and enclosed the pigment, after the inflammation had lasted longer, whilst the pigment could not, or could only in a very slight degree, be detected in the nerve cells. The author concludes from this that the granule cells which generally occur in the brain in acute inflammation are (in part at least) changed nerve cells.

In another paper in the "Centralblatt" the author records these results of the examination of the brains of three patients who died of exanthematous typhus in the wards of Professor Botkin, of St. Petersburgh. In this disease also the author finds (1) That there is a similar collection of the wandering cells in the perivascular spaces such as occurs in abdominal typhus; (2) There is also penetration of the wandering cells into the ganglion cells, and division of nuclei in the latter; (3) Infiltration of the neuroglia with young wandering cells; (4) The proliferation phenomena in the walls of the vessels are more pronounced and extensive here than in ileo-typhus. Infiltration of fat and pigment in the vascular walls may also be observed. Capillary extravasations are sometimes to be noted; (5) An interesting, but at the same time very striking result is the formation in typhus, of small nodules in the substance of the brain. They were found in the cortical substance of the cerebrum, cerebellum, corpus striatum, etc., and were 0·105-0·18 millimètre long, and 0·075-0·09 millimètre broad; they often had a rounded form. These nodules with a low power presented appearances very similar to miliary tubercle. Like the latter they were found generally, though not always, next the vessels. With high powers (300 diameters) these nodules were seen to consist chiefly of indifferent newly formed elements which could not be distinguished from lymph-corpuscles or white blood-corpuscles. Sometimes they consisted of such corpuscles

alone, and this specially in the peripheral finely granular layers of the cerebrum and cerebellum. Where, however, in fibrous tissue nervous cellular elements were present in considerable proportions, as in other layers of the cerebrum, in the corpus striatum, other elements, nearly as large as the nuclei of the ganglion cells entered into their composition. The changes already described in the nerve-cells are often very pronounced around these nodules. In the first described form of nodule, consisting of indifferent elements like white blood-corpuscles, there is never a finely granular degeneration of the central part to be observed as is often seen in tubercle. Neither giant-cells nor a special stroma were to be observed. These nodules, from their character and origin, are apparently completely analogous to the nodules, described by Wagner as occurring in some parenchymatous organs, such as the liver and kidneys in abdominal typhus. These nodules were observed in two cases out of the three. The relation of these nodules to the brain-symptoms, owing to the epidemic being at an end, was not made out. In both cases the patient died on the fourteenth day (" Lond. Med. Recd.," 1873).

Physiology of the Cerebellum.—H. Nothnagel (" Centralblatt," No. 22, 1876), from a series of experiments on the cerebellum of rabbits, has arrived at the following conclusions:—(1) The cerebellum can be stimulated mechanically by a minimum puncture with a needle. (2) The motor phenomena can be discharged from different parts of the hemispheres and from its vermiform process. It is not necessary that the deeper parts adjoining the crura should be stimulated mechanically. (3) Mechanical stimulation of *one* hemisphere of the cerebellum produces motor phenomena first on the one and then on the other side of the body. The same is produced by injury to one side of the vermes; stimulation of the vermes in the middle line produces simultaneously motor phenomena on both sides. (4) One may remove (*a*) the greater part of one hemisphere, (*b*) greater part of both hemispheres, *i.e.*, with the exception of the direct continuation of the crura, (*c*) or the entire anterior and upper part of the vermes, and the animal may remain several days without shewing any symptoms thereof. (5) Destruction of a distinct portion of the vermes, however, produces intense continued motor disturbances which agree with those described by Flourens.

On Disease of the Brain. F. Karrer and C. Stark (" Berlin Klin. Wochenschr.," 1874, Nos. 31 and 33).—K.'s case relates to a strumous girl suffering from melancholy, who several months before her death had had spasmodic seizures without loss of consciousness. The spasms at first only affected the right arm, later the muscles of the neck on the left side, and ultimately passed into complete epileptic attacks with loss of consciousness. On post-mortem examination there was found tubercular meningitis, and in the posterior part of the left hemisphere a greenish-yellow coloured area $4\frac{1}{2}$ c.m. long and nearer the middle line three or four similar nodules. The area affected

the surface of the gyrus occip. primus. Whilst the right hemisphere was quite free, there was a greyish-yellow coloured nodule the size of a pin's head on the margin of the left median frontal convolution. The partial spasms of the right arm, according to the author, were due to irritation of the cortex from the presence of the tumour in the posterior part of the brain, which physiological experiments, however, have not yet shewn to be motor in function.

In S.'s case continued contractions in the muscles supplied by the left facial nerve, and also in the masticatory muscles supplied by the motor branch of the fifth, occurred in a woman suffering from progressive paralysis. The extremities on the left side were only temporarily and very slightly affected, and only when the contractions of the facial muscles on the left side were very strong were the right side of the face and the right hand affected. Later a temporary lateral turning of both eyeballs towards the left, in which position they executed quick spasmodic movements from right to left. Post-mortem examination shewed several parts of the surface of the brain excavated into little pits; these pits represented cystic dilatations of the pia, and there the surface of the brain was irregular and atrophied. The author lays special weight upon a cyst lying in the upper part of the right sulcus præ-centralis, which compressed the root of the second frontal convolution and the lower part of the anterior central convolution; and by its gradual compre sion excited these parts, which, by the stimulation of the centres for the left facial nerve, the muscles of mastication on the left side and the straight muscles of the eyeball could have produced the symptoms described.

Aphorisms on the Pathological Anatomy of the Central Nervous System. R. Arndt ("Virchow's Arch.," 1874, lxi. 508-516).

I.—Pigmentary degeneration of the grey sheath of the nerve fibres in the intervetebral ganglia of a patient suffering from tabes.

II.—Tubercular degeneration of the grey sheath.

III.—Division of the axial cylinder.

IV.—Nerve fibres with nuclei.

The author has found nerve fibres in the brain, spinal cord, and spinal ganglia, whose axial cylinders contained oval nucleated and nucleolated structures. By embryological investigations he has convinced himself that normally, at a certain period of development, such structures occur not only in nerve fibres, but also in the processes of ganglionic cells, but that they ultimately disappear completely. He, therefore regards these nerve fibres as imperfectly developed, and as having remained at a lower stage of development, and having found the former only in the insane, the latter only in paralytics, he is inclined to seek the cause of congenital neuro- and psycho-pathic diathesis in this retardation of development.

On the Alterations of the Central Nervous System in a Case of Chorea, associated with Mental Aberration. C. Golgi ("Rivista Clinica," 1874), in the introduction, discourses on the different facts

which appear to shew that chorea is of central origin. (1) Heredity of chorea. (2) Hereditary relations of chorea to other diseases of the nervous system. (3) Origin of chorea from psychical causes. In addition to these three causes there ought specially to be mentioned those cases of chorea in which psychical changes are added to the disturbances of motion; in fact, a survey of the literature shews that the greater number of pathologists ascribe a central origin to chorea. In most of the cases where a post-mortem examination was made, changes in the central nervous system were detected, but of so varied a nature that up to the present time no distinct relation between the chorea and any distinct anatomical nerve centre were detected. The case communicated by the author refers to a man who was born of an hysterical mother, and who died at the age of 42 of pneumonia. In his youth he had indulged much in baccho et venere; at the age of 32 chorea appeared, at first accompanied by maniacal excitement. In the first two or three years periods of complete remission, as well of the motor as of the psychical symptoms occurred; later the remissions disappeared altogether, and the disturbances of motion became chronic; at the same time a chronic condition of mental weakness, incapacity to follow regular instruction, difficulty in articulating words occurred. The year before his death furious delirium set in; the autopsy shewed the following:—A thick false membrane covered the whole of the right hemisphere, the pia mater was generally greatly thickened, the frontal and temporal convolutions were moderately atrophied; their ganglion cells were sclerotic, atrophied, or had undergone fatty-pigmentary degeneration. The ganglion cells of the corpora and the large ganglion cells of Purkinje of the cerebellum were calcareous; the posterior and lateral columns of the spinal cord shewed a secondary descending sclerosis.

In his critical observations the author refers to the great similarity between the pathological results of this case and the pathological anatomy of dementia paralytica. In this case also, just as in dementia paralytica, the interstitial connective tissue of the cortex was increased, whilst the ganglion cells had undergone degeneration. Specially noteworthy is the calcareous degeneration of Purkinje's cells; this has only once been described before by Roth. In the case of Golgi the fatty degeneration was not, as is usually the case, limited to one area, but it had a thoroughly diffuse character in as far as here and there single cells or even single processes of cells were affected.

On Epilepsy. Rinke ("Berlin Klin. Wochenschr," 1875, No. 37).—Rinke had a case where a soldier who had just recovered from typhus had epileptic seizures every evening. The author, by an experiment analogous to that of Brown-Séquard (stimulation of the skin of the neck in guinea pigs rendered epileptic), sought to produce attacks in his patient, which was successful when a stimulus, *e.g.*, mustard plaster, was applied to the skin between the

levator scapulæ and sterno-mastoid muscles. The experiment also succeeded when the patient, by the use of bromide of potassium, had remained for months free from spontaneous attacks.

On the Psychoses of the Pregnant and Puerperal Conditions.—C. Fürstner ("Arch. für Psych.," V.S. 505) observes that in pregnant women melancholy chiefly occurs, mostly running a simple and favourable course when occurring in the earlier months, of a severe and more protracted form in the later months of pregnancy. Of the puerperal psychoses melancholy proper is the principal form, mania the rarer. The author gives in both especially favourable prognoses; as to the question whether there is a special form of disease peculiar to pregnancy, the author answers in the affirmative. Its characteristic sign he regards as an acute, intense setting in of the first symptoms which in a few hours, and even in less time, may go on to complete delirium, accompanied by the most pronounced motor excitement. This delirious condition seldom lasts longer than three months; is characterized like its acute beginning by extremely pronounced sensory delusions, and then passes tolerably rapidly into a somewhat "stupid" stage. This latter description, however, only relates to the appearance presented by the patient. She takes notice of what surrounds her, motor impulses occurring quite suddenly which interrupt the stupid condition are to be explained by the sensory delusions. Convalesence often occurs very rapidly, corresponding to the disappearance of the sensory delusions. An abortive form of this disease, occurring quite as often when the first stage is only developed, lasts from six to eight weeks, not passing into the stupid stage but out into recovery. The prognoses of the complete as well as of the abortive form is generally favourable.

Transmission of Artificial Alterations to Two Generations.—E. Dupuy ("Gaz. Med.," No. 33, 1875) shewed the Society of Biology of Paris guinea pigs, which presented the peculiar changes in the medulla following section of the cervical sympathetic. These guinea pigs were the offspring of animals which had inherited this peculiarity from their parents originally operated on. Here, therefore, there was a transmission of an artifically produced condition to the second generation.

On Induced Somnambulism.—Ch. Richet ("Journ. de l'Anat.," 1875, p. 348) has made his experiments on about forty persons (including two men), and concludes—(1) That we can, by so-called "magnetic lines," as well as by fixing the attention on a shining object, and by other empirical but little known and unreliable procedures, produce a neurosis analogous to somnambulism. (2) This is with difficulty produced the first time, it generally appears when the process is repeated several times. If it has been once produced then it can be easily produced again. (3) All the phenomena to be thus observed may be explained by known physiological and psychological facts, and may be observed to a greater or less extent in some intoxications

(alcohol, chloroform, Hachisch), and in different nervous diseases (hysteria, epilepsy). (4) Specially characteristic are the phenomena of hallucinations, which can be produced, as often as one wishes, representing a complete automaton, so that the person affected is subject to the will of the experimenter, and feels sensations about which one speaks to him.

Development of the Corpus Callosum and Fornix.—Dr. V. v. Mihalkovics ("Centralblatt," No. 19, 1876).

Amyl-Nitrite.—Kelp ("Deutsch. Arch. F. Klin. Med.," xv., p. 602) has given this substance in doses of five drops two to four times daily to five patients (three men, two women) suffering from melancholia stupida, without having produced the slightest result on the psychical condition of the patients.

On a Case of Protopathic Spinal Muscular Atrophy.—Charcot and Gombault (Type Duchenne Avar, "Arch. de Physiol., etc.," 1875, No. 5) had an opportunity of observing a case of long-standing progressive muscular atrophy. The disease had, in the course of more than twelve years, led to the disappearance of the greater number of the muscles of the upper arm and shoulder in the patient, a woman of about 50 years of age. The lower limbs were tolerably well preserved. Their very complete investigation of the nervous and muscular systems yielded the following results:—The cerebrum, cerebellum, pons, and medulla oblongata with its nuclei were unchanged. The grey substance of the cervical and dorsal spinal cord was much changed, the degeneration gradually diminishing upwards and downwards from the lower part of the cervical enlargement. There the nerve cells and the nerve fibres which traverse the grey anterior horn in all directions had disappeared. The capillaries of these parts were enormously developed, the walls of the smallest and largest vessels thickened. The lumbar portion of the spinal cord and its lateral columns were normal; there was sclerosis of portions of the cord close to the exit of the anterior roots in the cervical and dorsal region. The ganglion cells occurring there were enormously diminished in size, without processes, more pigmented than normal, but still containing nucleus and nucleolus. The anterior roots of the cervical region were atrophied; sheaths either empty or often filled with large nuclei took the place of the normal fibrillar contents; the posterior roots appeared normal. In the peripheral nerves more than two thirds of the nerve tubes had disappeared; the greater number of the muscles of the shoulder girdle and upper extremity were atrophied; there was simple atrophy of the primitive bundles without coarser changes of the fibres, or any extraordinary development of the inter-fibrillar adipose tissue. The author proceeds from the stand point that the affection of the grey matter of the spinal cord is the primary part of the process in this disease, or, as he calls it, proto-pathic muscular atrophy or tephromyelitis.

Asymmetry of the Grey Matter of the Spinal Cord.—P. Schiefferdecker

("Arch. f. Micr. Anat.," xii., p. 87) has found that in perfectly healthy spinal cords, and without any functional disturbance being observed during life, a not inconsiderable asymmetry of both halves of the grey substance, both as regards form and position, may occur. The former case refers to a dog, the latter to a man. In both cases the asymmetry was distinctly limited to single vertebræ; in the dog to the region of the second cervical and the seventh dorsal, in man to that of the sixth cervical and the fourth to the sixth dorsal vertebræ.

Anastamoses of Nerve Cells in the Spinal Cord.—A. Willigk. Virchow's Arch., lxiv., p. 163, describes four cases of undoubted anastomosis of nerve-cells from a diseased spinal cord (Embolism). These were undoubtedly normal conditions, which, on account of the small amount of sclerosis of the inter-ganglionic substance, were easily detected.

On the Course of the Fibres in the Spinal Cord. P. Schiefferdecker ("Arch. f. Mikr. Anat.," x., 471.) arrives at the conclusion that the fibres of the spinal cord are so arranged that they serve to connect the different parts with one another in the most varied manner. For this purpose they pass partly out of the white substance in different ways into the grey, and partly become mixed with the latter in the most different manner.

Fibres which spring from different parts of the white substance go to the same part of the grey substance, or *vice versâ.* Fibres having a different destination, and which take origin in the same part of the white substance, pass in different ways into the grey, or pass at least into it at the same height. In the grey substance they form partly simple networks without ganglion cells, partly processes, which unite the different parts with each other, such as the anterior and posterior commissure.

On the Condition of the Nerve Cells in Embolism of the Spinal Cord. A. Willigk ("Prager Vierteljahrsschr," 1875, iii., s. 41).—In the neighbourhood of small, thickened sclerotic vessels of the spinal cord, plugged up by emboli, the author found in the grey substance pronounced proliferation of fine fibrillar connective tissue, rich in cells, in whose neighbourhood well-preserved ganglionic elements were scarce, their place being taken here and there by amorphous hyaline bodies, without nucleus or processes. Similar changes were exhibited by Clarke's column. The changes in the anterior horns, however, were most interesting; whilst the greatest number of their large multiplar cells presented throughout a normal appearance, there existed close beside them faintly glancing cells, whose body was only partly coloured by the carmine, and also completely colourless cells of enormous size, which, with a low power, appeared like masses of colloid matter, but which, under a high power, exhibited distinct processes and a pale nucleus. In the neighbourhood of such diseased cells, a thrombus of small vessels was generally to be found. The neighbouring tissue,

however, was unchanged, and exhibited no trace of proliferation of connective tissue. Here, therefore, in consequence of embolism, disease of several nerve-cells had occurred which may, perhaps, be regarded as genuine colloid degeneration.

On the Pathology of Sunstroke. K. Köster ("Berlin Klin Wochenschr," 1875, No. 34).—In the case of a soldier, who died from sunstroke, found the following appearances: Extravasation of blood into the ganglion supremum of the right cervical sympathetic; the ganglion was increased to about double its volume, its nerve fibres were separated one from the other and broken up; small hæmorrhages were found in the lower, larger ones in the upper part of the right sympathetic. In and around both vagi, in the sheaths of both phrenics, there were also extravasations, and at the lower part of the neck in both parotids there was hæmorrhage into the vascular sheaths; the brain was slightly hyperæmic; under the ependyma of the left ventricle there were several small ecchymoses; the lower lobe of the right lung was infiltrated with blood; ecchymoses were found under the peri- and sub-cardium of the left ventricle.

The author describes similar results as occurring in the case of a syphilitic woman where excessive increase of temperature could not have been the cause of death. The author makes future observers aware of the possible occurrence of disturbances of the vaso-motor and respiratory nerve centres which must occur in a pronounced form in patients suffering from sunstroke.

On the Pathology of the Cervical Sympathetic. P. Guttmann ("Berlin Klin. Wochenschr," 1875, No. 32) observed that in the case of a man of about 40 years of age, suffering from tubercle, the left half of the face and the neck became covered with sweat whenever he took even moderate bodily exercise. The left half of the face and specially the left ear became red, and the temperature in the left external auditory meatus rose several tenths of a degree above that in the right; atrophic disturbances were not observed on the left side, but they were clearly pronounced in the left eye, which was prominent, freely movable, while the conjunctiva was strongly injected, and tears sometimes flowed more readily from the left than from the right eye; the left pupil was wider than the right, but was sensitive to light; vision was normal.

This case is of interest, because of the abnormal secretion of sweat on one half of the face, and also because the phenomena are of a vaso-motor nature dependent upon the sympathetic and pointing to a paralysis of the corresponding fibres; whilst the occulo-pupilar phenomena must be regarded as the result of a stimulation of the corresponding fibres. The area of the left facial, trigeminus, and occulo-motorius (no disturbance of accommodation) was throughout intact; there was slight sensation on pressure in the region of the left cervical sympathetic, probably indicating a chronic inflammatory condition of this nerve trunk.

3. *American Retrospect (continued).*

The Chicago Journal of Nervous and Mental Disease. Vol. I., October, 1874.

October, 1874. No. 4. *Pathology of the Vaso-Motor Nervous System* (Lecture iv), by J. S. Jewell, M.D. *Cases of Hysteria, Neurasthenia, Spinal Irritation and Allied Affections*, with remarks by George M. Beard, M.D. *A Case of Hydrophobia in a Child*, by Addison H. Foster, M.D. *On the Action of Certain Medicines on the Cerebral Blood Vessels*, by Dr. Max Schneller. *On the Dilating Vaso-Motor Nerves*, by Prof. Fr. Goltz. *Notes on the Nitrite of Amyl*, by Dr. J. Crichton Browne. Reviews, &c., &c., &c.

Vol. II. 1875.

January, 1875. No. 1. *Pathology of Epilepsy*, by J. S. Jewell, M.D. *Aphasia*, by A. D. Rockwell, M.D. *Researches on the Functions of the Brain*, by M. M. Carville and Duret. *Illustrations of Heredity: Influence of both Parents on the Children*, by Prof. Ransom Dexter. *The Management of Delirium*, by J. Milner Fothergill, M.D. *The Automatism of Memory and Association in Pathological Somnambulism*, by Dr. E. Mesnet. Reviews, &c., &c., &c.

April, 1875. No. 2. *The Relations of the Nervous System to the Uterus*, by J. S. Jewell, M.D. *Nitrite of Amyl in Epilepsy: Experimental and Clinical Observations*, by J. H. McBride, M.D. *The Movements and Innervation of the Iris*, by Dr. H. Gradle. *Angina Pectoris*, by J. H. Hollister, M.D. Reviews, &c., &c., &c.

July, 1875. No. 3. *The Movements and Innervation of the Iris*, by Dr. H. Gradle. *Some Practical Observations on Exophthalmic Goitre and its Treatment*, by Roberts Bartholow, M.D. *The Atheromatous Process in its Relations to the Brain*, by Karl Hertzka. *On the Hypodermic Administration of Ergotine in Certain Cases of Acute Mania*, by Dr. A. H. Von Andel. Reviews, &c., &c., &c.

October, 1875. No. 4. *On the Existence of Definite Motor Centres in the Cerebral Cortex*, by J. S. Jewell, M.D. *Pathology of Drunkenness: Is it a Disease or a Moral Delinquency?* by N. S. Davis, M.D. *Two Cases of Exophthalmic Goitre associated with Chronic Urticaria*, by D. Duncan Bulkley, M.D. *On Chronic Subacute Neuritis*, by H. M. Bannister, M.D. *Paralysis of the Vagus*, by Franz Riegel. Reviews, &c., &c., &c.

It will not be necessary for us to notice the majority of the papers given in the tables of contents, as they are chiefly systematic lectures, translations and reprints, but there can be no doubt that the "Chicago Journal" must be most interesting to its readers as each number contains a "Periscope," giving excellent and full abstracts of papers on

—1st, the anatomy and physiology of the nervous system; 2nd, the pathology of the nervous system and mind, and pathological anatomy; and 3rd, therapeutics of the nervous system and mind.

Cases of Hysteria, Neurasthenia, &c.

Dr. Beard is engaged in preparing a work in which he hopes to *unify* those diseases of the nervous system usually known as functional, and "to show that they have in general a common pathology, a common history, a common group of symptoms, and a common therapeutics." He "shall seek to show that these diseases, or symptoms of disease—or, as they might, perhaps, with better justice be called, results of disease—are expressions of a common nervous diathesis; that they are liable to run into each other, and to act vicariously to each other; that they are a part of the price we pay for civilization, being confined mostly to the enlightened peoples of modern times." Dr. Beard treats all these affections on the same general principles, and depends mainly on general *faradisation* and *central galvanisation.* Internally, he uses preparations of phosphorus and cod-liver oil, and sometimes arsenic. He uses largely cod-liver oil emulsion, and has seen good results from the oxide and phosphide of zinc and chemical food. Externally he employs ice and hot-water bags to the spine and cautious counter-irritation.

Illustrations of Heredity.

Whatever value may be attached to the cases detailed by Dr. Dexter, his general propositions are reasonable enough.

1. The natural healthy constitutions of father, mother, and their ancestors, are blended in their offspring.

2. The offspring of healthy individuals are likely to inherit the cast of the more strongly constituted parent, or the particular organs most highly developed as they may appear in either of them.

3. In the acquired constitutional change, whether of disease or development, the impression may be so strongly made that the tendency to reproduce it again is stronger than to resume the normal condition.

4. Strong mental impressions of either parent, though of comparatively short duration, may prove to be dominant in the offspring.

5. There may be a duality in some instances, of mental impressions in the offspring on the same subject, having resulted from conflicting influences in the minds of the parents.

6. That parties whose ancestors have been drunkards, and who are constitutionally affected from that influence, show it in the lineaments of their bodies, as well as in their mental peculiarities.

Two cases are given in illustration of the fifth proposition. The second case is so amusing that we reproduce it verbatim, leaving the reader to judge as to the value of such a history.

N. J., the subject of the following peculiar history, has attained the

age of about forty; both he and his ancestors were healthy, industrious and intelligent.

Although alcoholic beverages were used quite sparingly by his parents, the mother when pregnant was in the habit of using them several times daily until her confinement. But just before becoming pregnant with the subject of these remarks, her eighth child, a strong temperance movement was instituted in the section of country in which his parents resided. His father being a minister, was naturally expected to take the lead in the good cause. Both parents taking an active part in the endeavour to suppress the use of alcoholic liquors, of course forbade the accustomed use of the beverage even in the delicate situation in which she had now become. During the latter months of gestation, a great conflict ensued between the appetite for the beverage to which she had been accustomed, and the moral restraint to which she had subjected herself. The appetite growing stronger as gestation advanced, was a source of great discomfort; but the moral restraint and the power of the will held the entire mastery.

The effect upon the offspring was specific. The boy when quite small was often the object of observation. Quite to the surprise of his parents he manifested the same peculiarities of appetite and sentiment that possessed his mother during her stage of gestation with him. If there was any spirituous liquor anywhere near him, he would be frantic to get a drink of it, but strange as it may seem, would be glad when it was placed beyond his reach.

This gentleman reports, and his veracity is perfectly reliable, that from his earliest recollection he has always had a strong appetite and desire for alcoholic liquors, but is cognizant of the accompanying automatic action of the will, which enables him to abstain from them. He says that he has a conscious sensation within his own mind, that the desire for these liquors is coupled in his mind's action with the will-power that enables him to abstain from their use. In short, he has a duality in the operations of his mind transmitted from his mother, and exactly as she had them.

Nitrite of Amyl in Epilepsy.

As the result of clinical and experimental observation, Dr. N. Bride concludes that those cases of epilepsy in which there is a distinct aura are the cases in which the nitrite of amyl promises most good.

PART IV.—NOTES AND NEWS.

QUARTERLY MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION, HELD AT GLASGOW.

A meeting of the Medico-Psychological Association was held on the 3rd March in the Hall of the Faculty of Physicians and Surgeons, Glasgow. Present: Professor Gairdner (who presided), Drs. Yellowlees, Alex. Robertson, Clouston, Anderson, J. A. Campbell, Coats, Fred. Skae, Rutherford, Wickham, Charles Skae, Stewart (Kirkintilloch), Jas. Maclaren, Dove, McCalman, and Stainthorpe. Letters of apology were received from Drs. Howden and Batty Tuke.

The CHAIRMAN said that the Association was always welcome when it met in Glasgow, though not many of their brother practitioners attended unless the subjects to be discussed were of very special interest. The first thing on the card was the exhibition of pathological specimens.

Dr. M'LAREN exhibited the cast of the head of a microcephalic idiot child, whose father and mother were drunkards. This creature was perfectly devoid of intelligence, and very badly nourished. It lived a sort of vegetative existence.

The cast having been examined,

The CHAIRMAN then proceeded with his own communication, which he said he made quite as much in the hope of receiving as of giving instruction. It was one of those communications which might be said to be entirely founded on facts. It would be very easy to preface it by a pretty long discussion or disquisition upon the different subjects that would come under observation. But as a mere statement of the facts would occupy time, he would omit all kinds of preliminary remarks, with the exception of these few. The forms of nervous disease, of which he had got the living illustrations downstairs, were in two cases, he thought, forms that all present would recognise as having certain relations of comparison with general paralysis of the insane. One of the patients, however, was not only very sane, but he was a man quite above the average in his mental balance. He was a man, whether regarded from the side of intellect or emotion, rather superior, and seemed to be as sane a man as was going. As to the other man, there had not been such a long period of observation. He belonged to a lower grade of society, and was altogether a lower type of man. He was also a man who might have injured his system in various ways. He would not defy any of the gentlemen present to find some lurking insanity about this man. But roughly speaking he was a sane man. These two were the cases which bore a certain relation to general paralysis. The object of this communication was not so much to discuss the subject as to place the cases before the meeting and to invite the remarks of the members present upon the diagnostic distinctions between these two cases and general paralysis. He had repeatedly met with cases which puzzled him in this way. But meeting them as he did, entirely almost from the side of general consulting and hospital practice, it seemed to him that he approached them as it were from a different side from the members who must have a far greater experience of cases of which insanity was the principal element. It appeared that by combining their observations they should both gain—that is by bringing side by side the observations of a general hospital physician with those of gentlemen whose field of observation lay within asylums. The third case was one which he brought there, simply for the purpose of comparison. It was not a case of his own. It was under the treatment of Dr. Finlayson, who, he had hoped, might have been here to-day, but who was necessarily detained elsewhere. Any explanations

that were wanted might be had from the report in the Journal (see p. 256), or from Mr. Stainthorpe, who had the reporting of the case and who was present. It was a typical case, in most respects, of locomotor ataxy. It was many years since he had his attention drawn to the difference between general paralysis and locomotor ataxy as regards the mode of progress. A good many years ago, when the British Medical Association were meeting at Oxford, he formed a little party to go through some of the asylums in London, with the view of looking at that point. Mr. Lewes, the well-known author, and Dr. Baxter were of the party. Two or three hospitals were visited. It struck him at the time that considerable obstacles were encountered in getting into Hanwell—indeed, it was closed practically to them for the purposes of observation on account of some crotchet—but they made their way to Colney Hatch, and took observations. They were impressed with the differences between locomotor ataxy and general paralysis with regard to the mode of progression—differences that had been pointed out by Duchenne in his well-known book. He (the Chairman) had brought this case for the purpose of comparison. To begin, then, the first case he wished them to notice was that of a man, aged 50 years, a watchmaker (see p. 250). This was the man who, to the Chairman's mind, was emphatically sane and quite able to appreciate every word which was said to him. The summary of his case was this: Defect in articulation and gait, observed nine months ago, followed by imperfections of the minuter movements of the fingers which his occupation as a watchmaker brought into prominence; sensibility absolutely intact, whether of the legs or arm. The gait was characteristic of locomotor ataxy; but as the man would be seen that day there would be recognised a considerable similarity with general paralysis. The intellect and emotions had been set down as sound. He was a temperate man, with no marked tendencies to excess, either sexual or alcoholic. The only ground upon which sexual excess could be presumed was that his wife never had any children. She miscarried the first time, and it was supposed she had received some injury in the uterus. His physical conformation was robust, and there was no trace of fever since he came. The other points in the case were accessible in the report. But perhaps the best way would be to bring the man up, and then any questions could be answered about him. He had always enjoyed good health till the present illness, which began about two years and a-half ago with a difficulty of walking and performing the minuter manipulations of his occupation. It was eighteen months since he experienced defective articulation, which had made gradual progress, and was worse now than it had ever been. There was no inequality in the pupils, and all the special senses seemed to be perfect. When he stumbled it was always to the left side. He always made such a case walk the plank, which was the navy test for drunken men. His gait was worse going down hill. He could walk pretty well with his eyes shut; and standing with the eyes shut he did tolerably well.

The patient was then introduced, and, in answer to questions put by the members, he said that the first thing he noticed was that he got stiff and could hardly walk. His speech was good a long time after that. The first thing he noticed was in the shop, when he told the boy to go for two sixpences for a shilling. He could not pronounce the word "sixpence." Patient then pronounced imperfectly the words "perpendicular," "Constantinople," and "truly rural."

The Chairman—I think the linguals are the worst.

The patient further stated that the right hand was all right, but the finger next to the little finger of the left hand shook. He was sometimes restless in the legs and feet. He never had a fit in his life, and he heard perfectly with both ears. He could show both gums and could whistle. He pronounced "practising" with difficulty. His grasp was perfectly strong, and there was no great tremor. His friends did not think he had altered in the expression of his face, but they noticed his speech and walk. He had never taken any

stimulants since he felt this, but a glass of porter. He got tired after walking half a mile. He had never a pain in his head, but he had a queer feeling in the whole of his head. He never heard funny noises, nor did he ever see flashes of light. He never got a fall or hurt. He was 50 years of age, and was of an anxious temperament, and took his business keenly to heart. He had no darting pains in his legs. He had a custom of shooting his leg in bed. Both his hands gave way at the watchmaking at the same time. The right hand was pretty good yet. It was the left hand that went first. He did not know when his father died. As a watchmaker he constantly used the magnifying glass to the right eye. He thought he saw as well with the one eye as with the other. His taste was quite correct. He had always been pretty sober.

The CHAIRMAN—His pulse is not strong. The sensibility on the left side is quite natural.

Dr. CLOUSTON—I think the sensibility on the left side of the face is impaired.

The CHAIRMAN—It is the right that Dr. Yellowlees and I made out.

The patient then left, and the CHAIRMAN showed the writing before and after his illness, and said that there was a brother who had some kind of paralysis. The patient was remarkably free from emotional sensibility.

Dr. STAINTHORPE—It was found that when discussing theological questions he could hold his own quite well, and he conducted his business till he came to the hospital.

The CHAIRMAN—The arteries are probably a little senile; but there is nothing more marked than you would expect from his age. The pulses are rather feeble as compared with the heart's action. There is no great change in the symptoms since he came under observation; but they are rather better. He has been on strychnine.

The CHAIRMAN said that the next case was one which came to him within a few days afterwards. It was sent to him by Dr. Gorman, of Rutherglen, not to be treated in hospital, but to know whether it was a case of locomotor ataxy He (the Chairman) answered at once it was not a case of locomotor ataxy; but while he said that, he always admitted it was very difficult to know what it was:—

"T. H., a man of 45 years of age, a miner. Progressive imperfections of gait and articulation resembling in some points general paralysis, but devoid of insanity; gait not that of locomotor ataxy. Tremors in the right fingers, but steady grasp and no distinct paralysis; no tremors of lips; handwriting unsteady; muscles not at all atrophic; no imperfections of speech. There was just a possibility he had syphilis at 19 years; but pretty distinct history of sexual excess in marriage life, he admitting that he had had intercourse with his wife every day for years. Absolute negation of history of alcoholic excess; indeed, strict temperance; physical conformation average; instability of gait, disorder of articulation, together with such want of control of right arm as to incapacitate him for work since the beginning of September. According to his wife's statement, it appeared to take origin in a seizure of some kind, in which he bit his tongue. He had himself a perfectly distinct recollection of the occurrence. The tongue was severely bitten and bled considerably. His own expression was that his teeth 'went faster' than his tongue. He had never been so much disabled as at present."

"The patient was then admitted, and said that he never walked more than four miles, and that it was the arm that first went wrong; rather the tongue and then the arm. At least he noticed it in his speech first. It come gradually on, and always increased. All this was after he had bitten his tongue. He had no pain at all; but he had many a time a pain in the head. If he was stooping he had a sore back. This was before his illness, and had nothing to do with this. He had no flashes and darts of pain through him. He could not say whether it was long or short words that puzzled him. He could not pronounce the word 'corruptible' at all. The patient pro-

nounced distinctly 'Constantinople' and 'perpendicular.' If he took time he could speak well enough; but if he spoke fast his speech went away, and one word came upon the top of another. The patient then pronounced three times pretty well the words 'truly rural.' The patient then said that sometimes he had great pains in the right side of his neck. There was a want of feeling in the lips on the right side. His memory had been bad for 20 years. He never had any rheumatic pains. He had not the slightest emotional tendency. He was always ticklish. He had no family by his second wife, but a large one by his first one. He could see well enough that day, but he could not see well the two days before yesterday. He did not think he had the sense of smell as well as he had before."

The patient then withdrew.

The CHAIRMAN said that the third case was a typical case of locomotor ataxy, and that nothing more could be said about it except the details:—

"D. R., aged 37 years. The case was one of Dr. Finlayson's. The locomotor ataxy was about nine months' duration; no distinct paralysis, but great loss of balancing; no distinct shooting pains; atrophy of the optic nerve of the left side with reduction of the field of vision; tightness across the abdomen; diminution of sexual desire; some affection of the bladder and rectum, causing urgency in attending to their calls; preservation of the sense of temperature; diminution of the sense of weight. As a remarkable contrast between this case and the first it was brought before the members. Tested by weight, a quarter-pound suspended over the right foot could be appreciated, while nothing under one pound could be felt by the left foot. The man first introduced felt half an ounce with either foot. This man, with his best foot, did not feel anything less than a quarter of a pound. He had improved a little under medical treatment. The patient said that he never noticed a double vision till his attention was drawn to it. He could see much better when he shut the left eye; but when he opened the right one it caused mistiness to come over the other one. His speech was not at all affected. He felt it from the thigh downwards. He could not write steadily. He was a gunmaker. He was more affected in the left than in the right leg. He got tired very soon."

The patient then withdrew.

Dr. CLOUSTON said that they were much obliged to Dr. Gairdner for having brought these cases before them. But he had not the same difficulty in his own mind with regard to such cases as some people seemed to have. He did not attach "insanity" necessarily to general paralysis. General paralysis was a disease with certain characteristics—especially motor characteristics and the quality of progression from bad to worse. According to his ideas of general paralysis, he would say decidedly that the first two cases were cases of that disease. They were affected as regards their motor centres exactly as general paralytics were. If in these cases there was mental weakness, there would be no room for hesitation. There were certain kinds of disease which puzzled them at times. He had been puzzled in the diagnosis between general paralysis and alcoholism, cases of tumours of the brain, and syphilitic disease of the brain. Latterly he had a very curious case under his care—it was that of a cab-driver, about the age for the occurrence of general paralysis. He was a reckless man, having indulged in all kinds of exhaustive excesses. In addition, he had syphilis with secondary symptoms. He began by having the symptoms of locomotor ataxy. That evidently went upwards. He had the articulation of general paralysis; but along with this the locomotor symptoms—the peculiar walk and diminished sensibility, and want of the sense of weight. He was paralysed on one side more than another. After death there were found distinct pathological signs of locomotor ataxy, and there were found also the ordinary pathological signs of general paralysis. In addition, there was an enormous mass of degenerated brain-tissue on the side opposite to the greatest paralysis. In the whole anterior lobe of one side, slightly fibrous

grey gelatinous substance was observed, so that there was no connection between the convolutions on the one side, and the convolutions on the other. Now, he considered this case was a complication of the two diseases and of syphilitic arteritis as well. His own opinion as to the real nature of general paralysis was, that it was a disease of the convolutions of the brain, and that without this there could not be general paralysis. Hence there was this difficult utterance, caused at first by fibrillar tremblings of the muscles of articulation, these being symptoms indicative of disease of the convolutions of the brain which constituted general paralysis. In addition, we had, in a few cases, locomotor ataxy, and in rare cases the absence at first of decided mental symptoms. But he was extremely sceptical as to the absence of mental symptoms. He had never seen a case in which, from the beginning to the end of the disease, there had been the absence of mental symptoms. He would unhesitatingly pronounce that the two patients first seen would become imbecile before they died. If there were not delusions, there would be the occurrence of imbecility, and the emotional nature would be to a considerable extent impaired. The special point he wished to impress was, that general paralysis consisted in a certain progressive disease of the convolutions—probably the outer layer of the convolutions. He would not attach any great importance to mental or other symptoms except these progressive symptoms of articulation were present. He had known of cases of so-called recovery in general paralysis, where mental symptoms passed off to anybody but the experienced eye, and those patients appeared quite as sane in intellect and emotion as the two patients that had been seen just now.

Dr. Yellowlees was not quite disposed to go so far as Dr. Clouston. When he saw the first man he said, "Look out for that man's mind, I do think it will go." There were many brain conditions which he could not define. He thought that everyone who had lived long in asylums had been surprised that a certain case had developed general paralysis which at first he did not know was general paralysis. Although going back over the history of the case one did not find anything to justify it, yet general paralysis had grown under one's eyes, engrafted upon something else. In other cases, though you knew the man was unwell, yet his condition was such that you could not say there was anything insane about him. But you could prophesy what his future would be. As to the third case, it was quite apart from the other two, and did not call for remarks.

Dr. Robertson felt that their ideas regarding general paralysis were still in an unsettled condition, very much owing to the late observations connected with the discoveries of Hitzig and Ferrier on the surface of the brain. He had a doubt in connection with the cases submitted as to really where the mischief had arisen—whether the symptoms, which apparently began with paralysis of the lower extremities, were referable to the spinal cord was a different matter. By-and-bye the disease might spread from the different motor centres such as the motor centre of the arm, the leg, and speech, and involve the mind generally; or, again, they might consider that in these first two cases, about which there was any doubt, having begun and advanced in the spinal cord, the disease might gradually grow upwards until it involved the surface of the brain, so that general paralysis passed upwards from below instead of downwards from above. He did not know that they could come to a conclusion upon that point, in the cases of the kind which Dr. Gairdner had shown them. He thought there was fair room for doubting which might be the course. It certainly struck him that the first of these cases was a case of disseminated sclerosis as found very much in post-mortems. With regard to the diagnosis of general paralysis from locomotor ataxy, he did not think there could really be any difficulty in ordinary cases. He never had had any difficulty in the diagnosis of such cases. Still, it was known that cases of locomotor ataxy might have mental symptoms superadded. A very eminent writer described three cases in which the disease began as locomotor ataxy and general paralysis

developed afterwards. The difficulty with him (Dr. Robertson) was as to the situation of the lesion in these cases—whether they were to consider the lesion was really in the lower part of the motor apparatus, or if it had commenced in the convolutions.

Dr. Rutherford said that there might be mental weakness, although it was not very well marked. He thought that mental symptoms would follow. As to the first case, two years ago, the symptoms commenced in the lower limbs. He thought if we could examine just now, there would be great degeneration in the posterior columns of the cord. In the second case, we have the epileptic form of the attack. He had no hesitation in saying these are cases of general paralysis, and the chances are that mental symptoms will follow.

REPARATIVE POWER IN INSANITY.

Dr. Campbell read a paper on the "Reparative Power in Insanity." (See p. 222., "Original Articles.")

Mr. Wickham also thought that the reparative power of the skin was wonderful, while Dr. Yellowlees was of opinion that their experience must corroborate the statements of Dr. Campbell.

Dr. Clouston had a case under his care of a female general paralytic who was not merely paralysed, but had contraction of the muscles beginning on one side and extending to the other. The digestive power was extraordinarily perfect. The chief actions were when you got near her mouth, she opened it like young birds which wanted food. Possibly this perfection of the digestive power of general paralytics, with advanced paralysis and advanced enfeeblement of mind, was a proof that the disease was in the convolutions of the brain. He was not aware that in locomotor ataxy the digestive power was at all so good. Did it occur to the members that this power of repair was in the soft parts and not in the bony tissues. He had noticed in general paralysis, where there were bed sores, that spinal symptoms were most apparent. When you have spinal symptoms developed you have a tendency to bed sores.

MASTURBATION.

Dr. Yellowlees said that they would all agree that of all cases those of masturbation were most obnoxious. There were many cases which they were not able to cure if they could not correct the habit. It seemed to be the vexation of asylum life that patients should, before their very eyes, get by this habit from bad to worse. They had all perplexed themselves about this vice, and endeavoured to prevent it. Recently he had tried something in the way of a preventive, which he brought forward, in order that the members might be got to essay it as well. He had tried this mode in a dozen cases, and so far as it had gone he was very much satisfied with the results. The oldest case was 18 days. The suggestion was founded upon the anatomical fact that the prepuce was anatomically necessary for the erection of the penis. Its anatomical use was to give a cover for the increased size of the organ. If you prevented the prepuce going to that use, you would make erections so painful that it would be practically impossible and emission therefore extremely unlikely. What he had done was to deal with the prepuce at the very root of the glans, to pierce it with an ordinary silver needle, the ends of which he tied together. He had the case of a lad who was so extremely addicted to masturbation that his mother begged him to do what he could to prevent it. He used the apparatus first in the case of this boy, with most excellent results. He had been masturbating night and day, and he was now so well that he was working as a carpenter. Dr. Yellowlees further said that he had eleven more patients all going about with wires in their penises. There was only one case where he had to take it off, the wire causing a good deal of irritation. But he took it off with

the intention of putting it on again. But one man had had it on for 18 days, and had no irritation at all to speak of. None of the other cases were giving any trouble in that way. He felt certain they were for the present, and while the wire remained, absolutely debarred from the habit of masturbation. The sensation amongst the patients themselves was extraordinary. He was struck with the conscience-stricken way in which they submitted to the operation upon their penises. He meant to try it upon a large scale, and go on wiring all masturbators. The moral effect of it in the house was excellent, and one man was seen weeping over his in anticipation of its disablement. The wiring was so simple that it could do no mischief. He believed it was effectual. It was a silver wire.

Dr. Skae—Is it a case of life-long wiring?

Dr. Yellowlees—No. I think if we could get them to stop masturbating for a few months, they would be cured. You can keep the wire fixed as long as you like. We have found bullets remaining in the bodies of persons for a long time. One of the patients removed the wire; but unless you get a rough stone to rub it, it remains. Only in one of the twelve has the wire been taken out.

Dr. Robertson—If anything can be suggested to prevent patients from practising this vile habit, which is the cause of insanity in many cases and aggravates the disease, it would be of very considerable importance. We know various things have been tried previously, such as blistering the penis, croton oil, &c. but without effect: and various medicines are given with the view of moderating or repressing the desire. Dr. Yellowlees' experience is short; but so far as it has gone it promises to be successful. We shall be interested to hear the result of these cases. Should they continue to prove beneficial in repressing this habit, I have no doubt we will be all glad to try it.

STOMACH PUMP.

Dr. Yellowlees showed a stomach pump of his own invention. One of the advantages claimed for it was its perfect simplicity. It was an ordinary bottle in which the prepared food was placed. The propulsive power was obtained by blowing. No one could form an idea of the ease with which food passed into the stomach in this way. There was a perfectly clear passage without taps or valves, so that biscuit, mutton, or what one liked, could pass through the tap. There was also the advantage of the food passing into the stomach with a gentle flow, whilst there was less danger of vomiting. He had often used the same kind of thing in Wales. He could get minced meat through the pipe.

Dr. Campbell—This subject was discussed at the last meeting in Glasgow. I think Dr. Skae used to let a patient starve for a number of days.

Dr. Robertson—There is a case quoted in the "Journal of Mental Science," where feeding by the stomach pump was carried on for seven years. What was the result?

Dr. Yellowlees—The man went to Dr. Rutherford, and died (a laugh).

Dr. Rutherford—Of phthisis contracted at Gartnavel.

After some further discussion, the proceedings concluded with a vote of thanks to Dr. Gairdner for presiding, and to the Faculty of Physicians and Surgeons for the use of the hall for the meeting.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—QUARTERLY MEETING HELD AT BETHLEM ROYAL HOSPITAL, May 10th, 1876.

The Quarterly Meeting of this Association was held on Wednesday evening, May 10, in the Board Room of Bethlem Royal Hospital.

Among the members and visitors present were—Dr. Rogers, Ernest Hart, Esq., Dr. Maudsley, Dr. Orange, Dr. Wilks, Dr. Harrington Tuke, Dr. Hack

Tuke, Dr. F. Blandford, Dr. L. Down, Dr. Rayner, Dr. Stocker, Dr. Klein, Dr. Savage, Dr. Willett, Dr. Brushfield, Dr. Paul, Dr. Johnson (Tunbridge Wells), Dr. Frederic Hy. Ward, Dr. R. Acton, Dr. William S. Tuke, Dr. Henry F. Winslow, Dr. Chas. S. W. Cobbold, Dr. Fletcher Beach, Dr. John Warwick, W. Clement Daniel, W. Wagstaffe, Esq , Dr. Joseph Seaton, Dr. George Mickley, Dr. F. Schofield, Dr. J. E. M. Finch, Rev. Dr. Dawes, Dr. Koeppe, Dr. Forbes Winslow, Dr. Claye Shaw, Dr. W. Rhys Williams.

On the motion of Dr. MAUDSLEY, seconded by Dr. WILLIAMS, Dr. Rogers took the chair.

Dr. WILLIAMS stated that, since the annual meeting last August at Dublin, no quarterly meeting had been held. It seemed not so easy in London as it was in Edinburgh to get a meeting together, or to get any gentlemen to read papers here. But they had the promise, for that evening, of two or three very interesting subjects to be brought forward by Dr. Shaw, Dr. Hack Tuke, Dr. Fletcher Beach, and others. The first business, however, was that of mentioning any cases of interest within the knowledge of the members present. He had intended, for his own part, to describe a very interesting case of insanity accompanied with syphilis; but as there would be enough of other matters to fill up all their time, he should reserve it, perhaps, for some other mode of publication.

SYMPTOMS OF INSANITY DURING INCUBATION OF FEVER.

Dr. HARRINGTON TUKE read a letter he had received from Dr. W. C. Hills, of the Thorpe Asylum at Norwich, giving the following account of a case recently under his care, which he thought was of a very unusual character. He had not, in his twenty years' experience of County Asylums, met with a similar case, and he wished to be referred to any work in which such a case was mentioned:—

"F. G., aged 32, was admitted January 22, 1876, in a restless, stubborn state; could not sleep, or answer questions rationally; was destructive and dirty in his habits, and muttered incoherently. These symptoms lasted only till the third day after his admission, when scarlet fever rash was seen on the neck and chest, which extended on the following day over the trunk; there was a slight sore throat. The interesting point, however, was the entire cessation of all mental disturbance as soon as the exanthems became developed. From that time until the date of his discharge, March 28th, he exhibited no further symptoms of mental aberration; he gained flesh, and worked in the garden. He stated, which was confirmed by inquiry, that there had been a child ill with scarlet fever in the house whence he was brought. I have seen cases which were delirious, &c., during the period of incubation, but I never saw one evincing such active symptoms of insanity as to require a removal to an asylum. This patient was respectably connected, but of rather feeble intellect."

Dr. HARRINGTON TUKE added that he had himself seen a rather similar case, that of a young lady, to whom he was called at the Charing Cross Hotel, and whom he found, as he thought, with typhoid fever, but a distinguished surgeon who was with her said that she was mad. They differed in opinion about it, but it really was typhoid fever; for within two days the typhoid rash came out, and there were no more symptoms of a disposition to suicide or any mental aberration.

Dr. WILLIAMS said there was a case somewhat analogous last year in Bethlem Hospital. A patient was admitted suffering from acute mania. The medical gentleman who sent her in was one of large practice, but he gave them no hint of any other disease in this case. Within twenty-four hours of her admission, she had scarlet fever rash fully developed. She was afterwards removed to the scarlet fever hospital, and got well.

Dr. SHAW mentioned that, upon one occasion, he went to see a woman who was in a maniacal state, and had delusions; he was informed that she came from where there was smallpox, and he suspected there might be some poison of it in

her system. He had her watched, and within three days she developed small-pox.

Dr. RAYNER asked whether, in the case mentioned by Dr. Williams, or in the others, there was any hereditary predisposition to insanity? It was answered that no information had been got upon that point.

The CHAIRMAN said that several such cases had occurred within his own experience. There was one quite recently, last year, in which there were symptoms of mental disturbance, the patient continually getting out of bed, and giving much trouble; but something about it induced him to put it down as a case of fever, instead of ordinary mania; and the result showed that he was correct. The medical man who had signed the certificate, afterwards told him that he also was in doubt about it at the time, but that he signed it with the less hesitation, because in the workhouse infirmary there was no room for this patient in the fever ward. The patient was carefully examined every day, without detecting any rash on the body, but there were the abdominal symptoms of typhoid fever. A few years ago there was a case of simple pyæmia, which seemed to be of spontaneous or idiopathic origin, accompanied with symptoms of insanity. It resulted in death, and the post-mortem examination showed pus in every organ, including the heart. In the workhouses in Lancashire, where lunatic patients were commonly kept too long before sending them to an asylum, there would more likely be time to find out any case which was merely caused by a fever.

STRUCTURE OF PALATE IN IDIOCY OR IMBECILITY.

Dr. SHAW read a minute account of his observations and measurements of the height and width of the palate, in relation to the dimensions of the skull, in a large number of cases of congenital idiocy or imbecility. He exhibited a little apparatus contrived for the purpose of taking such measurements, and discussed the subject in all its details, combating the notion, set forth in many books, that a highly arched palate is a characteristic feature of the conformation usually found to accompany a deficient capacity of brain. (See Pt. I., "Original Articles.")

The CHAIRMAN thought it would be interesting to know what other gentlemen might have observed with reference to the matter so ably investigated by Dr. Shaw. If anyone had examined, for instance, the form of palate which occurred in cases of goitre or cretinism, a report upon it would be of service.

Dr. LANGDON DOWN said it was a subject to him of particular interest. He had long been accustomed to look into the mouths of idiots or imbeciles for that palatal structure which he had found, in a great number of cases, to be co-existent with mental deficiency. In a paper which he published twelve or fourteen years ago the measurements were given of two hundred imbecile and idiot patients, compared with those of two hundred other persons. At that time the opinion which Dr. Shaw now rejected was not at all controverted, and it was confirmed in a paper by Dr. Granville, of Paris, from the observations he had made; but there was another person besides Dr. Shaw, who had since controverted it. He had had a visit from a leading American dentist, who told him that he had read a paper before a society at New York, contending even that a narrow high-arched palate was a sign of genius and high intellect, as it was often found in very clever men. He took that American gentleman to see about ninety patients, whom he examined one after another; and the result was quite to convince him that the idiots of England, at any rate, had such palates as he described. Dr. Shaw was a very careful observer, but there were two likely causes of fallacious observation in these instances. In accidental cases of idiocy, such as were caused by meningitis, or by some casualty of early life, the high-arched narrow palate would not be met with; the observations should rather be confined to the cases of congenital idiocy. Another circum-

stance which might lead to mistaken conclusions was that there were two distinct types of facial conformation among idiots, one class having a broad palate, but the majority had the narrow, high-arched palate.

Dr. HARRINGTON TUKE said this question was brought before him in the case of Mr. Windham, one of the reasons assigned for that gentleman's insanity being that he had an excessively arched palate. He then made some inquiries upon the subject, and he thought there could be no doubt that a large palate, in combination with other peculiarities of structure—in the ears and teeth, for example—was a symptom to be taken into account, though it might not be important taken alone. A gentleman he knew, who died not long ago, had an idea that idiocy in children was produced by the habit of sucking the thumb, and some one might fancy that this habit was associated with a peculiar form of the palate; but there was not much reliance to be placed on such suppositions.

Dr. SHAW replied, acknowledging the friendly tone of the criticisms his paper had received. What he had intended to affirm was this, that persons were to be found with a badly formed palate, who had all their mental faculties in a perfectly sound condition; while there were, on the other hand, microcephalic idiots, whose palate would be found, instead of eight-twelfths or nine-twelfths of an inch, not more than four-twelfths of an inch high. The upper part of the cranium might be perfectly formed, and there would be no defect of brain, notwithstanding the existence of a high-arched palate. The palate bones of an idiot from birth might be of that formation which had been regarded as belonging to persons of ordinary mental capacity. His conclusion, therefore, was that there was no necessary connection between the palatal structure and the amount of mental power.

THE HISTORY OF BETHLEM HOSPITAL.

Dr. HACK TUKE read an interesting antiquarian and topographical account of the successive foundations of Bethlem, from the year 1247, when the Priory of St. Mary of Bethlehem, in Bishopsgate, was founded by Alderman Simon Fitz-Mary, on through its several transformations and removals, to the present institution, in which the Medico-Psychological Association was that evening assembled. With the aid of maps, old prints, and drawings, furnished by Mr. G. H. Haydon, of Bethlem Hospital, he gave a clear explanation of the precise localities, and in some instances was enabled to show the plan and aspect of the ancient buildings. (See Pt. I., "Original Articles.")

Dr. WILLIAMS moved a vote of thanks to Dr. Tuke, and in so doing took occasion to remark that it had often been asked, why should not Bethlem Hospital be removed into the country? He wished it to be generally known and remembered, that Bethlem Hospital actually had an institution in the country, the establishment for convalescents, situated in one of the most delightful parts of Surrey, which gave accommodation to forty patients. That establishment would vie with any similar institutions in England for healthiness and agreeable surroundings. He finished by expressing regret that there was not time for the reading of a paper which Dr. Beach had prepared, but which he hoped would find publication elsewhere.

The CHAIRMAN then declared the proceedings of the meeting at an end; but a vote of thanks was unanimously passed to the Resident Physician of Bethlem for the use of the room by the Medico-Psychological Association, and for the hospitality towards its members that evening assembled.

The following Microscopic Specimens were exhibited at the meeting by Dr. Savage:—

Normal brain, various convolutions.

,, cords, human and of lower animals.

Cerebellum prepared by Dr. Sankey's method.

Sections of intermediate regions of cord, medulla, and pons.
Sympathetic in health and in general paralysis.
Dura mater, with effusions of blood on surface in general paralysis.
Sciatic nerve in general paralysis (Dr. Ward).
Sections of brain from case of cerebritis with mania.
,, ,, ,, chronic mania.
,, ,, ,, acute mania.
,, ,, ,, sclerosis (Charcot).
,, ,, ,, melancholia with giant cells.

Section of brain and cord from diabetes, showing the changes along the course of the vessels, described by Dr. H. Dickinson.

Sections of cords from tetanus.

Sections of cords from general paralysis, showing "colloid" and "amyloid" changes, wasting, fatty degeneration, fibroid degeneration, and changes in the cells.

Brains in general paralysis, showing wasting and fibroid excess, with degeneration of the cells.

Sections of cord from a dement, with old hemiplegia, with secondary wasting of right lateral column.

Sections of brain of three cretins from Clapton Asylum (Dr. Beach), in which there were demonstrated similar conditions hitherto undescribed. (There are a greater number of large round cells in the superficial (3rd and 4th) layers of brain, with few fusiform cells. Around the cells there are large numbers of large spaces. The general appearance of the brain resembles rather that of the lower animals than that of man).

Carmine injection of the various organs of guinea pigs.

Microscopes of a new form resembling Hartnach's and also their students' microscopes and other interesting instruments were exhibited by Messrs. Beck and Co.

Correspondence.

Sir,—I hope you will excuse my sensitiveness if I ask leave to correct a slip in your report of what was said by me at the branch meeting of our Association, held at Edinburgh on the 14th of December last. I am not prepared to state that there are no cretins in Scotland. What I intended to convey to the meeting was that, if goître and cretinism had no necessary connection, I could not see how the existence of cretins in Scotland could be proved. I certainly said that I thought there were "no Kalmucks in the East," but I added the words "of Scotland."

I remain, &c.,

Larbert, Stirlingshire, W. W. Ireland.
April 23rd, 1876.

Appointments.

Aplin, A., M.R.C.S.E., has been appointed Assistant Medical Officer to the Notts County Asylum, Snenton, Nottingham.

Ashe, I., M.D., has been appointed Physician-Superintendent and Governor of the Central Criminal Lunatic Asylum, Dundrum, vice MacCabe, appointed a Medical Inspector under the Local Government Board, Ireland.

Bowes, J. I., M.R.C.S.E. & L.S.A., has been appointed Assistant Medical Officer to the Northampton County Asylum.

Burtonshaw, T., M.R.C.S.E., L.S.A.L., has been appointed Second Assistant Medical Officer to the Essex Lunatic Asylum, Brentwood, vice Powell, appointed First Assistant Medical Officer of the Kent Lunatic Asylum, Barming-heath.

Dutt, B. L., M.B., C.M., has been appointed Assistant Medical Officer to the Somerset County Lunatic Asylum, Wells, vice Dove, resigned.

Hetherington, C. E., M.B., T.C.D., has been appointed Resident Medical Superintendent of the Londonderry District Lunatic Asylum, vice Ashe, appointed Physician Superintendent of the Central Criminal Lunatic Asylum, Dundrum.

Maclaren, J., L.R.C.S.Ed., Senior Assistant-Physician, Royal Edinburgh Asylum, has been appointed Medical Superintendent of the Stirling District Asylum, vice F. W. A. Skae, M.D., resigned on his appointment to a Commissionership in Lunacy for New Zealand.

McKenzie, G. H., M.B., C.M., Resident Surgeon, District Infirmary, Ashton-under-Lyne, has been appointed Senior Medical Assistant at the Gloucester County Asylum, vice Dr. J. A. Philip, appointed Superintendent of the Lincoln Lunatic Hospital.

Millson, G., M.R.C.S.E., L.R.C.P.L., Medical Superintendent of the Hampstead Asylum, has been appointed Medical Superintendent of the Northampton County Asylum, Northampton.

Moody, J. M., M.R.C.S.E., has been appointed Junior Assistant Medical Officer to the Brookwood Lunatic Asylum, vice Thomson, resigned.

Thomson, Dr. W. A., Junior Assistant Medical Officer of the Brookwood Asylum, has been appointed Assistant Medical Officer of the Kent County Asylum at Chartham, near Canterbury.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Annual Meeting of the Medico-Psychological Association will be held at the Royal College of Physicians, London (by permission of the President and Fellows), on Friday, July 28th, under the Presidency of Dr. Parsey. Notices of Resolutions to be proposed, or Papers to be read should be sent at once to the Hon. Sec., W. Rhys Williams, Bethlem Royal Hospital, London.

The Editors regret that they have been compelled, by pressure on their space, to postpone the publication of Clinical Cases, Reviews, some German Retrospect, and Review of Asylum Reports (1875), *some of which are in type.*

Erratum.—In April number, page 47, line 16, for "Maine Island Asylum," read "Maine Hospital for the Insane."

THE JOURNAL OF MENTAL SCIENCE.

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PART 1.—ORIGINAL ARTICLES.

President's Address, at the Annual Meeting of the Medico-Psychological Association, held July 28th, 1876, *at the Royal College of Physicians, London.* By WILLIAM H. PARSEY, M.D., Lond., Medical Superintendent of the Warwick County Asylum.

GENTLEMEN,—Before entering on any matter that I may be able to bring under your notice in the form of an address from the Chair, a very pleasurable duty devolves on me, one on which I wish I were able to express myself in adequate terms. I have to thank you—which it was not in my power to do this time twelve months—for the honour you then conferred on me in electing me to preside, for the coming year, over this large Association of my respected and valued fellow workers in our department of Medical Science. But, whilst thanking you, I cannot help regarding myself as an unworthy recipient of the honour. I cannot forget that—though the earliest period of my study of the treatment and management of the insane dates back for five and thirty years, and my connection with this Society for nearly thirty—beyond the oral information that I have been able to impart to the younger members of our profession, who have been my coadjutors in my duties, I have contributed little towards the advancement of that important and fundamental object of its formation, "the diffusion of a more extended knowledge of insanity and its treatment."

I can merely say that I have conscientiously endeavoured to develop, in the Asylum of which I have for the last quarter of a century had charge, the more enlightened changes in general management, hygiene, and medical treatment that have, year by year, been making such steady progress since the time that it was my good fortune to be a recipient of Conolly's earnest and eloquent instruction in his clinical teaching at Hanwell; instruction, that it was in my

power to mature by associating myself, a few years later, at the Devon Asylum in its earliest days, with one who has since attained so high a position in our specialty, my esteemed friend, Dr. John Charles Bucknill.

I have referred to my early reminiscences, hoping that a few words on some of the changes now in the probable, or possible, course of adoption for the more comprehensive treatment of the insane, from an Asylum Superintendent, who has been witness of all that has been effected, since the inauguration of the radical changes, due more especially to Conolly, may have sufficient interest to occupy your attention and to elicit useful remarks and suggestions from some of my colleagues, whom I have the honour of addressing.

I am aware that, whatever practical subject I propose to myself, I am only going again over oft-trodden ground. But it is not every one, called upon to perform the functions of the office with which you have invested me, who is gifted with the power to make an occasion like this the vehicle for new ideas, and new chains of reasoning, elaborated from his own originality of thought; though I do not forget that such men have occupied this chair, and given to their addresses a tone that plain workers like myself cannot hope to emulate.

The first fruit of the enlightened teaching of Pinel, and of his great English disciple, Conolly, the foundation of all subsequent advances in our dealings with the insane, of all the superstructure of non-restraint in its widest acceptation, was compassed when we began unreservedly to admit the influence of the material element in the causation and progress of mental disorder, and to recognise a certain capacity in those afflicted with it for the exercise and enjoyment of personal responsibility and personal liberty; and when the conviction grew upon us that the diseased mind is only very exceptionally so perverted as to be altogether beyond the influence of those kindlier attributes and more genial sympathies, which at its normal standard of health would induce a ready response to the varied remedial agencies with which it is in our power to surround it.

That these principles were slow in gaining general recognition must, however, be well known to all whose experience carries them back to the years more immediately succeeding the great Hanwell experiments. For even among those who were enthusiastic in their resolve to banish mechanical restraint from their treatment, attempts to further ameliorate the restraint of utter isolation, and wearing monotonous routine, were not, for a long time, framed on the broad basis

of trust in the latent self-controlling principle and recuperative power of the insane mind. They were confined to cautious advances in the direction of extended occupation, social comfort, and amusements. Approaches to the exercise of personal freedom, save in the pursuit of some out or indoor avocation under rigid supervision, were exceptional indeed. And I well remember the sense of responsibility under which I laboured, when, on finding myself at the head of an Asylum, I determined to inaugurate the mingling of the sexes in social dances and other homely amusements, the liberty to walk about the country with their attendants, and other such apparent trifles, conducive as much to the freedom of action, as to the personal and domestic comfort of those who constituted my new charge. I acted under a sense of fear and trembling lest there should ensue, in various bugbear shapes, mishaps, which experience, gradually gained, has taught me to regard with as much unconcern as would now the latest Asylum Superintendent; who, profiting by the cautious advances of his elders, finds it difficult to realise how much that is recognised in these days as part of the routine order of the life of the insane, could ever have formed a subject for anxiety or mistrust.

But Asylums were then few in number, and their inmates but as it were a handful, compared with the crowded populations of the numerous structures that have been called into existence through the length and breadth of the land in the last few years. Facilities for intercourse, and for the interchange of opinion and experience, were small and rare indeed, as the earlier promoters of this Association can testify. And the still lurking belief in the necessary perversion for evil of the insane mind, exercised an unconscious deterrent influence; all tending to clog the earlier steps of our more zealous workers, even though the veil had already been raised by such men as Pinel, Esquirol, Tuke, Charlesworth, Hill, and Conolly.

But I must not waste your time over matters like these, which, by tradition at least, must be familiar to all whom I am addressing. Nor need I dwell on the progressive expansion that has been taking place in our ideas of the management of the insane, until, at last, the pendulum of opinion seems to be so enlarging its arc as to be inducing in the minds of some, at least, of our younger and more enthusiastic fellow-workers, a belief that what has now become the old

familiar system is, after all, an over-grown mistake, which it is part of their mission to re-adjust on new lines, or re-cast in an entirely altered mould. What I would to-day more particularly submit to your attention, is a few words on the measures that may be most likely to satisfy the social requirements of that large section of the now recognised insane whose existence, as a special State care, was not contemplated by the framers of our present lunacy laws. So far as the more active phases of mental disorder are concerned, the beneficial influence of these laws has given to our treatment an impress which is gradually being accepted as a model by all other civilised countries. But it is only of quite recent years that a knowledge has been spreading among us of the large number of persons of diseased mind that have become a burden on the community, but for whose due care the institutions that have been organised under our present legislation are scarcely adapted. It is impossible for those engaged in the public treatment of the insane to be insensible to the growing tendency, fostered of late by peculiar circumstances, to shelter many of them within the walls of our County Asylums, though their mental condition does not warrant so costly a form of management. And their number is so increasing, and has attained such proportions, that, if we concede their claim to legislative interference, the time of this meeting may not be wasted, if, from the great experience that attaches to it, and from the somewhat varied phases of that experience, some fresh expression of opinion may be elicited as to the best modes of dealing with them without prejudice to those on whom must fall the cost of their maintenance, or to their own well-being, or more especially to their personal liberty.

There are many practical questions of detail involved in our present conduct of asylums, on which such diversity of opinion exists, that I could willingly have been tempted to give them the preference in what I have to say to-day; more especially the advisability of doing without, or with newer arrangements of, airing courts; of dispensing with locked doors in our asylums; or of absolutely eliminating from our treatment the use of seclusion in a darkened and fastened room in certain conditions of dangerous excitement, or in some of the exhaustive forms of brain-irritation with which we are all, in the course of our experience, made more or less familiar. And within almost the last few weeks has been opened up to us another subject of unusual interest, that may

well occupy the deliberations of this association, in the unlooked for results of the personal observations of our eminent colleague, Dr. Bucknill, in some of the public asylums of the Northern Continent of America, and in the more serious arraignment, made under the authority of the Editor of "The Lancet," for abuses that we might well have hoped could not exist at the present day in any institution for the insane among an English-speaking race. But it would not be an act of justice for a representative body like this to enter on the discussion before ample opportunity had been offered to the distinguished alienist physicians of the United States to pronounce upon these statements, or to rebut the grave charges that at present must be felt to hang over them. We may well follow the judicious course adopted by Dr. Bucknill, and, possibly, avoid what might otherwise drift into an angry and embittered controversy, in reserving our comments until both sides of the question have been fully and temperately stated.

I have rejected these somewhat tempting topics in consideration of what I think to be the comprehensiveness of the subject I have chosen, which, just at present, seems to have become too much one for discussion outside our specialty; while we, who ought to be able to speak on it from practical knowledge, may be, perhaps, prejudicially passing it over in silence, or, at least, not according to it the consideration it demands at our hands.

I take for granted that our modern old-fashioned asylums, if I may be excused the term, are not going to be superseded; but that, if with our present knowledge we are to deal successfully with the acute, and with a large proportion of the chronic phases of insanity, all the resources that they can command must be considered not only desirable, but, in large measure, essential. Beyond this comes the question as to the most judicious, and at the same time most justly economical, methods of disposing of that portion of the insane for whom, by general agreement, such resources are neither essential nor absolutely desirable.

In rural counties the workhouses are so small as to afford no conveniences for the addition to them of lunatic wards, except by the entailment of a complicated expenditure, under difficult combinations of neighbouring Poor Law Unions. And if the details of such combinations could be satisfactorily adjusted, there are probably few among us who would expect them to result in any but a dwarfed, badly organised

arrangement, with more than the disadvantages inseparable from the lunatic wards of our large urban workhouses, and no redeeming feature to set off against the many petty interests and crude opinions that would obtrude themselves into all questions of management and expenditure. Neither is it probable that we should give much favour to any scheme by which, under some simple additional legislative enactment, two or more rural counties, with scattered populations, should have power to combine for the erection, under the Lunacy Commission, of comparatively inexpensive chronic asylums, of sufficient capacity to ensure a proper economy, to clear the workhouses of their imbeciles and dements, and to relieve the parent asylums of those among their more permanent inmates who could be equally well cared for under such simpler and less expensive machinery.

Under some conditions a proposition of this kind may commend itself to our consideration. But where those, for whose immediate benefit it would be carried out, must be drawn from populations scattered over very extended areas, objections suggest themselves that should make us hesitate in according to it any but a very qualified approval. Conspicuously the long distances that a large proportion of the patients, many feeble and aged, would have to be conveyed; the tediousness of long journeys from districts often only partially opened up by railways; the thorough stamp of chronicity that must attach to such an establishment; and the injustice both to patients and their friends in the alienation that must be gendered among them by the breaking up of all family ties in removals to such distances from their old homes as would preclude all future personal intercourse between them. The real practical nature of this latter hardship can scarcely have failed to force itself on the attention of asylum officers who have temporarily, or otherwise, relieved neighbouring counties of the charge of some of their insane poor; and, in the interests of both justice and humanity, it carries with it a weight of objection that is, unfortunately, scarcely like to meet with due appreciation from those who are not conversant with the daily routine of insane life. When the question is one of mere expediency to meet a passing emergency, the objections that I have mentioned are matters of minor consideration; but in dealing with measures of a lasting nature, that ought to be expected to continue in force for generations instead of years, they rise in significance, and should, in my judgment, have

sufficient weight entirely to negative any such arrangement as I have referred to.

In thickly populated and concentrated districts, on the other hand, where existing asylums have already attained such proportions as to preclude the desirability of any further enlargement, or to depreciate their usefulness as curative establishments, from the necessity for merging the individuality of the patient in the general grouping of classification, it is, I think, worthy of consideration whether supplementary asylums, involving a less costly expenditure both in structure and in maintenance, may not, with advantage, be brought into use as adjuncts to those already existing.

So far as sites are concerned, there should be little difficulty in obtaining them conveniently disposed both as regards propinquity to what may be considered the Parent Asylum, and suitable location for the districts they would have to serve. Nor should the difficulty be greater in so facilitating, through the medium of a common Managing Committee, the mutual interchange of patients, in accordance with the varying phases and development of their disorders, as to relieve the subordinate asylum of any supposed detrimental consequences arising out of the stigma of chronicity that might otherwise attach to it.

Under the Local Government Board, and with our present legislative enactments, the development of such a system must be impracticable. Independently of the existing objectionable divided control of the insane by two State departments, and of possible abuse, from the detention in them of persons not really mentally afflicted, were the management of these asylums not regulated by the lunacy laws, the local expenditure would necessarily be larger than that incurred for treatment either in workhouses or in our present County Asylums. And in the interest of the unification of the government of the insane as a class demanding a special care, disconnected from that of ordinary bodily infirmity, or of poverty in any other of its varied forms, it is fortunate that through the Lunacy Commission alone could they be worked with adequate economy to command the approval either of the guardians of the poor or of the ratepayers. Should the principle of Government aid under the Lunacy Laws be so established as to justify a confidence in its permanence, the insane poor of the large urban districts might be disposed in asylums of different grades, so manipulated as to deprive none of them of the character of being curative

establishments; whilst all would be embraced under one Government department, and their maintenance become a divided charge between the general community and the contributors to the local rates and burdens. The extent to which the principal asylum would be relieved would depend on various contingencies incidental to the localities; but the usefulness of the secondary ones could not fail to be felt in that they would supersede the lunatic wards of large workhouses, which, notwithstanding the care that has been bestowed on the better adaptation of many of them, cannot be divested of their radical defects in having their insane inmates cooped up in the midst of crowded populations, without space for out or indoor occupation, or the fresh and varied scenes so indispensable for them.

An illustration of the pressing necessity for more satisfactory measures, in dealing with the insane poor in our densely populated centres of manufacture, may be found in Birmingham, the great capital of the Midlands, with its yearly increasing population, already approaching four hundred thousand. The large majority of its residents, as in all other manufacturing centres, are members of the artizan and labouring classes, who, when overtaken either themselves, or in their families, with the calamity of insanity, are altogether unprepared to cope with its anxieties and expenses, and compelled to seek the assistance of the parochial rates. Its over-crowded asylum shelters about six hundred and fifty patients. There are about two hundred and fifty others in the lunatic wards of its workhouse; and more than another two hundred scattered among their friends about the town.

This is a sad catalogue for such a population, the saddest part being, to my mind, that some two hundred of these unfortunates should be confined to the wretched tenements, or suffered to wander about in the crowded streets and filthy courts of this densely populated borough; in which, however, under an enlightened appreciation of the advantage of sweeping sanitary improvements, many acres of its disease-gendering habitations are already condemned to be swept away. Such a community, the representative of such vast wealth, some millions of which it is now investing in the endeavour to make itself a pattern of what a large, well-organised town of the present day should be, ought to be, and doubtless is, prepared to adopt in a liberal spirit any course that mature and experienced deliberation can demonstrate as the most

desirable for dealing with its insane poor; and already the proposition has been under consideration to build a chronic asylum sufficiently distant from the town to receive five hundred of them. But were it enabled, without sacrificing its claim to the Government aid given to the older asylums, to combine with some of its contiguous over-populated mining districts, an asylum might be erected as comprehensive as, and without the defects of, those at Caterham and Leavesden, affording, perhaps, the most effectual means of removing from a large community a notorious blot on its ministration to this class of afflictions among the poor.

Of the measures for dealing with the less demonstrative among the insane, none has obtained so much favour with those who have a right to speak with authority in the northern part of the kingdom, as the "Family Treatment" now being carried out in Scotland. South of the Border it has also attracted no small attention, in some measure from its supposed economy, more from the liberty of action accorded to those treated under its auspices, and from the sort of analogy existing between it and the great Belgian Colony of Gheel. A certain prominence, consequently, attaches to the consideration of such merits and advantages as are claimed for it; and I hope to be able to give them that prominence to-day to the extent that my available information justifies.

If we would clearly comprehend the amount of extension proposed to be accorded to this form of treatment, as well as the mental and physical characters of those among the insane who would be recipients of the domestic freedom and comfort that it proffers to them, it is well first to have a correct idea of the machinery by which it is set in action. And, gathering my information from the very instructive and comprehensive Appendix to the Seventeenth Annual Report of the Scotch Commissioners in Lunacy, which embraces the special reports on single patients by the able Deputy Commissioners, Drs. Sibbald and Paterson, I believe I am correct in laying down as the basis of this form of treatment the powers conferred by the legislature on the Scotch Board to grant special licenses, without the payment of any fee or sum in respect of them, to ordinary cottagers and small householders for the reception and detention in their homes of poor lunatics, subject to such rules and regulations as the Board may appoint. These rules are sufficiently simple. Licenses can be obtained through the ordinary Inspectors of the poor, under the sanction of the Board; the number of lunatics in any one

house not being allowed to exceed four. It is rare, however, for these cottagers to be provided with sufficient house room to accommodate four additional inmates; a number, moreover, in Dr. Sibbald's experience, sufficient not only to do away with the purely domestic character of the arrangement, which is its leading feature, but even to overwhelm and destroy the family life. It is, therefore, resolved for the future to limit the number, as far as possible, to two. And, to guard further against the evils of over-crowding, and unsuitable associates, every application for a license has to be accompanied by a statement of the number and size of the apartments in the dwelling, and of the number of its sane inmates, including children.

These are simple precautionary measures; but there is an additional very important, indeed essential, recommendation made by the Board, one on the faithful execution of which must depend, in a great measure, the practical success of the whole scheme—that all Inspectors of the poor, who have lunatics boarded out in special licensed houses, shall be careful to exercise a direct personal supervision, both over the holders of the licenses, and over the patients entrusted to them. And, it may be added, though there is no rule for the exclusion of young women of child-bearing age, the Board of Lunacy is stated to be particular about granting its sanction when the risk of pregnancy exists.

This, with due provision for remuneration, constitutes the whole working machinery; and as the system must still be regarded as on its trial—eminently satisfactory, so far as it has progressed, in the opinion of those who have so enthusiastically fostered its development, and, as it were, committed themselves to its successful issue; imperfectly understood, or, perhaps, too adversely criticised by others, who, viewing it from a different stand point, may be tempted to depreciate it, possibly without due consideration—it behoves us to exercise all proper precaution in the selection of material from which to form an unbiassed judgment as to the place it is likely eventually to occupy among our available resources for the care and treatment of the insane.

Fortunately in Professor Jolly, of Strasburg, we are able to apply to a critic recognised on all hands as possessing, in an eminent degree, the qualifications for giving an unprejudiced statement of the result of his personal investigations, in their adopted cottage homes, into the minute details of the daily life in which these people pass their existence. But, as

his observations should not be unknown to the members of this Association, I shall do no more than just summarise his conclusions, in order to bring them to your minds in such a form as will serve to keep together the thread of this enquiry. And, though some of them apply more particularly to the insane poor at the colony, if it may be so termed, of Kennoway, where the Edinburgh patients are located, they may be taken as conveying a good, and even favourable, view of this system in its entirety; as these patients, from their number, their comparative concentration, and their accessibility, must necessarily be as well cared for, and as favourably circumstanced, as any that could be selected from among the rather large number of insane poor thus treated, and scattered over different parts of Scotland. We gather from him that the boarding-houses are mostly the plain one-storey cottages of the labouring classes, some of them with a bed in the cooking as well as in the other rooms. The bedding was clean, and there was no distinction in domestic arrangements between sane and insane; and the insane moved about with comparative freedom in the houses and neighbourhood. Here, as elsewhere, there was a marked predominance of the female sex. The males were generally physically helpless imbeciles, incapable of really useful work. The women were sometimes engaged in knitting, sewing, or assisting in the housework, but very few gave the impression of being able to earn by their work any appreciable part of their maintenance. Nearly all of them were over forty years of age, the greater number over fifty, and the few of child-bearing age were entrusted only to families furnishing special guarantee as to suitability. The forms of insanity observed were exclusively imbecility and dementia, and all were harmless and inoffensive. Dirty patients were excluded, as also those suffering from serious bodily ailments. His opinion was very favourable to this form of treatment for the class of inoffensive patients he met with, but only for that class. From an economic point of view, it did not encourage any hope of reduction of expenditure.

These observations appear to me sufficiently indicative of the mental conditions to which, under careful supervision, this "family treatment" may with advantage be extended; but I would supplement them with others made for myself, with more leisure than I could have bestowed, by an esteemed personal friend, a Scotchman, and member of our profession, though not of our specialty, in whose judgment, impartiality, and discretion I have implicit confidence.

His account of the village of Kennoway is sufficiently interesting to bear transcribing:—"It has a population of about a thousand inhabitants, chiefly of the labouring class. It is healthily situated, about three miles from the shores of the Forth, and is several hundred feet above the sea level. The death rate, compared with that of neighbouring parishes, is low; and, from its situation and healthfulness, it is well suited for a home for invalids. About twenty houses in all, in and about the village, are authorised to receive lunatics. Many of them are comfortable, and decidedly superior to the houses from which the lunatics have been brought, but others are inferior both in comfort and accommodation. Any one may signify to the Inspector of the poor for the parish his willingness to receive lunatics, and, from what I can learn by enquiry in the village, several who have the charge of one or more boarders are but poorly qualified for that office. The patients are mostly old and imbecile, and, as a class, give the appearance of being more fitted for treatment at home than for confinement in an asylum. They are generally treated as members of the family, and take their meals at the same table. This privilege, however, is entirely at the discretion of those in charge; and there appears to be a great defect in there not being a proper guarantee, nor apparently a sufficient one demanded by the authorities, as to the comforts of the house, the quality of the food, and the good character and general fitness for their duties of those entrusted with the care of the patients. And, I believe as a consequence of this, there was the greatest difference in the quality of food supplied in the various houses. In one house, kept by a most intelligent woman, the patients, four in number, seemed to have every comfort: the rooms were clean, airy, and well furnished; the diet consisted of tea and bread and butter, or toast, for breakfast; broth, beef or pork, and potatoes for dinner, with a simple pudding every second or third day in addition; bread and tea in the evening, and bread and cheese at night. As a contrast to this, one case was mentioned where those in charge left the imbeciles during the summer, when outdoor work was abundant, to dine off tea and bread, with perhaps a red herring. So far as the parochial authorities are concerned, these people are not required to do any work; some of them are invalids, and cannot work; none of them appear capable of doing much, but those with whom they are boarded may make them do such work as they are capable of, and appropriate the gains. The kind

of work they engage in is helping in the housework, acting as water carriers to the public, carrying coals, gathering leaves from the adjoining plantations for bedding pigs, or making manure, and winding pirns for weavers. With the money they earn the men may buy tobacco, and the women tea, or it may be taken from them. It does not appear to be spent in drink, though there are several public-houses in the place, and restrictions on their freedom are very limited. They generally go out in couples, and, without any attendance, take free exercise in and around the village. There appears to be too great facility for any one to apply for and get these patients put under their care, without special enquiry being made, or guarantee given, of their fitness or the suitableness of their houses; and, at present, the superintendence or supervision appears to be somewhat lax. A mistake is perhaps made in trusting too much to the honour and kindness of the guardians, who are themselves but poor."

Accepting the accuracy of the information gathered from these two careful observers, I believe I have been able to submit to you an accurate sketch of the "Family Treatment" as carried out at Kennoway; and do not see occasion to add any comments of my own on its merits or demerits. Neither one nor the other appear to have escaped them; and from their judicious remarks it is easy to estimate the real value of much in it that is good and sound and worthy of imitation, and to note the points of weakness, which, if not jealously guarded against, would, as its lines became more extended, pave the way to abuses that would be fatal to its usefulness. Its weak points are certainly not so formidable but that we may occupy ourselves usefully in an endeavour to get some approximate idea of its utility, under such modifications as experience may suggest, as a substitute for some of the arrangements now in force in the southern division of the kingdom.

In Scotland it comprehends nearly twenty-two per cent. of the pauper insane population; about seventy per cent. being maintained in the Royal, District, Private, Parochial, and State Asylums; and the remainder, nearly eight and a-half per cent., in the lunatic wards of poorhouses.

In England and Wales we find nearly sixty-one per cent. in County and Borough Asylums, Registered Hospitals, Licensed Houses, and State Asylums; more than twenty-seven per cent. in Workhouses, including those in the Great Metropolitan Local Government Asylums; and rather over

twelve per cent. boarded with relatives and friends. So that, taking these as the broad lines of distribution, we find the proportion of insane poor maintained in asylums in Scotland to be materially greater than that of those similarly circumstanced in England. If, therefore, the "family treatment" were developed in the latter country in the same ratio as it is among our northern neighbours, it does not appear that any relief should be expected for our existing crowded asylums. The benefit would accrue, in great measure, to those whose lot it has hitherto been to pass their lives within the walls of our workhouses; and whether such a redistribution would be acceptable to the authorities of these institutions would, I am afraid, depend very largely on economic considerations. It will be well, therefore, not entirely to ignore the pecuniary aspect of the question as between English workhouses and Scotch family treatment.

The County of Warwick, with the distribution of whose insane population I have been for many years familiar, may be taken as a fairly typical English county; being centrally situated, and embracing within its Poor Law Unions all leading groups of population, the urban, the mixed, and the strictly rural; and the cost of maintenance of its insane poor in workhouses, not including the items embraced in the Local Government grant, varies from three shillings and sixpence to six shillings a week, four and sixpence being that generally prevailing; six shillings that for the Borough of Birmingham.

Omitting the most destitute parts of Scotland, the Isles, and some equally poverty-stricken parts of the Highlands, the weekly charge made under the "Family Treatment" for board and general care, independent of clothing and medical and general supervision, is a trifle higher; it varies between four and threepence and six and sixpence; six shillings being about the average for the patients from the more important towns and wealthier districts, those represented in this country by the occupants of the insane wards of the Birmingham Workhouse.

Now it is scarcely probable, considering the domestic habits of the two countries, that in England the "Family Treatment" can be carried out on the same principle as in Scotland at any lower cost than its higher scale of expenditure, that is, five to six shillings a-week, in addition to what would be required for clothing, and for medical and general inspection; which latter being the great safeguard of the system cannot

fail, if efficiently performed, of adding to the expenses. And, if these estimates are correct, a change in this direction is scarcely likely to commend itself to either our urban or rural authorities so long as they can find space in their existing workhouses and cognate institutions; or continue the defective, but economical, English system of boarding out with relatives, now largely practised in some parts of England. In many rural counties it is not uncommon to find under this latter form of treatment numbers larger than are retained under care in the workhouses, and proportionately quite equalling those under family treatment in Scotland; while in the great urban counties they sometimes amount to but a tithe of the occupants of the insane wards of workhouses and of the workhouse asylums. It is in these latter counties only that the great mass of the chronic and subacute cases, instead of being sent to the county asylums, are crowded into their workhouse wards; and that the proper care of the insane has such difficulty in keeping pace with the demands of the rapidly increasing population; the rule, indeed, being pretty general that a faulty boarding-out system prevails in the English rural districts as largely as does the "Family Treatment" in Scotland; while in our densely populated localities this means of disposing of them has for obvious reasons found but little favour. I say for obvious reasons, because to those conversant with the crowded and unhealthy tenements which the majority of the poor in London and our large provincial towns are still obliged to occupy, and with the filth and immorality with which they are contaminated, the idea of boarding-out among them inoffensive pauper imbeciles and dements, though protected by every reasonable safeguard, must be altogether repugnant. Independently of the hygienic defects of their surroundings, under the care of the best disposed and most conscientious Guardians, their liberty could be but nominal. It could not be extended beyond their immediate homes without exposing them to the mocking sport of the idlers who abound in such localities, if not to the more serious contaminations of immorality and vice. And conditions, so damaging to both mental and physical health, would have little to counterbalance them beyond this supposed liberty. Indeed to my mind the idea of extending the Family System to such localities is simply to be mentioned to be condemned. If any such practice is to be adopted for the large urban districts, it can be only in the form of scattering their people over more thinly populated neighbouring

localities, far from their natural guardians and from those who are legally responsible for their supervision. They would be under the care of strangers, influenced, doubtless, in most instances by good though not disinterested motives, and fitted or not, as chance might have it, for the responsibilities they undertake. And, though such a course might, with great care, have very satisfactory results as a mere philanthropic experiment extended here and there to a few dozen picked cases, it would have within itself all the elements of failure if attempted to be applied on a scale commensurate with the requirements of any of our large centres of population; the difficulties of selection, distribution, and, more especially, of efficient supervision would be insurmountable.

In the rural districts, however, we may well take pattern from our Northern brethren, and endeavour to improve, and in some measure to extend our boarding-out practice, as has, I believe, already been accomplished in one or two of our English counties. It is a mode of life that harmonises with the previous habits of those for whom it might be adopted; and probably the only great obstacle to its extension would be found in the increased expenditure it involves. Its efficiency would be enhanced if, by legal enactment, such patients could be readily transferred between the cottages and the county asylum, the power of transfer being vested in the Asylum Medical Officer and visiting Justices. And, were the locality for boarding-out restricted to a radius of not many miles from the Asylum, which in most counties could be arranged with little difficulty, most of the necessary supervision and control might advantageously be exercised by its officers. In addition to this, an absolute power of removing patients from the care of unqualified or negligent guardians, vested in the Visiting Committee, might ensure the organization of a system that ought to reduce to a minimum the dangers of imperfect or improper management, from which the Scotch system does not appear to have entirely freed itself. And I am sanguine enough to think that, could the financial difficulty be arranged, our rural workhouses might be altogether relieved of their insane element; those boarded-out under our present loose system might have their position greatly improved; and these numbers might be augmented by an appreciable proportion of our present Asylum inmates.

But, though by no means insensible to the value in our rural districts of an improved boarding-out system, abuse in

the detail of working is not my only ground for hesitation in connection with its greater extension. It is not unreasonable to anticipate that by a too unguarded movement in this direction the risk might be incurred of swelling the catalogue of offences against the law, already too large, as an outcome of the unrestricted freedom of action of the unrecognised, or only partially recognised, insane. Our local public journals make record, week after week, of one or more suicides the result of mental unsoundness; but we rarely trouble ourselves to bear them in our memories, or ascertain their proportion to the population among which they occur. The value, however, of such statistics is not unimportant in connection with this question of extended liberty; and, through the courtesy of the coroners, I am able to give the number of these unfortunate occurrences in my own district in the year 1875. The ascertained suicides, forming subjects of enquiry, were thirty-four out of a population of less than three hundred thousand. In fourteen of these the state of mind was recorded as unknown; one was attributed to delirium tremens; and nineteen to "unsoundness of mind" or "temporary insanity;" a rather startling number, which might probably have been diminished had a proper discretion been exercised in consigning to an Asylum some of these unfortunates, before their mental disorder had culminated in so lamentable a calamity. And there is a sufficient ground for this opinion, as in the Asylum fed by the same population, though the suicidal element is always enough pronounced to to be an unceasing source of anxiety, but two undoubted, and one questionable suicide, have occurred among its patients in more than four and twenty years. Again, appealing to our experience as alienist physicians, and passing over the many minor offences so frequently recorded against persons of disordered or enfeebled intellect, we can have little difficulty in calling to mind painful, and not unfrequent, instances of graver breaches of the law committed by them, involving lamentable destruction of property, irreparable calamities, and too often loss of life. Only within the last twelvemonths I have added to my personal experience of homicide under insane impulse one of painful detail, in which a poor simpleton, who had been allowed to pass some forty years with his relations, earning a precarious livelihood by irregular labour, regarded by his neighbours as "crazy" and "mad," imbued, or I may say saturated, with a popular belief of his district in witchcraft and witches, to whose malign influences

he attributed all his real and imaginary grievances and ailments, ended by sacrificing his liberty, and would, if the ruling of his judge (Bramwell) had been adopted by the jury, have been found guilty of legal murder, for killing with a pitchfork, in what in a sane man would have been an unprovoked and revolting manner, a poor harmless woman, eighty years of age, one of his imaginary tormentors.

In considering the question of increased personal liberty for the insane we must not divest ourselves of such experiences; nor should we treat them lightly before the general public. On the contrary, it is occurrences like these that constitute one of the dark shades in the picture of the life of the insane under family treatment. They can scarcely be hoped to be eliminated, whatever judgment and forethought may be exercised, from among the masked, I might almost say mysterious, consequences of mental alienation. And they constitute, to my mind, the gravest difficulty to be contended with in the endeavour so to extend this family treatment as to substitute it largely for the more watchful care and management attainable in Asylums.

That we are not yet approaching finality as to the best methods of dealing with the insane, and that the question is a complicated one cannot but be admitted; and the solution of the problem is not simplified by the diversity of interests that have to be consulted in the regulation of their disposal. I have endeavoured to frame my remarks in a measure to satisfy the conditions resulting from this diversity of interests. I have avoided all reference to benevolent or philanthropic propositions, of necessarily limited or local bearing, or to existing long-established modes of dealing with them characterised by a similar impress. In our present state of civilization and social distribution it is scarcely probable that a second Gheel can assume a leading prominence in any of the more densely populated European States; and almost impossible that a sufficient number of Gheels should be established to satisfy our present requirements. And as to special industrial communities, they can have a practical value only as adjuncts to or offshoots from existing more extended arrangements. Possibly some difficulties might be simplified were we working under a greater concentration of controlling interests, and the insane poor recognised as wholly, instead of partially, a state charge. An enlightened and well-constituted State department might at least divest itself of the present somewhat complicated and incongruous machinery under

which all tentative changes have to be made. But this is a mere speculative question into which I have no desire to enter. I wish to do no more than submit, and leave in your hands, the practical question that I have endeavoured to make the leading subject of the observations, which, by virtue of the office you have conferred on me, I have had the opportunity of addressing to you.

On the Prevalence of the Causes of Insanity among the Ancients. By D. Hack Tuke, M.D., F.R.C.P.

The relative extent of the causes of mental disease in ancient and modern society is a problem of profound interest. The study of it is one mode of approaching the consideration of the question of questions for medico-psychologists—whether among the peoples of the highly civilized portions of the globe at the present day more persons do or do not become insane than among the nations of antiquity. The inquiry involves the search after and the marshalling of some facts which are not in themselves medical or psychological, but facts, nevertheless, which lead up to the directly medical and psychological result indicated by the title of this article.

Obviously the first question is, what are the acknowledged causes of Insanity? and the second, were these present in full force in the ancient world—as full force as in the modern one?

That the forms of disease to which the human race is liable may vary in character and intensity in different ages and in different nations will not be disputed. I put aside for the present the question of fact—one difficult for obvious reasons to ascertain—whether antiquity presents us with as well marked examples of madness as we witness in our own age, or whether the references made to the disease by ancient physicians, historians, and poets, except when they speak directly of the causes of insanity, indicate a familiarity with its symptoms. I shall only consider the *à priori* question, whether, having regard to the main and well-known causes of insanity on the one hand, and the conditions of ancient life on the other, there is reason to infer that it was as extensively prevalent in the earlier as in the later ages of the world? It is the question of presumption and probability we have to study. The

historical facts are not now in view. It is only needful to refer here in the briefest possible manner to the grand and salient causes of insanity, in order that we may have them clearly in mind in studying the manners of the several nations we shall pass in review; for it would be impossible to enter into the consideration of each of these causes in detail.

Broadly then we may thus enumerate them :—

Intoxication, whatever the poison employed may be. We include the action of alcohol and allied stimulants, not only on the individual taking them to excess, but upon the offspring; the condition of the children again causing further degeneracy in the succeeding generation. If, on this cause alone, we can arrive at anything like a decided conclusion, we shall have advanced far to the solution of the problem before us.

Then we have defective nourishment, leading to exhaustion and mal-nutrition of the nervous centres, to degeneration of the race, idiocy, &c., as witnessed in any miserably under-fed population. The degeneration and insanity attributed to intermarriages opens up a question still to a large extent *subjudice*, and it is extremely difficult to trace this cause in reference to its relative influence in ancient and modern nations. Hereditary insanity is of course left out of account, because it pre-supposes the existence of that of which we are in search. In connection with defective nourishment we place bad sanitary arrangements of all kinds—overcrowded and filthy dwellings; the conditions universally acknowledged to cause sooner or later a thorough depravation of the bodily organs, and therefore of that upon which the integrity of the mental faculties depends.

Next we have various causes, chiefly moral, but partly mixed in character, which excite or depress the emotions profoundly, as a dissolute life or depraved habits, domestic sorrow and misery, commercial speculation and losses, religious excitement, disappointments in love, and the worry of life in general—overwork.

Lastly, intellectual strain, which, if the least potent of causes, when rigidly eliminated from all emotional accompaniments, may by the infraction of the laws of health in other ways—as in causing loss of sleep—prove highly injurious. This distinction explains in part why it does not appear as a prominent factor

in the statistics of the etiology of insanity. It must also be remembered that the reports of asylums which are published are as a rule those which refer to the non-studying class of the population. Often and often the nervous system is greviously injured by the follies and excesses of educational work, involving undue mental tension, and that strain on the memory which is induced by high pressure examinations; but insanity is not the usual form which this injury takes. It may not unfrequently be a predisposing, but it is not often the immediately exciting cause. Hence, when insanity does supervene, the latter, whatever it may be, gets all the discredit which the former ought to have had, in part at least, and is therefore sometimes overlooked. And above and outside all these exciting causes is that peculiar mental constitution in which there lurks the subtle insane poison or liability to insanity, which renders its possessor prone to become mad when brought into conflict with any one of these causes, and without which they often prove harmless. Whatever conclusion we arrive at as to the extent of the causes of insanity at any period of the world's history, would at the same time affect the question of the prevalence of an insane diathesis. If we have reason to conclude that the former are present in full force, we may be sure that the latent tendency to an outbreak of madness will be induced.

The causes of the accumulation of insane persons in a nation, in other words, of existing as distinguished from occurring insanity, present a highly important, but distinct subject of inquiry.

Here, in the enumeration of the causes of mental disease, the question so often asked, and so often answered differently, arises—Does civilization favour the increase of insanity? Our answer to the general question, what is the presumption in favour of the prevalence of insanity among the ancients, drawn from the presence of the acknowledged generators of the disease, would largely depend upon the reply; if we were agreed upon what civilization is, and upon whether the ancients or the moderns are the most civilized, in the signification of the term so decided upon. But we are more likely to avoid reasoning in a circle, and escape the difficulties which surround the subject, from the loose and contradictory ideas attached to the term, if we look rather, though not exclusively, at the causes of insanity unquestionably known to us, because present in the midst of the state of society with which we are familiar, and which we call modern civilization, than

at civilization in the abstract. If we were to speak and argue of a perfect civilization, it is clear that we should mean a very different thing from that which constitutes the mixed condition of modern society. All our pauperism and drunkenness would be excluded, and the highly educated, moral, and religious portion of society would remain to represent the idea. But if we were to apply the term to the actual state of so-called civilized Europe, we should have emphatically to include them as striking features of its character, and this, be it observed, not at all as the *remains* of a previous barbarism. Our reply to the question as to the influence of civilization, will, therefore, largely depend upon the sense in which we employ it. If it excludes vice and want, it gets rid of prolific causes of insanity, and its influence must be highly beneficial, even though there may be some unfavourable causes set in action in the very process itself. If, however, on the other hand, we allow it to include the condition of the whole population of a civilized nation, thus comprising those who may be both poor and vicious, but who are intimately engaged in advancing the progress of the country in its onward march in wealth and in the arts, and whose state is, to a certain extent, conditioned by the advance of modern civilization, then, indeed, must the reply to the question at issue be largely unfavourable.

To civilize, according to the definitions ordinarily given, is to instruct in the arts of regular life—to reclaim from barbarism—to advance the art of living together in civil society; and if this were all, civilization might consist, even when its conditions were fulfilled, with intemperance and dissipation, and a large amount of pauperism. It might, in fact, accord with much, or, indeed, all that which forms the actual civilization of our day. An ideal civilization, however, would be something much higher than this, and would, in theory at least, be antagonistic to all these evils. It would imply something more than the mere acquisition of knowledge or the refinements of life.

It is necessary, therefore, not to lose sight of these two modes of viewing civilization—the one as ideal, the other as actual. In attempting, however, to decide upon the probabilities of the prevalence of insanity in remote periods of the world's history, knowing, as we do, that there is a frightful mass of mental disease among the European and American populations—at least as much, if not more, than is found in other and less civilized countries—it seems the most practical mode of proceeding to enquire into the social condition of

ancient peoples, as compared with our own, satisfied that so far as it is found to have been similar, the former may safely be inferred to have been no strangers to the inroads of mental disease. For ourselves, civilization, whenever the term is employed, is not used to denote an abstract and theoretical state of society, which implies perfection, but the mixed condition which accompanies and helps to constitute modern society, as presented to us in the civilized nations with which we are all familiar.

If we say that civilization is accompanied by an increase of insanity, it is civilization so understood which we mean. Clearly a theoretically perfect civilization, even though it should render the organ of the mind more sensitive in some respects to derangement, might, by the fulfilment of the laws of mental and bodily health, largely, if not wholly, neutralize the danger.

Having glanced at the most prolific causes of mental disease, and stated our belief that modern civilization allows of, if it does not, in some respects, foster the growth of certain recognized factors of insanity, we proceed to consider whether and how far the state of the world in olden time contained the same elements of mental disorder, the same dangers to loss of mental equilibrium.

That these causes were, to a great extent, absent in the early period of the world's history—in prehistoric times—is clear. From *intellectual strain* and its concomitants, the man of the Stone Age was certainly free. From club blows in battle his brain was much more likely to suffer.

Intoxication.—It is difficult to form any positive opinion as to what, if any, form of intoxication prevailed in primitive times. We see from Genesis how soon it crept into the old world, and we know that among savages some form of inebriety is common. The Sonthals, one of the aboriginal tribes of India, perform their religious observances in a state of intoxication. But the latter instance, coupled as it is with the rites of religion, is scarcely to the point. Mr. Stanley speaks of African savages who live wholly on a milk diet.

Tylor,* in reference to certain mental phenomena produced by drugs in the West India Islands, at the time of Columbus, describes the effect of snuffing up the "cohoba" powder through a cane. It produced intoxication; the object in view being to obtain an ecstatic condition, in which oracular

* "Primitive Culture." Vol. ii, p. 377.

utterances would be given. The Omagnas were and are in the habit of using narcotic plants, causing intoxication for twenty-four hours, accompanied by extraordinary visions. To obtain these, the Californian Indians also gave their children narcotics. In North Brazil the same custom prevailed. The seeds of Datura Sanguinia were used by the Darian Indians to induce prophetic delirium. The Peruvian priests used a narcotic potion, "tonca;" the plant having also the name of "huacacache," *i.e.*, fetish herb. Delirium and visions were induced by the Mexican priests with "ololiuhgni." The above writer observes that tobacco was used for the same purposes in both North and South America, the smoke being swallowed by the native races to cause complete intoxication. It was regarded as supernatural ecstasy by the sorcerers of Brazil and by the North American Indians. That these, or similar practices, if known in prehistoric times, would be injurious to mental health, is indeed possible. At the same time they are, in these instances, limited apparently to the priests, and do not imply that these drugs were employed by the mass of the people. The reader will recall the observations of Cook in regard to the natives of Otaheite, where they expressed a liquor from the *avaava* root. Several chewed it till it was soft and pulpy, then spat it out into a platter, watered it, according to different tastes, strained it, and drank it immediately. Though intoxicating, Cook saw only one instance in which that effect was produced, as the natives drank it with great moderation. They would also simply chew it. Cook observed that an old native could walk very well in the morning, but required leading home by two people in the evening; hence, he says, he concluded that this root had the same effect upon him that wine has on Europeans. Although, however, he says that the old people seldom sat down without preparing a bowl of this delicious mixture, there was evidently no general intemperance. Lastly, and much to the purpose, from the fact that savage hunters and fishers are probably fair representatives of the rude primitive races, the hunting Indians of North America and the Australians had no intoxicating liquor.

With regard to drunkenness, then, and, we may add, immorality of a kind conducive to insanity, it is certain that while there *may* have been means employed to induce inebriation, and while the standard of conjugal morality would be wholly different from what obtains amongst a civilized nation, there was not the curse of alcoholism in the form known at a later

period of the history of the race; nor were there the multifarious and nefarious vicious indulgences, which in different and what are called more civilized conditions of society sap the mental powers and are the fruitful source of certain forms of mental disease.

Defective Nourishment, Poverty, &c.—Of poverty—at least, that grinding, reckless, drunken poverty and squalor, with which we are familiar in our large towns and in some of the rural districts, the primitive inhabitants of the world must have known nothing. They might sometimes find it hard work to make the chase yield all they would desire, but prolonged poverty, of the kind we have indicated, was surely then unknown. The curse of civilized pauperism was yet to be experienced. It is difficult to conceive that the conditions of life under such circumstances would favour attacks of insanity, or the generation of the insane diathesis. And, indeed, the strong presumption that such a race would be little subjected to the main causes of insanity, either predisposing or exciting, is confirmed by what we actually know of savages at the present day; and, granting that such savages may not exactly represent the inhabitants of the Stone Age, there would be an *à fortiori* argument in favour of the comparative immunity from insanity enjoyed by the latter. Although the objection may be, and has been made, that the fact escapes the observation of travellers, yet, with a very large allowance for this source of fallacy, it seems to us impossible to doubt that their testimony suffices to prove that insanity is rare among uncivilized tribes. The evidence is so uniform, that we cannot but allow it great weight.

Then as to *intermarriage*. In small clans and tribes, marrying in and in may be supposed to have often endangered their vigour, and tended to cause degeneration. If, however, the custom of existing races of savages may be taken in proof, the practice of exogamy which prevails in many tribes may have prevailed in early ages. This custom is, in fact, regarded by some as only explainable as a reformatory movement to break up the intermarriage of blood relations (Morgan). The advantage of crossing would, Sir J. Lubbock considers, soon give a marked preponderance to those races by whom exogamy was largely practised. "When this state of things had gone on for some time, usage, as M. Lennan well observes, 'would establish a prejudice among the tribes observing it—a prejudice strong as a principle of religion, as every prejudice relating to marriage is apt to be—against marrying women

of their stock.' We should not, perhaps, have *à priori* expected to find among savages any such remarkable restriction, yet it is very widely distributed; and from this point of view we can, I think, clearly see how it arose."* It is surprising also to find that in Australia no one may marry a woman whose family name is the same as his own, although in no way related.† Du Chaillu asserts that it is "an abomination" in Western Equitorial Africa for the members of the same clan to intermarry. If, then, endogamy was really rarer than exogamy, the tendency to mental degeneration in pre-historic times may have been confined within narrow limits. As we write, Mr. Stanley's narrative in the "Telegraph" records the endogamic practice of an African tribe. "They are," he writes, "extremely clannish, and allow none of their tribe to intermarry with strangers." Mr. Huth, in his recent original and able work, says that the only instances on record he has met with in savage nations of any evil effects being attributed to consanguineous marriages are those of the Kenai, the East Indians, and the Hawaiians, and he dismisses them as inconclusive. He tries to show that the reason many nations have prohibited such marriages is not from having observed any evil result; that many communities have lived without crosses, and without any excess of disease; that the statistics on the subject are worse than useless; and that as far as experiments on animals go, they show the harmlessness of these marriages; and that deterioration through the chance accumulation of an idiosyncrasy, though more likely to occur in families where the marriages of blood relations are habitual, practically does not occur oftener than in other marriages, or it would be more easily demonstrated.‡ The influence of consanguineous marriages upon the production of insanity and idiocy is at any rate not so certain as is usually supposed, and therefore if in pre-historic times, as among some savages, kinship was disregarded, it would not be safe to assert, in the present undetermined state of the question, that there was more liability to mental disease under such circumstances than in modern civilized society.

Causes Chiefly Moral.—To religious perplexities, commercial speculation, and to political excitement, the man of the Drift Period was certainly a stranger. He might, indeed,

* Op. cit., p. 69.

† Cf. Mr. Lang's "Aborigines of Australia."

‡ "The Marriage of Near Kin," by Alfred Henry Huth, 1875, pp. 8 and 358.

suffer terror from his belief in evil spirits, but probably this would be generally removed by the simple belief in charms to counteract their malign influence. Peril to mental health from theological doubts and perplexities, would, at any rate, be unknown. Mr. Tylor, in a letter to the writer, says that he does not think there is any likelihood that the fears of misery of the soul after death, which act so strongly in the civilised world, had any appreciable effect in upsetting the savage mind; and that though the notion of a future life of the ghost is strong (connected with the appearance of the dead in dreams) among the savage tribes who are best known, anything like a moral judgment after death seems faint or absent, and so it may have been among the Drift people; but that still, if the theology of modern savages is any type of that of these early people, madness would already have a theological aspect, and might be influenced by religious ideas. With epilepsy, convulsions, &c., mania would be regarded as demoniacal possession, and the utterances of the patient as due to a demon. We must not, then, ignore entirely the effects of a belief in ghosts and demons. Mr. Tylor inclines to think that savages really do fear horribly these phantoms who pervade their world and are especially numerous and active in the dark. Still, he would not go so far as to say that dwelling on these bogies often or ever drives savages mad, though an aggravating influence on morbid states of mind. While he believes that the sensual excesses of savages may be counted as causes of insanity, he thinks decidedly not to the extent obtaining in civilised or luxurious nations; being such as belong to a state of physical health (the weaker being killed off), rough food, active athletic life, and absence of stimulants. It should be remembered that while want of moral control would tell unfavourably, absence of conflict between moral principle and actual practice would tell favourably as regards insanity. To disappointments in love they would also be almost or entirely strangers. The affections of savages are so little developed and cultivated in this direction, that they would escape the dangerous shocks and blights to which they are exposed in civilized nations. They would probably have no institution of marriage. "True love," observes Sir John Lubbock, "is almost unknown amongst the lowest races; and marriage in its lowest phases is by no means a matter of affection and companionship. Among the Koussa Kaffirs, Lichtenstein asserts that there is no feeling of love in

marriage. In North America, the Tinne Indians had no word for "dear" or "beloved," and the Algonquin language is stated to have contained no verb meaning "to love," so that when the Bible was translated by the missionaries into that language, it was necessary to invent a word for that purpose."* He cites a French writer to show that the Samoyedes of Siberia show little affection for their wives and "*daignent à peine leur dire une parole de douceur.*" Many other instances might be adduced to illustrate this remarkable fact, but these are sufficient to show that in one very important circumstance the early races would not be so much exposed to the causes of insanity as more civilized nations are.

Passing from wholly uncivilized men to a higher grade, we may apply the same tests to the state of society depicted in the early and some of the later books of the Old Testament, and thence to Egyptian, Greek, and Roman society, the problem for solution being whether the character and extent of their social condition were such as to render it highly porbable that they were subjected to the same causes of insanity as ourselves, or causes equally potent.

Intoxication.—Noah planted a vineyard, and what followed is of especial importance to us, because in it we are obliged to recognise one of the frequent causes of insanity. Whether Noah was often drunk we do not know, but it may safely be inferred that it was no unusual thing for his immediate, as well as his subsequent, descendants to be intoxicated.†

In Deuteronomy, the parents of a rebellious son are commanded to bring him to the elders of the city and say, "This our son is a glutton and a drunkard," in order that he should be stoned. The fact that Eli thought Hannah drunk when she came into the temple, the simile of David "stagger like a drunken man," and of Isaiah "as a drunken man staggereth in his vomit," and his complaint that he was the song of the drunkards, and the remonstrance of Joel, "awake ye drunkards, weep, and howl"—these facts show how well known was the sin of drunkenness.

From all this we see clearly that intemperance was quite sufficiently prevalent among the Hebrews to cause a certain amount of mental disease; at the same time there is ample proof of its not having been the scourge of society

* "Origin of Civilization," Third Edition., p. 126.

† Later on, vineyards are constantly mentioned. Horne observes that the wines of Canaan being heady were commonly mixed with water. The luxurious prepared it with spices (Edersheim).

which it is among so many nations of the West. The Jew bears the character of being sober at the present day. Mr. Stallard, in his able work on "London Pauperism amongst Jews and Christians," says that drunkenness is rarely the cause of distress among the former, and that a Jew's sobriety gives him a marked advantage in all branches of common labour. "The visitor of the Jewish district is forcibly struck with the consequences of this sobriety. The houses of the poor are, on the whole, more cleanly, more tidy, and more comfortable than amongst the poorest English. The children are always better clothed and more cleanly, their round and ruddy faces presenting a strong contrast to the pale and scrofulous countenances of English children living in the same overcrowded courts. . . . . Everywhere in the Jewish houses there is less of that squalid destitution which is the result of intemperance. Nowhere is it possible to find Jewish men and women with bloated and waxy faces, standing at the doors of public-houses, as do the sots whom no charity can help, no philanthropy reclaim. Home is the centre of their happiness, and the love of the family is worthy of all praise. Desertion is comparatively rare, and brutal violence to the women and children utterly unknown amongst them" (op. cit. p. 11). Edersheim says the Jews were very moderate in their potations, except on festive occasions, and maintains that drunkenness was not one of the national sins.

Defective Nourishment, Poverty, &c., as shown in the mode of life.—The lives of the patriarchs unquestionably indicate a condition of life which, compared with our own, was exceedingly simple, although by no means savage—one much more in accordance with nature, far less moulded by artificial wants. It is true that Abraham was "very rich in cattle, in silver, and in gold," and also in men servants and maid servants, yet he runs to the field on a well-known occasion and fetches a calf for his guests, and it would seem even dresses it himself. As the custom was, he stood, and they took their meal under the tree, as is done to this day in the East. Rebekah comes forth with her pitcher on her shoulder at the well to meet Eleazer. There is, indeed, a remarkable mixture of the primitive simplicity of pastoral life with certain luxuries, or at least elegancies, for even then Abraham's servant presents her with ear-rings and with bracelets. These, however, may have been nothing more than the ornaments worn by savages at the present day.

Rachel tended the sheep; and Jethro's daughter had the charge of his flocks, although he was a prince. They were dwellers in tents, like the modern Arabs, and occasionally in caves, like Lot and his daughters, and in houses of stone, or mud, or wood. We read, indeed, as we extend our survey to a later period of Hebrew history, of ivory palaces in the Psalms, and of the ivory house of Ahab, probably houses only ornamented with ivory, but any way indicating some artistic development. Then as to dress, we find garments manufactured from wool and flax mentioned in Leviticus and Proverbs, while the wealthy indulged in fine linen and purple or scarlet silk. Rings and seals were frequently worn even in early times, and we read of chains on the neck, and tinkling ornaments on the feet. Rebekah's bracelets we have already mentioned. Men also wore them—as Judah and Saul. Jezebel painted her face or darkened her eyes with the powder of lead ore. Looking-glasses of polished brass were in use.

Then, as to the occupations of the ancients of the Bible, they were, we well know, mainly pastoral and agricultural—in the early times, almost exclusively so. The people were shepherds and husbandmen.

Moses was a shepherd. A judge in Israel—Shamgar—was taken from tending the herd, and Jephthah from the sheep. Gideon left his threshing floor. Even when Saul was king, we find him coming out of the field after the herd, at the time he was informed of the danger in which a certain city was. David was brought from feeding the ewes. One king—Uzziah—is stated to have been a lover of husbandry. Elisha was called from the plough. Amos was a herdsman. Women of quality, so to speak, also, as we have seen, tended sheep. There were in early days artificers in iron and brass, in instruments of music also, and afterwards there are occasional indications of art. The golden calf shows some artistic power. In "Chronicles" we read, after Joshua's death, of the valley of Charashim, where the craftsmen dwelt. Chariots were built, images sculptured. Smiths are mentioned in the days of Saul as being seized by the Philistines, and they and craftsmen (in addition to barbers, bakers, potters, and fullers) were carried away into captivity by Nebuchadnezzar. Horne says that among the Hebrews artificers were not, as among the Greeks and Romans, slaves, but men of rank and wealth. He points out that although before the Israelites entered Canaan Bezaleel and Aholiab excelled in their workmanship of the tabernacle, they seem

to have been without successors, for in Solomon's time, although at leisure for art, they had no professed artists able to undertake the work of the temple, and had, therefore, to send to Hiram, King of Tyre, for a skilful artist. In science, their knowledge was probably less than that possessed by many nations, but Job and Solomon must have had considerable acquaintance with natural history. However deficient in art and science without foreign help, their civilization was shown in their literary compositions, and especially their poetry. We have only to recall the Song of Moses, that of Deborah, Barak, and Hannah, the lamentations of David over Saul, and Jonathan, to say nothing of the Psalms, Proverbs, Canticles, &c. In those schools of which we read first in the book of Samuel, the law must have been carefully taught, and instruction must have been given in music. By the time of David, and yet more of Solomon, very considerable advance must have been made in knowledge and civilization.

We also witness the development of luxury and of the vices incidental to such a state of society as must have existed under Solomon. Those referred to in the book of Proverbs must have had a certain influence in producing mental disorders. We can speak no longer of primitive simplicity, although we might still contrast the society of Jerusalem at this period with that of our modern capitals.

As to poverty, it was said indeed that the poor should never cease out of the land, and the poor are very frequently mentioned in the Jewish writings. Some, at least, in the days of Solomon were observed to become poor through drink. "The drunkard shall come to poverty." It is not, however, to be supposed that the depths of poverty and misery familiar to ourselves were reached by large masses of the people. Beggars, properly speaking, except those afflicted with disease, were unknown in Palestine, and to a great extent are so still among Jews.*

Causes Chiefly Moral.—As regards profligate immorality, the references to it are numerous enough, but, as a whole, the Jewish nation cannot be regarded as having stood low in this respect. As to other emotional excitors and depressants, they no doubt exercised a certain influence in the direction of insanity, but still a limited one compared with that of modern society. The same remark applies to intellectual strain.

Take next Egyptian civilization. Nothing can be more

* Edersheim's "History of the Jewish Nation," &c., 1857.

wonderful; and the more we know of it, the more wonderful does it appear. The earliest writings of Egypt (some of them the earliest writings in the world) reveal a social condition and a state of morals which leave no room for doubt as to the remarkable advance made in civilised life centuries before Abraham visited Egypt. The question is, was it ever comparable to our own in its character and extent? Were the great causes of madness present in our age in powerful action among the Egyptians? To glance rapidly at the first question, look at their proficiency in some of the arts. The Egyptians, although principally an agricultural people, were remarkable for their inventions, and as manufacturers were celebrated for their fine linen, cotton and woollen stuffs, and their taste in porcelain and gold and silver articles, while the cabinet makers turned out excellent work.* Pharaoh arrayed Joseph not only in fine linen, but put a gold chain about his neck and a ring upon his hand. Many of the bracelets, rings, and ear-rings discovered in Egypt, which are at least four thousand years old, show the advance made in goldsmith's work. In the Leyden papyrus the following curious satire on the luxury of the day occurs; at least it seems reasonable to regard it in this light, "All manner of jewels are found on the necks of slave women; honourable women and mistresses of houses are saying 'would that we had enough to eat.'" The hieroglyphics on obelisks, &c., were sculptured in a way which surprises the workman of the present day with his tools of exquisitely tempered steel, as I have been assured by the proprietor of well known granite works in England. Their rich sculpture and the beautifully clear execution of their drawings were combined with a knowledge of the harmony of colours. Geometry would seem to have originated with the Egyptians. Mathematics are said to have made almost as much progress at the time of the earliest extant monuments as at a much later period. Then the ancient Egyptians are generally believed to have invented the art of writing. Through their power of committing their thoughts to paper, we know (from the "Book of the Dead") what their sentiments were in regard to the future, and that they believed in the immortality of the soul. They cultivated the study of Medicine and Surgery, and their second King (Athothes) wrote upon Anatomy, while another Egyptian composed six books on

* Wilkinson's "Ancient Egypt," Vol. ii, pp. 109. 247

Medicine. Each doctor practised his particular branch; some were oculists, some dentists, some treated internal maladies. The mummies show that the art of stopping teeth with gold was known to the Egyptian dentists. If of Medicine they had a remarkable knowledge, and if in Divinity—notwithstanding their degraded notions in regard to the worship of animals—they had certain conceptions of a lofty and spiritual nature, so also the high character of their Legislation has always been admitted and admired. The condition of the women in any country is regarded with justice as some test of the degree of its refinement. They are represented in the Egyptian sculptures as engaged in weaving and using the spindle, but they were no mere drudges. They were not obliged to remain in seclusion, or if they left the house, to wear a veil as in the East; nay, it would seem, according to Diodorus, that so great was their influence and position that it was actually agreed in the marriage covenant, among other things, that the wife should have control over her husband, and that no objections should be made to her *commands*, whatever they might be *—a fine precedent for the advocates of women's rights in our own day.

The Egyptian women were, as Mahaffy shows, good musicians, and versed in some of the other arts and sciences. But if they spun and sewed, they sported at ball and danced; and this writer thinks that their education cannot have been very great, because they have left no literary compositions behind them. He also points out that their best known characters, whether they appear in history or are depicted in romance, are by no means good, and contrast unfavourably with the women of the Bible.

Recalling now the main causes of madness mentioned on a previous page, were they, let us enquire, largely present among the ancient Egyptians?

Intoxication.—In a very old papyrus in the British Museum occurs unmistakable proof that the ancient Egyptians were no strangers to drunkenness. Here is a most interesting passage from a letter written to a teetotaler of that day, who had evidently not kept his pledge :—

"Whereas it has been told me that thou hast forsaken books, and devoted thyself to pleasure; that thou goest from tavern to tavern, smelling of beer, at the time of evening: if beer gets into a man, it

* Wilkinson, op. cit., vol. ii., p. 223.

overcomes his mind. Thou art like an oar started from its place, which is unmanageable every way; thou art like a shrine without its god, like a house without provisions, whose walls are found shaky. Thou knowest that wine is an abomination, that thou hast taken an oath that thou wouldst not put liquor into thee. Hast thou forgotten thy resolution?"*

The custom which prevailed at their feasts of handing round a small wooden image with the words "Behold this, eat, drink, and make merry; when thou art dead, such shalt thou be" (a commentary, by the way, on "If in this life only we have hope, let us eat and drink, for to-morrow we die"), illustrates the drinking customs of the Egyptians on public occasions. It is stated that at the Egyptian banquets even the ladies were carried home by their attendants drunk.†

Wilkinson regards it as highly improbable that the Egyptians were in early times immoderately fond of delicate living, or at any period committed the excesses common among the Romans. The example of the priests favoured moderation. Still, before 1600 B.C. the indulgence of the higher classes had almost reached the pitch attained by the later Pharaohs. Diodorus and Plutarch assert that their primitive simplicity succumbed to luxury as early as King Menes the First. They were guilty of excesses, "especially," this Egyptologist asserts, "in the use of wine, both on private and public occasions, which is not concealed in the sculptures of Thebes; and in later times, after the conquest of Egypt by the Persians, and the accession of the Ptolemies, habits of intemperance increased to such an extent, and luxury became so general among all ranks of society, that writers who mention the Egyptians at that period, describe them as a profligate and luxurious people, given to an immoderate love of the table, and addicted to every excess in drinking. They even used excitants for this purpose, and *hors d'œuvres* were provided to stimulate the appetite; crude cabbage provoking the desire for wine and promoting the continuation of excess" (op. cit., vol. ii., p. 381; and "Athenæus," vol. i., p. 56).

In consequence of the quantity used being so much greater than what was made in Egypt, a large importation from Phœnicia and Greece was, according to Herodotus, required in his day. It appears that among the rich not only

* Eleventh Letter of the Papyrus Sallier I., British Museum; translated by Mr. Goodwin ("Prolegomena to Ancient History," by Mahaffy, p. 293).

† Wilkinson's "Ancient Egypt," Vol. ii.

was wine the favourite drink, but a beer called zythus, made from barley, and flavoured with lupin, &c., was in great repute. Athenæus, himself an Egyptian (flourishing in the third century after Christ) says of this beer that those who drank it were so pleased with it that they sang and danced and did everything like men drunk with wine.* For our present purpose, it would be particularly interesting to know whether or not the mass of the people drank it. Athenæus says the poor drank it because they could not afford wine. Wilkinson thinks that the peasants in all parts of Egypt partook of it, though in a less degree in the abundant vine districts; but as Herodotus maintains that it was only used in lieu of wine in the lowlands, where corn was mainly cultivated, it is by no means certain that its use was general.

Herodotus records that "Mycerinus, the Egyptian, having been told by the soothsayers that he was fated to live but a short time, used to light a great number of lamps when night arrived, and spend all his time in drinking and luxury, relaxing neither by day nor by night; and when he withdrew into the marshes and into the groves or wherever he heard that there were meetings of young people to amuse themselves, he always got drunk. Amasis, also, another of the Eygptian kings, was a very hard drinker indeed."†

From the foregoing it is but too clear that there was quite sufficient drunkenness to cause a considerable amount of madness; at any rate, in the more luxurious age of Egyptian history, for the distinction must always be borne in mind, in this enquiry, between the early and the more civilised periods of a nation's history. To confound under the term "Egyptians" the people of a less and more advanced civilisation would be misleading, although as to large periods of time, the embracing of populations separated by thousands of years would be of less consequence in Egypt than in any other country, perhaps, except China. Granting, however, the fact of drunkenness among the Egyptians, some in the early and more than a little in the later periods of their history, I cannot find evidence to prove that the labourers, native or foreign, were maddened by bad beer—certainly not by worse gin—into frenzy, or into the committal of crimes such as figure every day in our police courts. Are not these luxuries more especially reserved for the British labourer? His Egyptian prototype did not enjoy, we may safely assert,

* "The Deipnosophists," vol i., p. 56 (Bohn's Ed.).
† Herod. Bk. II. Athenæus, vol. ii, p. 692.

the grand privilege of being frequently off "on spree" when he might be at work; nor did he, we may confidently aver, revel in the enjoyment of that liberty so dear to Britons, so gladly accorded to them, and so scrupulously protected and defended by certain members of Parliament, of being so muddled by Saturday night's and Sunday's drink as to be unable to go to work on Monday morning.

Defective Nourishment, Poverty, &c.—In regard to the extent of poverty among the lower classes in Egypt, probably their toil was sufficiently paid in food to prevent actual pauperism, and yet they appear to have been "miserable in the extreme" according to Mahaffy, who suspects that this may have been an important cause of the gradual decay of Egyptian and other early civilizations.

"The Fellaheen," writes a friend of ours now travelling in Egypt, "are miserably poor,being ground down with taxation, a large part of the produce of which must be spent by the Khedive upon the innumerable Palaces, for himself or his sons. I have little doubt that all that is wanted to make their people prosperous is a reduction of taxation, and the gradual inroad of education, for they are a very fine race. Possibly the little which is required to make life tolerable in such a climate as this, might be a hindrance to advancement. They eat three quickly consumed meals of dry brown bread, and a mash of peas, and this seems enough to develop very fine muscular frames. One cannot help wishing that something could be done toward the better government of these poor people, who have been under the bonds of a perpetual succession of oppressors from the earliest ages. I expect in old Egypt the mass of the population were in much the same state that the Fellaheen are in now. The representations of life on the walls of the Temples depict what we see every day in the fields and on the river banks."

We must admit that "the miseries of the old Egyptian poor are only transmitted to us by the boasts of reckless kings who so loved their own glory, and to magnify their deeds, that they confessed the reckless waste of human life with which they completed their eternal monuments, and that there were great social sores, great sorrows of humanity, covered with a surface of unjust and heartless splendour."* The suffering of those engaged in mines was no doubt horrible, if the account given by Diodorus may be trusted.

* Social life in Greece, p. 75.

They were prisoners of war, and notorious criminals, and not the ordinary slave, to whom they are said to have been kind, and the murder of a slave was punished with death. These miners were bound in fetters, compelled to work day and night; and overseered by soldiers. No attention was paid to their persons; they were naked; and, "so wretched," says Diodorus, "is their condition, that everyone who witnesses it deplores the excessive misery they endure. No rest, no intermission from toil, are given either to the sick or maimed; neither the weakness of age nor women's infirmities are regarded; all are driven to their work with the lash, until at last overcome with the intolerable weight of their afflictions, they die in the midst of their toil. Such," adds this graphic writer, "is the method of extracting the gold on the confines of Egypt, the result of so many and such great toils. Nature, indeed I think, teaches that as gold is obtained with immense labour, so it is kept with difficulty, creating great anxiety, and attended in its use both with pleasure and grief." But whatever their poverty and poor food, their sufferings—and these evidently ended in death rather than madness—they were not of that particular kind which affect so large a number of our own labourers, both agricultural and manufacturing—those bound up with England's accursed pauper drunkenness being, we had almost said, worse than all the plagues of Egypt put together.

Causes chiefly Moral.—In regard to emotional excitement—there is no reason to suppose there was, even among the classes above the labourers, that hot and breathless struggle for a livelihood—that speculation and gambling in various forms which mark our business life. Contrast the constant tendency to change which characterises English society, with that which existed in Egypt. It was fixed, stereotyped. The strange thing about Egyptian civilisation is, that there was no gradual advance to higher and higher states, but that for thousands of years the people continued in essentially the same condition, civilized it is true, but never making vigorous strides beyond. The range of knowledge traversed by the student in Egypt, however remarkable, will bear no comparison with that required in our own day. What we call learning must have been very much restricted to the priests. It was their interest to confine it to themselves, in order to maintain their superiority over the masses of the people, and make a good living out of their wisdom. Zincke observes, that the Egyptians eliminated the elements of political and

social change, by arranging society in the iron frame of caste, and by petrifying all knowledge in the form of immutable doctrine.* The ruling power decided what every man was to be, and what every man was to do. The system was both a cause and effect of the condition of their society. One third of the land belonged to the monarch, one-third belonged to the priestly caste, and one-third to the military. A profession or business usually descended from generation to generation. The office of embalmer, for instance, might be hereditary for some hundreds of years. From another point of view, that of slavery, we might with the above writer say that this system divides the society of Egypt into two great castes, assigning to one, leisure, culture, the use of arms, government; to the other, denying them all participation in these advantages and employments, it assigns absolute subjection, labour, and just sufficient food. Hence uniform social order, and little sensational excitement. Political heat, commercial panics, religious perplexity, where were they in the good old days of the Pharaohs? There was in all probability comparatively little morbid sensitiveness, little sentimentalilty, self-consciousness, or the imaginary, but no less real, anxieties and cares of an over-strung mind. As regards the morality of the Egyptians, we are not in possession of much definite information, but are not aware that they were in any way remarkable for profligacy. The union of brother and sister was permitted. We cannot, however, with certainty assert that this custom would entail mental degeneration. Polygamy was allowed. There was no restriction, says Diodorus, except for the priests. Yet the privilege does not appear to have been frequently taken advantage of. Herodotus found in his day, that most of the Egyptians had only one wife.

Intellectual Strain.—The remarkable advance of the Egyptians in knowledge of various kinds could not have been attained without considerable study. What amount of toil and moil this study involved, it is impossible to say; but we can have no doubt that it was small compared with the standard of the present day. As a cause of insanity we may safely place it low. Sleepless nights from over-worked brains, were, we may well suppose, infrequent.

It is obvious, then, on a general review of the state of Ancient Egypt, that the people attained to a high rank of

* "Egypt and the Khedive," p. 275.

civilization, and that there certainly were not wanting some of the recognized causes of insanity to which we have referred—especially drunkenness. Whatever the vices of the Egyptians were, they were no doubt intensified in their later history. Still I think the conclusion is fair that while it resembled the civilization of England and some modern countries in important respects—those, indeed having special bearing on the question before us—it did differ in degree sufficiently to affect results. We think that on the one hand there must have been a strongly marked difference in regard to the intensity of mental pressure, including in this the emotions as well as the intellect; and on the other, in regard to that shameful drunken pauperism which accompanies our own boasted civilization.

(To be continued.)

On the Question of Getting, Training, and Retaining the Services of Good Asylum Attendants. By T. S. Clouston, M.D., Physician-Superintendent, Royal Edinburgh Asylum.

(*Read at the Annual Meeting of the Medico-Psychological Society, held at the Royal College of Physicians, 28th July,* 1876.)

There were in Great Britain in the beginning of 1875 about 72,000 insane persons registered and under control. For the care and treatment of these there are at least 6000 paid officials, whose sole duty it is to act as their attendants and nurses. This is reckoning them as one to twelve patients over all, the usual proportion in County Asylums; the numbers less than this in Poorhouses being made up for by the extra number employed in the care of the wealthier classes.

There is no available source from which I can ascertain precisely the changes that take place among attendants in Great Britain, but in the thirteenth report of the Scotch Commissioners in Lunacy (for 1871), a table is given (p. xlviii) showing the changes that had taken place among attendants in Scotch institutions for that year. Including voluntary resignations and dismissals, they amounted to 281, out of a total of about 500 employed; that is, the length of the services of each attendant was on an average less than two years. I think it will accord with the experience of most asylum medical officers, that attendants don't

stay on any better now than they did five years ago, and it is my own opinion, formed after an experience in both countries, that attendants remain longer in the service in Scotch Asylums than they do in English. It is a fair inference, therefore, that the changes among attendants in Great Britain now are no less frequent than they were in Scotland in the year 1870, and therefore it may be most safely assumed that there were 3400 changes among them last year, and that the average period of their services is less than two years.

I am perfectly aware, of course, that the duration of the services of many attendants is much less than a year, thus running up the average number of changes, and that there is, in all Asylums, a stable nucleus in the staff of attendants, as well as a floating ever-shifting plasma.

I have no means of verifying the fact by statistics, but the universal testimony of Asylum Superintendents is that of the new entrants into the service, by far the majority have never been in Asylums before, and are therefore totally inexperienced in the management of the insane. The same testimony is equally strong, and almost as unanimous, that this raw material, out of which they endeavour to make attendants on the insane, is most difficult to get good at present.

It requires no words of mine to show that this state of matters is most unsatisfactory to those who have the management of Asylums, and is most detrimental to the insane, interfering with the comfort and happiness of some of them, prolonging the malady of others, preventing the recovery of a number, and causing risk to the lives of not a few. I should not much exaggerate if I said that this attendant question is at present the question of questions to many of us at the head of Asylums. I feel certain that the discussion of it here is needed, and that the comparison of our experiences and thoughts in regard to it will be good for us all. This paper I have ventured to bring before the meeting solely to excite a discussion of the matter, and so to bring out the experience and ideas of our senior members. Which of us would not feel a burden lifted off us, and sleep more soundly at night, if we could think that our patients were all under the care of experienced, intelligent, and trustworthy attendants? Would not the absence of that suspicion with which we instinctively go round our wards, sweeten our lives and liberate more energy and sympathy in

doing our daily medical work? If we could see in each of our attendants a well-principled person, intelligent enough to understand the reason of his rules, and the unreason of his patients; with sense of duty enough to make him do his work as well when we are away as when we are looking on; with vigour of mind enough to compel the respect of his fellow attendants and his patients; with tact and temper enough to get on smoothly and have his own way with them too; with kindness of heart enough to put himself in the position of his patients at times; with self-control enough never to do more than blow some of them up, when they needed it; with observation enough to see and report the changes in their mental and bodily state to the doctor; with adaptability enough to cheer up the depressed and curb the excited in the same breath; and finally with physique and health strong, with a gracious presence and pleasant sympathetic manner—if each of us could see all this embodied in each of his attendants, should we not feel as if it were an easy thing to manage an Asylum, and not so sad a thing after all to be insane? As I try to realize the ideal Asylum with such attendants, it seems indeed one of the highest embodiments of human philanthropy. Alas! I fear such an institution is far removed from those over which we preside.

But to return to real life. Are six thousand beings such as I have described to be got for love or money in Great Britain? I question it; but, what is the same to us, they are certainly not to be got to enter asylum service as attendants. We have, therefore, to look for a somewhat lower ideal; but if even this is too high, I am quite sure most of us have one far too low.

One or two facts familiar to us all are worthy of notice in passing. Which of us has not found a very uneducated person with no advantages of up-bringing—the son or daughter of a poor cottager—to turn out an excellent attendant? Who has not found a smart, educated, intelligent, bright-looking young man perfectly useless in the wards? Who has not had experience of a well-principled person of the best character, moral and religious, turn out a dead failure? My experience cannot be quite peculiar in sometimes finding a well brought up educated girl fail entirely with a lady when one who entered the service as a scullery maid succeeds to perfection. Do we not find that a woman entering the service at forty will sometimes make a

first-rate attendant, and a girl of sixteen do equally well with the same case? Have we not all every day experience of the fact that a man brought up in the country will sometimes be a failure, while one from a town will do well? Is it not the case that at times we find a man or woman without any sort of experience whatever a first-rate attendant in a month? Such facts show most strongly that persons of different stations, characters, educations, experiences, and ages will all make good attendants, and that, therefore, our field of choice is not a limited one. This is a very important and very satisfactory fact to us all in the outset of our search for our six thousand. But they show as clearly that some sort of natural aptitude for the work is necessary in all cases, without which nothing else will do.

Are there any special motives that influence our attendants to enter asylum service? I think there are none, except those that influence people in seeking situations elsewhere. I fear one of the most common ideas in their minds is that the work is not hard. In the course of thirteen years' experience as an Asylum Superintendent I have just had one person assign as a reason (and I constantly ask the question) that she wished to do good to her fellow creatures; and the circumstance was so unprecedented that I regarded her with much suspicion, and cross-questioned her most sharply to detect any lurking hypocrisy. I am glad to say she turned out and is still one of the best nurses for the sick insane I ever had. Can we expect to get six thousand persons to act as attendants from such (so called) higher motives? I think not. We may give up the notion as chimerical at once. Indeed most of us could not fail to have a sense of much incongruity in our presiding over institutions with such a staff. I know of few members of this Association who took to asylum life from "higher motives" alone, however much those motives may influence the way our work is done. We cannot expect from others what did not influence ourselves.

It would seem a mere truism that we ought to get as well educated and as well brought up men and women as we can, and yet your experience will be greatly different from mine if it has not led you to be very guarded in employing any man who, with a good education and better position in life, comes to you seeking an engagement as an attendant. As things are at present, such men are generally failures elsewhere before they come to us. In the case of females, we do,

especially for private patients, get good attendants from the class of teachers, farmers' daughters, and governesses, but by no means invariably so. I have asked many head attendants and matrons, and the almost constant answer I received was, that the best raw material they got was, in the case of men, from the class of farm servants, fresh from the country; and in the case of women, from the class of domestic servants of the better sort. Is this really the best raw material for our attendants, or is our standard at present too low? I am decidedly of opinion that at least for our pauper asylums this is the best material. Far better get the best of such classes than the worst of a higher grade. But do we get the best of those classes? I fear not. There is no doubt that a lady's maid or housemaid of respectability and experience would look on it as a great come down to take service as an attendant. I fear we often get the sort of men who are too idle to work hard, and the sort of women who go as servants to hotels and lodging-houses. This is undoubtedly a most serious matter, and all of us who have the welfare of our patients at heart must deplore the fact and strive hard to raise the standard. The attendant of the future, if he is to excel that of the present, must have good material in him, and must be a good specimen of his class. To get such a person to come to us it is quite certain that in the first place we must offer rather better rates of pay than can be readily got elsewhere. Our work is not attractive. Will this alone tempt him to come to us, and when there keep him? The experience of many asylums where the pay is above the wages of the district shows that it will not keep him. It is not a mere money question. All of us have had good attendants leave us when we have offered an addition of five pounds to their wages to stay.

What sort of first experience in an asylum is apt to make the best attendants? I have generally found it to be one of this kind: A young man, after being spoken to by me very seriously as to the responsible nature of his duties, &c., is handed a copy of his rules, told to read them through carefully at once, and is sent to be junior attendant in the admission ward, where there is a good old charge attendant, who takes an interest in him, and whom he sees obviously taking an interest in the individual patients. He sees day by day new patients arriving, and being examined by the doctor. He hears the charge attendant questioned about their state and symptoms, and soon he himself is asked by the medical

officer as to the symptoms of the patients he has charge of. He soon comes to look on patients in some degree from the doctor's point of view, takes an interest in them from this higher and professional point, and turns out not a mere machine for keeping order and cleanliness in the ward and carrying out the general arrangements of the institution, but a true guardian and friend of his individual patients. Now why has this man turned out well? I think the reason is that he has been subjected to the right training when he first entered on his duties. He has been educated to look on his patients and his work from a professional or special point of view, just as a doctor is educated to look on his work. This is the only way, I believe, of getting over the disagreeable things in any kind of work. But even in the case I have taken, how unsystematic and hap-hazard is the training! How many new attendants are pitchforked into wards full of dements, where they are never asked a question by the doctor about the individual patients, where they come under the influence of bad attendants only experienced in bad ways? How can we expect them to turn out good attendants? Is it not in the experience of us all that a man whom we have accidentally spoken more to, and asked questions of, from his having an interesting case under his charge, has from that time come out in a new light and developed qualities he never showed before? A new way of looking at his patients has been roused in him, and a new interest in his work begotten.

Now if these are facts, can we not devise and elaborate a systematic professional training for attendants in all our large asylums? Subjecting each one to a regular education, not only as to the routine of his ward duties, but much more in regard to the forms of the different kinds of insanity, their nature, and their appropriate management and treatment; could we not in that way produce, in some degree, our own point of view of insanity and insane patients in the case of the attendants? Who, that has seen a well-trained nurse manage a fever patient, can fail to see the importance of this intelligent, professional mode of looking at a patient and his disease? This training would weed out the persons without the special tact and adaptability for the work, more or less of which must be innate before any one can make a good attendant.

But coming more to details. Could we not have, in every large asylum, one ward in which all new attendants should be trained? Could we not have in this ward a person of

intelligence and experience to have charge of it, and give the novices instruction in the routine of his ward work? Could we not have one of the medical officers spend a special time each day in instructing them as to the mental peculiarities, habits, and diseases of the different kinds of cases, draughting in succession into the training ward for this purpose a typical suicidal melancholic, an acutely excited case, a general paralytic in his different stages, an epileptic, a low dement, a masturbator, a delusional case without excitement, &c., giving the novice charge of each of these in succession, making him walk with him, work with him, sleep with him, and eat with him, the doctor and chief attendant examining the novice, and teaching him every day as to the things to be known and done, making him feel and realise that here was a human being with a certain disease, which it was his business to look into and know how to manage? Could he not go with his patients to see their relatives when they came to the asylum, and find out why and how this disease arose? Could not one of the medical officers once a week, during the winter evenings, give a lecture to all the staff on the brain and mind, their functions, diseases, and their treatment? Can any one doubt that such a training for an attendant would not be better than the present mode? Why, then, should we not attempt it on a large scale? Surely our counties are rich enough to afford the extra expense. The comfort and assistance of having reliable men and women about us would far more than repay all the trouble it would give us.

Supervision of our attendants in our wards is no doubt most important, but I believe that if we offered enough pay to begin with to draw good raw material to us, and then moulded it in this way to our own views, there would be less necessity for watching our wards with the feeling of detectives. On this question of training I am especially anxious to have the opinion of every member of this Association in charge of a public asylum.

But, having got our attendant, and trained him, how can we keep him? I must not delay so long time in discussing this question as the other.

My own impression is that we must carry out, in some degree, the following things before we shall get our attendants to stay in our asylums, doing their irksome and disagreeable duties for many years running.

1. Provide a rising scale of pay up to a really good amount,

certainly not less than £50 a year as the maximum in ten years.

2. Give pensions to all those who become sick, or who serve long, at about twice the relative proportion to pay, as in the Civil Service.

3. Make provision for changing attendants from one asylum to another, one institution getting the benefit of the surplus of another district; the pay and pensions counting as if no such change had been made. I am certain we lose for our patients the services of very valuable trained attendants, whose desire for a little change, or temporary ill-health, or misunderstandings with fellow-attendants or officials make them leave us, but who would be delighted to go to another asylum taking the same rank.

3. Develop and encourage an *esprit de corps* among attendants as a class, making them proud of their profession, as we are of ours. I should like to see them get diplomas from the asylums where they were trained, and that they should get up an association of attendants extending all over the kingdom.

4. Provide facilities in the matters of houses, suitable times of leave, &c., and for the marriage of at least one half of our male attendants.

5. Encourage any kind of promotion to head attendants positions, to good places in charge of private patients, or in private asylums, &c.

6. Encourage by some special means provident habits. Next to good principles, I have always found saving money the best thing in an attendant. Such a man is not a rolling stone.

7. Make their lives as pleasant as possible by good accommodation, days off duty, annual holidays, social gatherings, means of amusement and instruction, and, above all, reasonable facilities for satisfying the social cravings of human nature.

8. Bring systematically and directly to bear on them the elevating influence of the better educated officials, such as the medical officers, chaplains, matrons, &c. I am certain that the chaplain should be a more valuable official in an asylum than he commonly is. How many asylum chaplains preach to the attendants, now and then speaking to them in a direct and real way as to their special temptations, and setting before them a high ideal of duty?

*Torquato Tasso.**

"Peace to Torquato's injured shade."
CHILDE HAROLD. *Canto* IV, *Stanza* 39.

There is no error in opinion or judgment, no wide-spread prejudice, so difficult to eradicate or overcome as one that is founded on sentiment, and when the sentiment is a generous one, seeking to make some atonement for supposed injustice done in the past, in thought or in deed, the prejudice will be apt to cling the more tenaciously. "Peace to Torquato's injured shade," exclaims Byron in his heart-stirring lines—but was this a just apostrophe? Nobly gifted, deeply afflicted and unfortunate though he was, was Tasso indeed injured, as implied, by his fellow man? Most sad and suffering as his life became, we may be committing a deep injustice in asserting it to have been brought upon him by cruelty or even unkindness; and a fair impartial review of his whole life and circumstances would seem to reveal a far different history. This has been most forcibly impressed by reading the pages of one who from the outset seems to have believed in the grievous wrong done to Tasso by Alfonso d'Este, and to have viewed every event by the light of a preconceived opinion; while to one coming without opinion formed to the perusal of these pages, ignorant until then of the course of events, they would seem, we think, strikingly to set forth the very opposite view; the very facts the author brings forward in evidence of his assertions seeming to furnish the strongest indications of a contrary explanation. To any one coming with even a moderate knowledge of mental disease to the study of this sad life, it will surely seem one in which the tendency to, and at length declaration of, this malady can be most clearly traced out from the very early days of Tasso down to the very last hour of his life. This is not to disturb the shade of Tasso, rather to yield it the desired rest; for who would not rather think of him as bowed beneath the weight of a sad inscrutable affliction sent by no mortal hand, than as the victim of cruelty and injustice, which would indeed have been scarcely human in their refinement, but of which we must consider Alfonso d'Este may have been most unjustly accused?

If we follow through in review the course of Tasso's life, we shall see how the usual forerunners and indications of the illness that at length more fully declared itself are presented

* The Life of Torquato Tasso. By the Rev. R. Milman. In 2 Vols.

to us—the melancholy, the extreme self-exaltation and inordinate love of praise and distinction; then the disorder of his bodily health immediately preceding suspicions of enmity and danger; his restlessness and flight from Ferrara, and his unreasonable return to it had his suspicions and fears had true cause and foundation. It is also to be noted that Tasso in his calmer hours seemed aware of his real illness—did not deny it but rather alluded to it, in his letters more than once adverting to his deep melancholy, his alarms and suspicions. It is not requisite to take the statements of Serassi or others, supposed to write as friends of the d'Este family; but simply following the narrative as here set forth by one who takes so different a view, it unfolds to us the gradual development of this illness in Tasso, sad indeed to mark when we remember the mind that was "here o'erthrown;" and this seems to have been sincerely felt and lamented by Alfonso and also by others whom Tasso, in his morbid state of mind, imagined to be inimical to him. But much as there may have been to admire and to love in Tasso, it is evident that his was not a healthy tone of mind nor a nature wholly admirable or loveable. He alludes to his own desire of being preeminently honoured; and this exacting spirit might well create dislike and anger in those who did not appreciate so highly his noble talents as to view leniently these defects in his, in many respects, superior and noble nature.

It is not needful to dwell minutely on the early years of Tasso, though they were indeed marked by a marvellous precocity. At six months old we are told he began not merely to move his tongue, but to speak. His great susceptibility likewise early manifested itself, and was fostered rather than allayed by the circumstances of his religion, as it is said that at nine years of age he made his first communion, "participating in the mystery with the deepest fervour and devotion, though not fully understanding it." While still very young his ardour in his studies was great, and at Naples, under the instruction of the Jesuits, he attained some proficiency in Greek; in reading, speaking, and writing both prose and verse, he attained such facility as at ten years of age publicly to recite some of his own compositions.

His father's chequered and wandering life had necessitated a temporary separation from his wife and family, and, unable to accomplish his desire of rejoining them, he determined on his son Tasso coming to him. The parting between his mother and himself was an anguish to both, and they were

never destined to behold each other again. He became the sharer of his father's vicissitudes, but also the object of that father's solicitude and pride and love, and Tasso maintained for his father throughout life and for his memory after death the strongest regard and affection.

For some time his father would appear to have been anxious that his son should be trained to some decided occupation or profession, and not live as he had himself done, dependent upon the favour of princes—a courtier's precarious existence. Torquato eagerly availed himself of the opportunities of acquiring learning and knowledge which his father, in spite of straightened circumstances, provided for him; but his father's desire that he should be settled in the legal profession was wholly repugnant to him. At Padua, while he attended in form the lectures upon law, he gave far more time and attention to those on philosophy, poetry, and eloquence, and indeed was composing an epic poem when in supposed attendance on law lectures.* Soon after this, at Bologna, he began his great epic the "Jerusalem Delivered." His father's pride and delight in his son's achievements and success in poetry probably reconciled him to abandoning his other views for him, though he saw, in that event, no other prospect than that Tasso should enter on the courtier's life which he had so often deprecated.

His father would seem soon after this to have exerted himself to make interest with his own former patron Cardinal Luigi d'Este, to whom by his directions Torquato had already dedicated his "Rinaldo." After some interval the Cardinal gave Torquato an appointment among his gentlemen, and summoned him to Ferrara so that he should arrive before the expected entry of the Arch-duchess of Austria, the betrothed of Duke Alfonso the Second, the Cardinal's elder brother. Thus, at twenty years of age Tasso arrived at Ferrara and was evidently almost at once taken into extreme favour by the d'Este family. Cardinal Luigi remained himself absent at Rome, and Tasso would seem to have been in constant attendance at Alfonso's court, and to have been distinguished by the greatest kindness, not from the Duke alone but from both his sisters, the Princesses Lucrezia and Leonora. In the society of the Princesses he now passed many hours, reading to them his own poems and composing sonnets in celebration of their even minutest doings and occu-

* During his first year at Padua, he wrote his first epic poem "The Rinaldo."

pations. They obtained for him the privilege, regarded as a coveted distinction, of dining at the "tavolo ordinaria," the daily table of the Princes themselves. And here for a brief period we may behold Tasso in the happiest portion of his life, beloved and honoured, distinguished by the affection and kindness of the d'Este family; he had attained a position he had himself coveted, and realizing in a measure his own dreams of pre-eminent favour and distinction—and this at only twenty years of age. It is worthy of note here that even now, at this age, and in these happy circumstances, Tasso's taciturnity and gloominess, and his great absence of mind are already spoken of as being very manifest; it is said that "he could when he pleased" (rather, we should imagine when sufficiently wrought upon and drawn out of himself by the excitement of society and that emulation which had such power over him) "throw the greatest brilliancy and charm both of manner and eloquence over his carriage and conversation in society."

Tasso had thus early attained almost the summit of his wishes, and if we now trace the sad decline and fall of all his hopes, we shall have to seek the cause far more from within than from without, and be forced to admit that, allowing even for rivalries, jealousy, envy, or even also for malice and detraction, which the great honour and distinction in which he was held may have drawn upon him from less favoured aspirants, the real cause of his future calamities was the disastrous malady that beset him; the morbid tone of his mind being, perhaps, more fed and fostered in his exalted position than if he had remained obscure and unknown. Tasso himself admits the insatiable love of praise and self-exaltation that existed in his nature. We find him acknowledging in a letter:—"I marvel that I have never written down the promises which I make myself, and the gifts and the graces from emperors, kings, and mightiest princes, which I am always imagining and forming at my will." Such a nature, possessed with so exaggerated a notion of its merits, and such prolific imagination of rewards and honours showering upon it, would be injuriously excited and moved by many honours and distinctions actually bestowed upon it, rather than beneficially influenced and made really happier.

With regard to the alleged attachment of Tasso to the Princess Leonora, upon which, according to some, all his misfortunes hinged, the most substantial arguments in

proof of its existence seem to be many exaggerated expressions in poetry, in which, it must be observed, it is necessary often to *infer* that Leonora was the object of them. Had she been certainly so, this, indeed, would not render them a proof of any weight—the hyperbolical language of praise and adulation of that age must be taken into account; in fact, Tasso could not well have used stronger language than in praise of Alfonso at a time when, according to his biographer, he had conceived a well-founded horror and distrust of the Duke; and in the days of his first favour with the d'Este family it was his custom to record their doings in lyrical effusions, devoting his talents to exalting and extolling them—not Leonora alone, or even principally or specially, but her sister also, and the Duke himself.

On the whole, it must be said that the proofs of any real attachment on his part to the Princess Leonora would seem to rest on very slight foundations, if indeed they can be said to have any true ones. On the contrary, the supposition of it is at variance with much in his own conduct, and with expressions in his letters to intimate friends, while many circumstances in the conduct of herself and her own nearest relations—the Duke himself and the Princess Lucrezia—render the fact of it, or of their having entertained any belief in it, wildly improbable. Is it conceivable that when, later on, Tasso's illness was first coming on, had the Duke been acting in anger towards him, and had he believed in the existence of a presumptuous attachment, he would have allowed him to accompany him to Bel-riguardo, and to be the special guest of Princess Leonora herself, by her invitation? Surely it is far more reasonable and consistent to suppose that they saw in the change that came over him, with deep regret, the dread malady that threatened their honoured favourite, and sought to avert the impending calamity, and to soothe him by timely rest and absence from Ferrara. This is somewhat anticipating what is to come hereafter. But in tracing the further steps of his sad life the question must arise whether in this point also and throughout this matter injustice has not been done to Alfonso and the d'Este family; failing to see wherein the Duke manifested displeasure or illwill, we rather find much concern and solicitude, and patience and consideration too, shown in his treatment of Tasso, more especially when we remember how in those days madness was viewed, and how the victims

of it were shunned. And quite consistently we may believe also that Alfonso may have at last felt and evinced irritation when Tasso refused to submit to treatment, persistently returned to Ferrara, to fly from it again, spreading abroad his belief of Alfonso's wish and intention to compass his death.

After a time Tasso was summoned suddenly to the death-bed of his father. Even here one might trace his inability to bear much painful strain in life, as we read that his anxiety during his father's illness, and his grief at his death, brought on a dangerous illness. On his recovery he returned to Ferrara, and from thence, at the close of 1572, accompanied the Cardinal into France, and at the Court of Charles received from the King and from others many marks of distinction and favour. Here something of that restlessness of spirit, which was to manifest itself so greatly hereafter, first declared itself; a suspicion likewise of the dislike and enmity of others towards him evinced itself, without any real ground apparently for his entertaining such a belief. We are told—"Tasso moreover was beginning to be desirous of quitting the service of the Cardinal, or rather of returning to Ferrara. He speaks in one of his letters as if Luigi were angry with him, but no sufficient reason appears why he should be so." Mr. Milman supposes that the Cardinal may have withdrawn his usual allowance, or given other tokens of displeasure, when he found that Tasso wished to leave him; but unless any more reason than is given in the text existed for such a supposition, it is hardly borne out. Tasso requested his dismissal, which the Cardinal granted, wishing him, however, to defer his departure for a while; the subsequent illness of the Cardinal further delayed it; but in December they left France together, and arrived at Rome, where, as his biographer admits, the reality of anger on his patron's part would seem to be little proved, Tasso having been kindly and honourably entertained in the house of that patron's uncle, the Cardinal of Ferrara.

The poet's desire was to obtain a situation in Alfonso's service, and to this the two Princesses contributed their aid. The Duke willingly accorded his wish, allowing him a specific salary, and conferring a greater benefit on him in exempting him from any particular duties, that he might have leisure for his studies, and for the completion of his great poem. How unlikely that, either the Princesses should have urged, or the Duke have acceded to, his wish to enter

his service, had any attachment existed, or have been even erroneously supposed to exist, between himself and the Princess Leonora! Now, in temporary quiet and repose at the Court of Ferrara, he finished his poem, "The Aminta," and it was represented at the Court with every requisite accessory, including the choicest music, Tasso himself directing all, and Italy resounding with applause.

In this record of his life, so greatly is it dwelt upon that he suffered much persecution and neglect, much affliction and want, that we cannot but remark how often we learn that honours and praises were lavishly showered upon him; even affluence was sometimes his, and at other times pressed upon him, but rejected by him: he could not rest even when in possession of it. That he did at length suffer much distress and poverty is too true; but this came about through actions of his own, not avertible by others, and too probably beyond his own control. At this juncture of so much applause and renown, we are told that "from this time the origin of his misfortunes is dated. His triumph and renown, and favour with the Royal Family, awakened the jealously and malice of the courtiers. They began to lay their trains from this moment of his prosperity. They were, for a season, carefully disguised; but, before long, their working was only too evident, and from that hour Tasso was never altogether free from suspicion and alarm." But it is necessary, in no captious spirit, to bear in mind that at about this time his bodily health had begun to suffer; he had accompanied his patron Cardinal Luigi to Venice, and in the hot, unhealthy season had succumbed to an attack of ague, from which, or its consequences, he suffered during many months. As the bodily effects wore off, the mind would appear to have become more morbid and disturbed. Now we first hear of his return of restlessness, of his wish to quit Ferrara, without assignable cause for doing so, and of his desire to go to reside in Rome. We are told that "he must have had strong reasons for projecting this change of residence," and that "it is plain that he had strong suspicions of impending danger;" but we are afforded little reason for one or the other of these assertions. It is said, however, that some interruption of his correspondence with Scipio Gonzaga took place about this time; and Gonzaga, to whom Tasso had written of his danger and his fears, seems to have been desirous that he should exchange the service of Alfonso for that of the Grand Duke of Tuscany, and on Tasso's

arrival in Rome Gonzaga exhorted him to do so. To this, however, he would not accede, purposing ultimately to return to Ferrara; and, in justice to him, it must be remembered that, in the first instance, he desired to visit Rome, and did travel there and to other cities also, that he might have the opportunity of obtaining the judgment and criticisms of poets, and of others whose opinions were of value to him, upon his poem of "Jerusalem Delivered." But in the midst of his own anxiety with regard to the bringing out of his poem, and the ardour and impatience with which it was being looked for by others—showing the renown to which he had already attained—the calamity of increasing illness seems to have come upon him. His biographer reverently traces the afflicting hand laid upon him, chastening and correcting him just as his character needed such purifying and chastening; we must needs, however, see the real outcome of the tendencies of his nature, which had been latent or partially manifested for years.

From this time we find him pursuing a very restless course, and constantly influenced by vague and, apparently, in great measure, groundless fears and suspicions, several times quitting Ferrara, sometimes in almost a horror of apprehension, but anon, without change of circumstances to warrant it, voluntarily returning there again, or earnestly desirous of doing so. There does seem to have been some secret interference with his papers, for what purpose it does not appear; it may be that as his strange suspicions and assertions had already gained some publicity, there was an endeavour made in his absence to seize upon his papers to discover what assertions he might be making in them. The discovery that his papers and locks had been tampered with, wrought to a still higher pitch Tasso's disturbed state of mind, and he began to dread accusations of heresy before the Inquisition. He meditated flight, yet still lingered at Ferrara, and himself appealed to the tribunal of the Inquisition to forestall the terrible denunciation he dreaded. We read that "His justifications were accepted, and the Duke caused some favourable expressions to be conveyed to him, as if to cure him of his terror." Throughout it is the same: the Duke with apparent considerate affection trying to allay his fears, to soothe and calm him; and it was at this time that the Princess Leonora received him as her guest for some days at a palace of her family beautifully situated on the river Po.

His biographer would have us look even on this visit as a snare set in his way, but there seems no just cause for so considering it. Tasso returned from it only little improved, and terrible fears of being secretly made away with grew stronger and stronger. Soon after, he meets, in the court of the ducal palace, the (as he believes) treacherous friend who had been an actor in the searching of his papers, and expostulates with him; the friend replies in anger, and, it is said, with revilings and insolence; Tasso strikes him in the face. A subsequent encounter takes place; Tasso is slightly wounded, though defending himself victoriously against three or four combatants. Tasso appeals to the Duke for justice. Manso says that Alfonso had him arrested, but Serassi affirms the Duke to have been full of attention and kindness. Tasso himself says that he had remained in his room some days, but had paid a visit to the Duchess and to the Princess Leonora. Soon Tasso believed that new enemies were arising, and he was induced to go to Modena for a time. The change and congenial society there for a while did him some good, and temporarily had some effect in lessening his disquietude. He was then again greatly disturbed by receiving a forged letter, purporting to come from his great friend Scipio Gonzaga, but full of reproaches and scornful taunts against his poem and his own character. Tasso must doubtless have incurred the enmity of some who executed this cruel forgery to distress him; at the same time he was from many receiving the most flattering letters and verses. He again returns to Ferrara, then again thinks that malicious eyes are following him, and is anew filled with dread of the Inquisition.

About this time he appears to have dwelt much upon his spiritual state, passing in review his past life, rejoicing in his renouncement of the sins of his early life, and, one is tempted to say, morbidly analysing his past doubts and feelings, as a mind and temperament like his would be prone to do. Then comes the remarkable confession: "And often I heard, horribly resounding in my imagination the angel trumpets of the great day of rewards and punishments. And I saw Thee sitting upon the clouds, and heard Thee speak the alarming words, 'Depart ye cursed into everlasting fire,' and this terror pressed so heavily upon me that I was frequently forced to impart it to a friend or acquaintance; and if in confession I omitted any fault from negligence or shame, however trifling and unimportant, I would reiterate the

confession again and again, often repeating the general confession also." And so he proceeds to comment minutely on his state of mind and feelings in a similar strain to that so often heard by those who have listened to the coherent self-reproaches and subjective revelations of diseased minds, in his case heightened by the vivid imagination of a poet and the terrible beliefs of that age. Meantime, though his fears and suspicions still abounded, his renown seems to have been increasing. He was possessed with an intense jealousy of any rivals to fame, and, one would say, had an insane attachment to his patrons—an exacting one, full of suspicions and doubts of them, yet uneasy when voluntarily absenting himself from them; doubtless in those times, when those who had offended were secretly put to death and no certain tidings were ever forthcoming, there was enough to work terror in one who imagined he had given offence and was suspected of treason, but the proof is not manifest of any enmity or secret evil design on Alfonso's part towards Tasso. It much more strongly appears that great consideration and forbearance were shown, true concern felt at the failing of so great a mind, and that both regard and sorrowful compassion led Alfonso and the Princesses to try many means to restore his mind or alleviate his state; but in all probability his mind was so full of strange suspicions and jealousies, that Tasso's presence had become a danger, and reluctantly, at last, some restriction was forced to be placed upon him.

He was arrested one evening in the rooms and presence of the Duchess of Urbino on a charge of having, in a fit of frenzy, seized upon a knife and raised it against one of the attendants, and he was then confined in some rooms overlooking the court-yard of the Palace. Maffeo Veniero writes to the Grand Duke of Tuscany that he had drawn his knife upon a servant in the presence of the Duchess, and says that he was apprehended rather with a view to the cure of his disorder than for punishment; and it would be difficult to conceive a more valid cause for interference, or that any milder course could have been pursued. Reflections that the evil Tasso had been dreading had now come upon him, as if from evil machinations against him, truly seem out of place and unjust at such a crisis. Keenly he felt his confinement, entreated and supplicated to be released, promising to *have himself cured;* for it is needful of special remark that Tasso himself admitted the illness his biographer would, as if a disgrace to him,

deny. The Duke consented that he should return to his own apartments on condition of submitting to medical treatment. He renewed his expressions of compassion, and after a time desired that he should accompany him to his country palace of Bel-riguardo. Tasso's accomplished biographer strangely seems to view all in a similar light to that in which Tasso then did, as a subtle art and design with evil intent on the Duke's part, this being exactly the view that a man in Tasso's state of mind would take of the most simple acts of kindness; but it does cause surprise that a biographer, years after, should dispassionately coincide in such unreasoning beliefs and imaginations. Alfonso is held up as a very adept of wicked art and design in all his words and acts at Bel-riguardo. Apparently the time passed with him there convinced the Duke of the hopelessness of Tasso's state, and the impossibility of leaving him at liberty. He was then, by Alfonso's directions, carried back to Ferrara, and confined in the convent of St. Francesco.

On the Duke necessarily fell all the responsibility of taking this step, and on him, apparently, has also fallen the odium even to the present day. It was not likely that Tasso himself should believe in the necessity or admit the justice of the course taken, yet he does seem to be in a measure conscious of his state and need of treatment, though he writes to Alfonso that *he* is not so much *mad* as *Alfonso deceived.* "You believe," he says, "that you have delivered me from the Inquisition, and I am only the more entangled in it." The Duke forbids correspondence with himself or writing to the Duchess. Tasso finding a moment when he was unguarded, escaped from the convent. He managed to make his way across the Roman territories and over the mountains of the Abruzzi into Sorrento, where he had a sister, Cornelia Sersale, a widow, residing. Here he remained almost in hiding, as it would appear that he was under sentence of condemnation for treason in Naples. The entire quiet, rest, and change of scene, and the companionship of his young nephews and nieces, had a most beneficial influence on his state, and he became much calmer and better for a while; but ere a year had passed, the old restlessness came upon him, and the determination again to return to the place he had fled from, although allowed to dwell unmolested in peace where he now was. We are told that the Princess Leonora wrote urging his return to their Court, but this is at variance with

the declaration of the Duke. "If he proposes to return, we will condescend to receive him;" but goes on to say that he must acknowledge his melancholy humours, consent to keep quiet, and to put himself under treatment; that if he again utters such words as he had formerly done, and refuses medical treatment, "we shall forthwith banish him from our states, with a charge never to return any more." But in spite of this, and of the warnings and persuasions to the contrary of his friends and relations, Tasso was bent on returning to Ferrara, and did so in the February of 1578. But he is no sooner arrived there than he is bitterly disappointed at finding that no apartments are assigned to him, and that he is not received at Court. He again fled from the place, and this time to Mantua, but the Duke refused to receive him. The ignorant fear of madness which then prevailed was probably the cause of the coldness shown to Tasso occasionally in his wanderings, when, uninvited, he appeared at other courts after leaving Ferrara. Vincenzo Gonzaga, the Duke's son, however, showed him much kindness and regard, but he had not much in his power to do for him, and the unhappy Tasso fell into great poverty. He wandered to Padua, to Venice, everywhere an unwelcome guest, all shunning and dreading him as one "from himself ta'en away." One nobleman at Venice interceded for him with the Grand Duke of Tuscany, in whose service Tasso then desired to be. This appeal was unsuccessful.

Tasso went to Urbino, where he might, as far as can be seen, have rested in safety, the Duke of Urbino being full of kindness and affection. Here he writes the strange statement that to return to Ferrara is in his power, for that his departure tormented Alfonso, who had sent a gentleman by post after him to prevail on him to return. If this were so, probably the many assertions and accusations made by Tasso against the Duke may have influenced him in making him unwilling that Tasso should be wandering from Court to Court, spreading these assertions. Tasso goes on to add that since his departure "there have been many princes who would have gladly received me into their service," which statement is quite at variance with the picture we have had set before us of the distress and want which he had suffered, and is possibly rather due to his exalted and erroneous imagination than to facts. Tasso, discovering that the rumour of his madness had spread far and wide, besought his friends, and especially Scipio Gonzaga, to banish this

false imagination; but is it usual that the fact is admitted as truth by him who is the victim of the disease? Speedily came the old return of restlessness, and at this time he at first admitted the necessity of, and submitted to, some medical treatment; however, after a while suddenly and secretly he set forth from Urbino, travelling towards Savoy, as under the Duke of Savoy he had now determined to seek shelter. On the way he was hospitably entertained, and probably recognised, his wanderings being by this time well known; his appearance was striking, his stature unusual, and his features must long have been made familiar by portraits to those who had never hitherto beheld him. At Turin he was thus recognised by Angelo Ingegneri, a distinguished Venetian. He introduced him to the palace of the Marquis d'Este, who had known Tasso in former days at the Court of Ferrara, and who now received him with the greatest hospitality and kindness. Others, too, of rank and distinction vied with him in honouring Tasso, and would gladly have received him into their houses. Nowhere do we trace neglect or unkindness, and yet again the eternal unrest seizes upon him, and the unreasoning desire to return to Ferrara, from which he had twice fled in such apparent terror and horror; again he speaks and thinks only of returning, of "*undeceiving and conciliating Alfonso.*" Those about him earnestly dissuade him—entreat him to remain in quietness and happiness at Turin. Alfonso sends the reasonable intimation that he is willing to receive Tasso back if he will submit to medical treatment and to his guidance and direction. Tasso is dissatisfied, speaks again of Alfonso as of him who "guided him, who imprisoned him, who promised to him, who deluded him,"—still seems to have thought some "glorious return" should have been his to Ferrara; yet his friends cannot long succeed in detaining him at Turin, and the celebration of Alfonso's third marriage determined him on returning. He returns again, and miserable is it to read of his position there, so different from the once exalted one he had held, and so different from his own imaginings, for, blind to all the sad changes wrought in himself, he dreamed that to repair to the same scenes must be to recover the happiness and the distinction of the never-to-be recalled past. The author speaks, as a reproach to the d'Este family, of their doors being closed against him—no promises fulfilled. But it would seem to be always in a season of returning excitement that the wild desire to

return to Ferrara came upon Tasso, and be was at that time probably most unfit for the notice and honours he then most coveted. Miserable and suffering, Tasso breaks out in lamentations and reproaches against the Duke and his Court. By Alfonso's order he is again apprehended, with many expressions of the Duke's concern. Why are we to believe them otherwise than sincere? In former days he and his family had had Tasso constantly with them, had shown him unwonted kindness and favour, and when it was impossible to retain him with them on the old footing had forborne to interfere with him or lay any restraint upon him as long as it was practicable. We must charitably believe Tasso's state was a sorrow to them, but that his illness had increased. He is now declared to be mad, and placed in the Hospital of St. Anna, in which the insane of various classes were confined. And here indeed it is too likely his misery in the then wretched condition of such abodes—unclassified, untended except by ignorance, and that instigator of cruelty, fear—may need no heightening of exaggerated language or sensational terms to depict it; too well, to those who have knowledge of these things, are the horrors of such places in even much more recent days known, and appalling would it be to Tasso's refined, sensitive, and exalted nature to find himself amid such surroundings. But to attribute this to cruelty or even want of feeling on Alfonso's part would be most unjust. They knew no other course, nor realised madness but as something terrible, utterly removing a human being from his kind. Far later, fearful were the revelations of the state of some of the Italian Asylums. Thankful we may be if even yet reform has come in all of them; we know that much later than Tasso's time it had not so come in England. His condition in such an abode was indeed most pitiable, for there is no doubt whatever that he was perfectly well able to estimate the horror of his position and of his surroundings.

There is abundant evidence of the illness that existed—Tasso himself at times was aware of and admitted it; but he speaks with anguish—and it is an anguish to read—of his fearful dread of endless imprisonment, and how the indignities to which he was subjected increased it—the foulness of his dress, his hair, his beard, the filth and damp around him, and the awful solitude. This last do we not fail sufficiently to realise even now for those who are thus isolated, though without the horrible and degrading aggravations of those days?

His biographer feelingly and truly reflects: "He had loved renown, society, the sweet face of nature, the praise of men, the affection of women. He had been delicate in his food, particular in his dress, fastidious in his person. He had a dread, we have seen, as many imaginative persons have, of confinement, of scorn, of solitude. The cell in which he was shut up, was narrow, dim and unfurnished; there was no prospect from it. His only objects of view were the blank damp walls around him, and "the gate ever shut in his face!" a terrible picture indeed—all the more terrible as being probably true. It was the usual treatment pursued in the ignorance of those days; it in nowise proves that the lamented Tasso was falsely said to be mad. Milman wonders that his biographers speak often so lightly of his calamities. He cannot surely have reflected how custom dulls the power to realise torture and cruelty systematically inflicted, and knew not perhaps how, not in Tasso's day only, but, much later on, those esteemed as mild and benevolent have complacently been aware of miseries enacting under their own sanction and taken no step to alter them. Tasso had writing materials accorded to him, which in such times must, one would imagine, have been an exception especially made in his favour. Doubtless the use of them was an infinite resource to him. His biographer remarks on his courage and self-command in being able to use them; but, on the contrary, it will be well known how in such states of mind as Tasso's then was, such a means is eagerly grasped at and abundantly employed, as by him, in letters of entreaty for release, and also even in original compositions; so that we marvel not, even in those terrible circumstances, to learn that he composed poetry and elaborate philosophical dialogues. Ill-judged and miserable as was the system and treatment, it is no wonder the unhappy Tasso languished and grew worse; at the same time he would hardly seem to have been intentionally neglected or forgotten, but received occasionally a visit; one from Vincenzo Gonzaga, the young Prince of Mantua, which cheered and reanimated him for a time. He wrote again after the visit, and described the communion he held, in imagination, with spirits in his solitary cell. It is evident that Tasso heard voices at this time, and also that he was in some sort aware of his alienation of mind, though hardly able to understand what it was or whence it had arisen; he seems to have felt it might be a malady allied to genius. He was conscious

of a deep melancholy possessing him and writes—"Those who are melancholy, not through any malady, but by nature, are of singular genius, and I am melancholy from both causes."

A great trial came to him at this time in the publication, without his knowledge or consent, and in a most imperfect condition, of his great poem, "Jerusalem Delivered," to which he had looked forward to bring him lasting renown. He had delayed its publication in order to bring it to greater perfection. The edition was printed in Venice, Celio Malaspina having obtained possession of those parts of the Poem which had been submitted to the perusal of his master, the Grand Duke of Tuscany. Soon after this the Princess Leonora, who had been gradually declining, died. Tasso had during her illness transmitted to her a message expressive of deep grief at her illness. It is surely a straining indeed for hidden motives and influences to conceive, as his biographer does, that Tasso's reluctance to lament her illness in verse, arose from a knowledge of the danger of his doing so, and still more far-fetched to suppose, as he inclines to do, Leonora's failing health to be attributable to Tasso's confinement, or that it was in any way, but coincidently as to time, connected with that. As for Tasso himself, sincerely as he might have been attached to both the Princesses, his own troubles at this time far outweighed probably all other sorrow and losses; his health was weakened, his long imprisonment and the apparent almost oblivion into which he had now fallen had reduced him to hopelessness. Shortly before this time Montaigne had visited him and writes, "I had even more indignation than compassion when I saw him at Ferrara in so piteous an estate, a living shadow of himself and of his works."

But his poem of "Jerusalem," now published, was praised on every side; still the unhappy author was languishing in his miserable "estate." Whether his condition mentally now became somewhat ameliorated and led to an improvement in his treatment, or that it had been represented to Alfonso how dreadful this treatment really was, he was removed to a better apartment, to which another was afterwards added, large enough, he said, "to walk in and philosophize." Prince Vincenzo Gonzaga again visited him, and Tasso began to be hopeful of release; Maurizio Cataneo, Secretary to Cardinal Albano at Rome, giving him encouraging assurances from his master, and wisely urging him to

speak and write of Duke Alfonso with greater respect. He received also a letter from his sister Cornelia, telling him of her being again married, and she and her husband, Ferrante Speziano, gave Tasso pressing invitations to come to them at Naples; a cousin, also, of Duke Alfonso's, lately married to the Marquis of Massa and Carrara, charmed with Tasso's poem, obtained permission for him to pass a day at her villa. Here he entered with enjoyment on some of the old subjects of discourse, and it must have seemed as life to the dead indeed to find himself in scenes of refinement, and again participating in intellectual converse, after the way in which he had lately lived. His confinement was, however, still continued; but had Alfonso been purposely wrongfully confining him and declaring him to be insane, knowing him not to be so, he would have jealously excluded him from the sight of others, instead of allowing them, as he did at this time, to flock to see him. That some of these visitors, even those distinguished by ability, should have thought him to be quite sound, is no proof that he was so, when we take into consideration the notion of madness then, and much later on, or even now commonly entertained—that a man could no more converse at any time or on any subject as a rational being if mad, and that one who had the power to do so could not certainly be mad.

Amongst others who thought much of him at this time was Angelo Grillo, a monk of Monte Cassino, a philosopher and a poet; he seems to have gone to Ferrara on purpose to help and comfort Tasso, to have obtained leave from Alfonso to visit him as often as he wished, and to have spent whole days with him, doubtless, indeed, much conducing, not to his comfort alone, but to his restoration. Tasso, also, from various quarters, received many presents in money at this time. His bodily health had now terribly given way, and in his weakened state his mental distresses and apparitions beset him again more powerfully. He writes thus to a professor of medicine at Padua, whose advice he desired—"It is many years since I have been unwell, and what my complaint is I know not; nevertheless, I certainly judge myself to be ill. But whatsoever is the cause of my disorder, its effects are these: intestinal pain, with somewhat of a flux of blood; ringings in the ears and head, sometimes so strong that it seems to me as if there were in it one of those clocks which strike; unceasing mental images of all kinds, but all painful, which disturb me,

so that I cannot apply my mind to my studies for five minutes together. And the more I force myself to attend, the more I am distracted with those changing apparitions, and sometimes, with most violent disgusts, rising up in me according to the various fancies which present themselves. Besides this, after eating, my head fumes and burns, and in all the sounds which I hear, I keep imagining a human voice, so that it very often seems as if inanimate things were speaking to me." He was advised to submit to a cautery in the leg, to abstain altogether from wine, and to have recourse to broths and gruels; but Tasso was not willing to follow these prescriptions.

Angelo Grillo exerted himself earnestly to promote Tasso's release; Alfonso had Tasso brought into his presence, and promised that before long his liberty should be given him. Under some care and supervision he was now allowed to go forth occasionally to pay visits and attend spectacles and also mass and confession. Then after a while he was again much more secluded, and not permitted to be visited so freely; perhaps too much had been attempted, and an unfavourable change in Tasso's state caused this renewal of greater seclusion.

A. C. M.

(To be continued.)

Case of Sudden and Complete "Aphasia" and Partial "Right Hemiplegia," Lesion of "Broca's Convolution," with a Small "Hæmorrhage" in Substance of Corpus Callosum, &c. By Ringrose Atkins, M.A., M.D., &c., Assistant Medical Officer District Lunatic Asylum, Cork.

The particulars of the following case may be sufficiently interesting to place on record, as bearing on the morbid anatomy of aphasia, and, further, as illustrating the negative results which follow localised destruction of convolutions posterior to the "Fissure of Rolando." The patient, an elderly imbecile female, had been an inmate of the Cork District Lunatic Asylum for the last forty-five years. She was invariably quiet and docile, clean in her habits and person, and sufficiently rational to answer ordinary questions addressed to her quite correctly. She spoke slowly, and with emphasis, but always used the right words to express her meaning; and there was never any noticeable defect in her speech, so far as

her powers of conversation went. She had a peculiarly long and pointed tongue, which she took a pride in exhibiting, and which she was able to protrude to an enormous extent. There was no loss or deficiency of motor power whatever, and up to some little time before her death her general health was excellent. On December 29th, 1875, she suffered from a severe attack of erysipelas of the face and scalp, which was, however, subdued in a few days by inunctions of mercurial ointment and liberal support. During this time she became extremely dull and apathetic, being with difficulty roused; but on being pressed could still answer questions rationally. As the erysipelas passed away she returned to her former condition, being quite as well and as intelligent as before.

On March 19th, 1876, she became affected with a cough; and on March 21st she rose in the morning as usual, and entered the day-room of the ward, and a few minutes after she was noticed by the attendant to be nodding her head in a peculiar way, being seated in an arm-chair near the fire. On being spoken to, it was found she had become quite stupid and speechless, being unable to utter a word; and on raising her there was evident loss of power in the right limbs. On my seeing her shortly after, I found her stupid, though easily roused when spoken to, and she then apparently recognised me, and made attempts to speak, but could do no more than mumble inarticulately. The lips—normally flabby—were inflated at each expiration; she could or would not protrude the tongue when asked to do so, either from inability or not understanding what was required; there was great difficulty, almost amounting to inability, in swallowing, the fluid regurgitating. The limbs of the right side were partially paralysed; on raising the arm she could retain it in that position for a little while, but had no power over the hand, the wrist dropping. There was no apparent loss of sensibility, as she endeavoured, and could partially succeed, in drawing away the leg when the skin was pinched; reflex excitability, as tested by tickling the soles of the feet, being similarly unaffected. There were no muscular spasms or convulsions. Towards evening she became brighter, and on the next day regained, to a certain extent, the power of swallowing. For the next few days some improvement took place in the motor symptoms, the right arm and leg possessing more power, as she was able to extend and flex the limbs partially when requested to do so; whenever she attempted to get out of bed and stand without assistance, she used to

roll round from right to left, shewing the little support which the right leg afforded. Meanwhile chest symptoms set in: being unable to bring up the secretion, the lungs and bronchi filled, and she gradually sank and died, mainly from this cause, on March 31st, 1876, ten days after the seizure, the speechlessness having in the interval been permanent, while she had regained considerable power in the right side and become brighter; at no period, however, being as intelligent as she was previous to the attack; generally lying in an apathetic state, and only rousing herself when spoken to.

Post-Mortem Examination Two Days after Death.—The skull was unsymmetrical, and retained infantile characteristics; the right parietal bone was bulging, the left somewhat flattened; the occiput was projecting, and the sutures were quite distinct. On removal of the calvarium, which was of normal thickness, and easily cut through, the dura mater was found to be intimately adherent to the bone at the vertex over the longitudinal sinus, strips of the membrane remaining when the latter was removed; the dura mater was also attached to the arachnoid at either side of the great longitudinal fissure, but capable of being separated without tearing the latter membrane, and was not elsewhere considerably thickened or opaque. About 4 ozs. of sanious serum escaped during the removal of the organ. The pia mater was not thickened, or much congested, and was generally easily stripped from the convolutions, which were atrophied and widely separated. On raising the tip of the temporo-sphenoidal lobe of the left hemisphere, a number of tortuous vessels were seen lying on the inferior surface of the posterior part of the frontal convolutions running outwards into the fissure of Sylvius: one of these vessels was completely blocked with granular detritus, and could be traced, feeling cord-like under the finger, running in the pia mater to the region of the island of Reil: that membrane could not be here raised from the convolutions without bringing a portion of the brain substance with it, owing to localised softening having taken place. The convolutions thus affected were the tip and lower portion of the posterior part of the third frontal at the edge of the sulcus præcentralis and a small portion of the tip of the anterior central gyrus (Ecker), where it joins with the third frontal and posterior central gyrus to form the *operculum;* and the softening extended inwards, so as to cause a patch as large as a florin on the surface of the island of Reil. The brain substance in these places was

much diminished in consistence, breaking down when touched with the finger, and coming away with the pia mater as that membrane was removed. The remaining convolutions of the left hemisphere, though shrunken and widely separated by broad and shallow sulci, shewed no other localised lesions.

The convolutions of the right hemisphere were similarly atrophied, and the superior parietal lobule for an inch and a half of its length, as it ran parallel to the posterior central gyrus, was broken down throughout its entire thickness into a greyish-black pulp, in which minute black dots were scattered, and to the surface of which the pia mater was intimately adherent. This lesion was evidently due to old hæmorrhage. Involving the first and portion of the second occipital convolutions was a perfectly similar patch of pulpy softening as large as a florin, and separated from the former by several healthy gyri. The ganglia at the base of the brain and the medulla oblongata were healthy; the vessels in this situation were studded with patches of atheroma. On dissection of the organ, a small clot, of about the size of a threepenny piece, was found in the substance of the corpus callosum, a little anterior to its centre, and about half an inch to the left of the middle line *(the raphé)*: this was composed of three minute encapsulated clots quite separate, but lying in close contiguity to each other, and nearer to the inferior than the superior surface of the corpus callosum, occupying a position in it corresponding to the posterior third of the left corpus striatum, but not visibly affecting this ganglion. The clot was in no way connected with the lesion in the third frontal convolution, but was in a line running inwards, and a little backwards from it towards the ventricles; the latter and their ganglia were quite normal. The brain substance generally was anæmic. A small portion of the softened substance of the third frontal convolution, examined in the fresh state, shewed the nerve cells to be in an advanced condition of pigmentary degeneration. A prepared section through the blood clot and the surrounding tissue parallel to the surface of the corpus callosum shewed the fibres of the latter to be separated and broken; small amorphous particles of hæmatoidin were scattered outside the capsules of the little clots in great numbers, together with collections of fine yellow granules quite similar to those found deposited on the nerve cells in pigmentary degeneration of these structures. The walls of some of the minute vessels were coarse and thickened, and their outline irregular,

being pouched and puckered here and there, with collections of nuclei scattered on them. Two little globular bodies were observed, which, from their similarity in structure to the vessels, and from the fact that a minute arteriole was continued from one of them, were, no doubt, aneurismal formations which had become broken off from the vessels on which they had been formed. Several of the larger vessels drawn out from the brain substance near the site of the hæmorrhage shewed their coats thickened and twisted, with granular masses and particles of hæmatoidin deposited on them, and at one spot was a group of plates of cholestearine.

Remarks.—This case is interesting, not only as adding another to the already numerously recorded instances of aphasia in which a lesion of the third left frontal convolution has been found *post mortem*, but also as being an example of hemiplegia brought about by hæmorrhage into the corpus callosum—a very rare situation for such to occur in. At first sight the lesions in the left hemisphere would appear *cæteris paribus* to sufficiently account for the prominent symptoms, the softening in "Broca's convolution" for the aphasia, and the clot in the corpus callosum (by its influence on the corpus striatum beneath) for the partial right hemiplegia. When, however, we consider the differences in the nature, extent, and dates of origin of these lesions, and at the same time hold in view the simultaneous incidence of the aphasia and the hemiplegia, there are, I think, some points requiring explanation, which may be sufficiently interesting to briefly dwell upon, as bearing on important questions in cerebral physiology.

The late researches of Heubner shew that the third frontal convolution is supplied by the first branch of the second order from the middle cerebral, and the island of Reil by an arterial network from the pia mater which is chiefly derived from small lateral twigs of several branches of the arteria fossæ Sylvii. Hence, as one of these latter vessels, directly traceable to the region of the island of Reil, was found completely blocked and cord-like, it is probable that the softening was the result of thrombosis, perhaps of more than one vessel in this situation, which took place during the attack of erysipelas of the face and scalp—a not infrequent occurrence in that affection. If this be so, why then did not the aphasia happen either at the time of the thrombosis, or, at least, *pari passu* with the consequent

degeneration? Its delay until the occurrence of the hemiplegia shews that in all probability the cause giving rise to the latter was also a factor in the production of the sudden speechlessness; and the explanation of this seems to me to be somewhat as follows: The lower part of the inferior frontal convolution being destroyed was unable to perform its functions, hence (adopting the hypothesis of Dr. Broadbent) the "way out" through the fibres connecting this part with the corpus striatum could not be brought into use. The upper portion of the convolution, however, still retaining its functions, to a certain extent, through the connections of many of its cell processes, "words" there formed passed to the motor nerve nuclei, partly by the radiating fibres from the corpus striatum with which this portion was still connected, but, to a greater extent, by the callosal fibres—on a higher level—to the right inferior frontal, and thence through it to the right corpus striatum, where they became translated into motor processes; the two centres being then bilaterally associated and co-operating together, and the right gradually coming by education to take a larger share in the performance of their function than its injured fellow. On the occurrence of the hæmorrhage in the corpus callosum, the commissural fibres became broken, and hence the "way across" from the left to the right centre was interrupted, followed by complete loss of their functions; the left corpus striatum being at the same time paralysed either from the effects of the "surprise" or shock with which the entire hemisphere, weakened generally by atrophic changes, was taken, or by some pressure exerted on it by the clot lying above it. Thus the partial right hemiplegia was produced, the fibres connecting this ganglion with that portion of the third frontal convolution which still retained its function being at the same time paralysed; and hence the complete aphasia. As this condition of surprise passed off, or, as the pressure exerted by the clot diminished, as the latter became encapsulated, the corpus striatum regained its power, and the hemiplegia gradually subsided; and had life not terminated complete recovery would in all probability have ensued. Not so, however, the aphasia, as the "way across" to the associated centre was permanently cut off, and the progressive softening would prevent the resumption, by the fibres from the corpus striatum, of their conducting power; hence had life continued the speechlessness would have almost certainly been permanent. Although this view explains the part

which the hæmorrhage into the corpus callosum played in the production of the sudden and complete aphasia, yet there can, I think, be little doubt that had this hæmorrhage not occurred, loss of speech must sooner or later have ensued as the softening spread, involving the third left frontal convolution more and more to its complete destruction.

The lesions which I have been just considering also appear to me to account for the paralysis of the tongue and lips which was present. The experiments of Ferrier have shewn that the motor centres which preside over the muscles concerned in articulation are situated in regions corresponding in geographical position, and which, both anatomically and physiologically, he regards as the homologues of the lower frontal convolutions and the island of Reil in man. Now, in cases of aphasia following destruction of these parts—from the fact that the speechless patient is unable to express his ideas by written symbols—it is probable that the very centres for word-memory are destroyed. Therefore, it would appear likely that the latter are situated in the same convolutions as the centres which preside over the muscles concerned in articulation, although, as is well known in most aphasic patients, the muscles of articulation and mastication are generally unaffected—a fact explained by the existence of co-operating centres in *both* sides which regulate the action of these muscles. Yet, in the present instance, this rule was departed from, "inflation of the lips" and "difficulty of swallowing" persisting. This apparent anomaly is also accounted for by the inability of the centre on the right side, owing to the interruption in the commissural fibres of the corpus callosum, to become cognisant, as it were, of the loss of function of the left centre—the leading side—and, consequently, to carry on alone the functions requisite for the performance of voluntary movements in the muscles which they govern.

The effects of injury or disease on the corpus callosum are as yet but little known, this being a rare situation for such to occur in; and when it does happen, not admitting of positive diagnosis. Hence its peculiar functions are comparatively obscure, but little having been added to our knowledge on this point since the paper by Sir James Paget in the Twenty-Ninth Volume of "The Medico-Chirurgical Transactions," on a case of imperfect corpus callosum, &c. As the result of his study of a number of cases somewhat similar to that recorded by himself, he

inclines to the opinion that the corpus callosum, like the other commissures in the brain, serves to ensure unity or harmony of action between those parts of the brain between which they are placed, and that it is not a centre of action from which similar, and, therefore, harmonious influences proceed to each side; but formed of conductors by which a part on one side of the brain is informed, as it were, of the state of some part on the other side, and probably is induced into the same state, a view in which Drs. Carpenter and Ferrier coincide; the former considering it not improbable that the corpus callosum comes into action in enabling "either hemisphere singly to do the work—to a certain extent—of both;" the latter suggesting that in cases of aphasia, where the destruction of the third left frontal convolution has occurred, recovery of speech may ensue, according as the third right frontal becomes educated to take the lead, possibly through the agency of the corpus callosum. Minute anatomical investigation has now shewn that the system of the corpus callosum consists exclusively of commissural fibres between corresponding and identical regions of the opposite side of the cortex; hence a breach in the fibres passing direct from one series of convolutions across to the other, would necessarily interrupt the power of conduction possessed by these fibres, and materially interfere with the co-operation of the centres between which they passed, and prevent the assumption by one of the functions of both, either in whole or part, should the destruction of either occur. This probably only obtains in those centres containing movements which cannot be brought into action independently on both sides, and as the muscles of articulation are, to a great extent, thus functioned, it is possible that an important part of the work of the corpus callosum—at least of the anterior half—may be to enable the right side centre, governing the movements of articulation, to follow and assist its leader on the left; and if, as I have already remarked, the centres which preside over the muscles concerned in articulation are situated in the same region as those containing the organic seat of the memory for words, the commissural fibres would also come into action in the co-ordination of the highest mental acts originating in these centres. If this be so, what then will be the effect (if any) of a lesion of this portion of the corpus callosum without any disease of the speech-centres themselves? Will the left centre, when uninjured, and merely

cut off from communication with the right, be able to perform all the functions alone?

On examining the histories of the recorded cases of defective corpus callosum, in which the condition of the faculty of speech is mentioned, I find that in a case described by Dr. Knox, in the "Glasgow Medical Journal," April, 1875, the patient—an idiot woman—was unable to articulate, and never recognised her attendants, and here the corpus .callosum was scarcely perceptible anteriorly, while posteriorly it was merely represented by a very slight ridge about a tenth of an inch in depth, the external convolutions of the hemispheres being numerous but small and defective in various respects. In a case reported by Mr. Mitchell Henry ("Med. Chir. Trans.," Vol. xxxi., p. 243), in which the anterior portion of the corpus callosum was also entirely absent, the patient—a boy—"when suddenly questioned on any subject, would appear bewildered, and require some moments before giving a distinct reply;" and in a case quoted from Mr. Solly, by Sir J. Paget, where the entire corpus callosum was absent, the subject, a lad of 17, was said "to have had no power of reviving or comparing impressions on his mind," although Sir J. Paget says this was "disproved by the fact that he could read, and was fond of a particular class of books." In Sir J. Paget's own case, recorded in the paper already alluded to, the anterior portion of the corpus callosum, though defective, was still represented, and the patient, a young girl, is stated to have, "after leaving school, always read in a headlong way, very fast, sometimes missing words, and not staying to correct herself." In three of these cases, the anterior half of the corpus callosum was entirely absent ; and in each there appears to have been a difficulty in the co-ordination of the mental act concerned in speech. The first "was unable to articulate," the second "required some moments before he could reply to a question," and the third was, to use his mother's expression, as stated by Sir J. Paget, generally "boobyfied" when speaking; while, in the fourth, where a portion of the corpus callosum was still present, there does not appear to have been a similar difficulty; it is not improbable, therefore, that these defects in the faculty of articulate language may have been due to the absence of those conducting fibres passing from centre to centre. Might it not be possible, then, that in certain cases where a sluggishness in the power of speech occurs, or a loss of memory for, or the

omission of certain names or words from sentences, the using of wrong words, or syllables, in conversation, either alone or with temporary hemiplegia, may depend on hæmorrhage into the corpus callosum, partially injuring the commissural fibres, and causing the transient paralysis by its influence on the corpora striata below, as in the present instance. The presence, however, of the power of articulate language, to a greater or less extent, coincident with *congenital absence* of the corpus callosum, shews that under such circumstances this structure is not absolutely necessary for the exercise of that faculty to a certain degree; whether in such exceptional cases each centre becomes during the process of development endowed with the power of acting alone, and that in the normal state of things, this not being the case, acquired disease will have a different effect, is a matter of speculation. The fact that destruction of a considerable portion of the left centre, together with a breach in the fibres of the corpus callosum, caused complete aphasia, supports the view, however, that that centre is the leading or driving side, and that the right centre cannot act without being informed, as it were, of the condition of the left.

Passing from the lesions found in the left hemisphere, in the case under consideration, to those in the right, we have an illustration of the negative results which localised disease in the convolutions posterior to the fissure of Rolando may give rise to. The patches of softening found in the inferior parietal lobule, and in the occipital gyri, were indicated by no motor disturbances, nor, indeed, by any special symptoms which could be referred to such. The weakened condition of the mind was doubtless due to the general atrophy of the convolutions, but there was no depression or melancholia, as has been stated by Schrœder Van der Kolk to follow disease of the posterior parts of the brain, nor were there any symptoms of disturbance of the nutritive functions, as has recently been observed by M. Joffroy in a case, the particulars of which he brought before the Societé de Biologie. Whether the final effusion in the lungs, which directly caused death, was dependent on the brain disease, a view recently advanced by Nothnagel, is a matter of speculation. The absence of motor disturbance is in accordance with the experimental results obtained by Ferrier, who found that irritation of the posterior lobes of the brain, both on their external surface, and on their internal or hippocampal surface, as well as irritation of the

gyrus fornicatus, always failed to produce outward manifestations; expressions of pain, however, being generally elicited in the experiments recorded, pointing to those regions as being connected with sensory functions.

EXPLANATION OF PLATE.

Fig. I. Nerve Cells undergoing "Pigmentary Degeneration," from Softened Portion of Broca's Convolution, 'Hartnack' ob: 8, oc: 4 × 650.

a a a Double contoured nerve fibres broken and 'bulbous.'

Fig. II. Minute Aneurismal Formations in Corpus Callosum adjacent to the clot, 'Hartnack,' ob: 7, oc: 3 × 300.

In the section the two little bodies lay near each other but were not in the same 'field,' therefore to include both in the drawing they have been brought closer together than they really are.

Some Remarks as to providing increased and Better Means for Educating the Insane of all Classes. By Joseph Lalor, M.D., Physician Superintendent Richmond District Asylum, Dublin.

(*Read at the General Meeting of the Medico-Psychological Association, July 28th,* 1876.)

A Special Committee, apppointed by the Charity Organization Society, have had under their consideration for a considerable time the subject of placing Institutions for Idiots, Imbeciles, and Harmless Lunatics on the most comprehensive and satisfactory footing. The investigations of this Committee, and the report to be made by them to the Parent Society, will be likely to have much influence on the determination of many questions in which our Association has a deep interest. The Committee have evinced laudable anxiety to obtain advice and information, and to consider their subject cautiously, thoughtfully, and impartially. I think they have, in consequence, the strongest claims on the confidence and thankfulness of our Association. From a communication made by the Committee to the Social and Statistical Society of Ireland, and from being furnished, through the kindness of Dr. Hack Tuke, with copies of its agenda up to this, I happen to have become acquainted with the views of the Committee, and I propose to avail myself of the opportunity thus afforded, by making some remarks on a few of the conclusions they have arrived at. I shall, however, try to do so in a way that will not, by any means, hamper the proceedings of the Committee, or the full and free expression of their

Fig. 1.

Fig. 2.

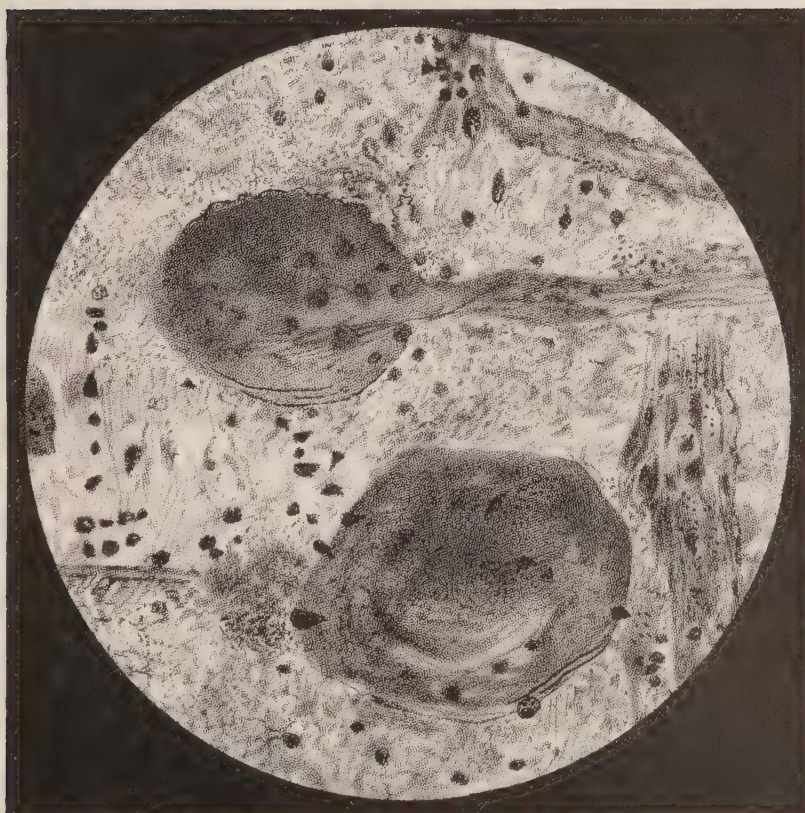

PLATE ILLUSTRATING DR ATKINS CASE.

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opinions; but which may conduce to a community of opinion, and a co-operation in action, or, at least, to a friendly and harmonious rivalry between the Charity Organization Society and our Association, calculated to produce most desirable results.

I believe that the Committee have arrived at the conclusion that adequate provision for all the idiots and imbeciles in England and Wales, of the poorer classes, whether juvenile or adult, cannot be made without the intervention of the State; and that adequate provision should include the education of all educatable idiots and imbeciles. I trust that this Association will not have a single dissentient from this conclusion.

Two propositions, resting on opposite principles, have been made, and discussed before the Special Committee of the Charity Organization Society, when it considered the administrative arrangements desirable for meeting fully the educational requirements of all the poorer classes of imbeciles, idiots, and harmless lunatics. The two principles in question are, whether the requisite machinery should be provided in the existing lunatic asylums, known in England as County and in Ireland and Scotland as District, or in new institutions altogether disconnected, and specially established for educational purposes. In this Association and amongst the public at large, I believe that a similar variety of opinion may exist.

I would submit, 1st—That if County Lunatic Asylums,* by which name I would wish hereafter to be understood as referring to these asylums, are to rank as institutions provided with full means for the cure, improvement, and care of the insane, they must have at hand appliances for educating all suitable cases undergoing treatment in them, and, 2ndly, That advantages are offered in county lunatic asylums for the education of the poorer classes of the insane, which should be availed of.

To controvert the first proposition, it must be proved that moral and mental treatment has no place in the cure, improvement or care of the insane. At the present day, or in the past, such an assertion has not, that I know of, been made. There may be differences of opinion as to the machinery by which moral and mental treatment ought to be conducted, whether by simple discipline, by schools, or by literary or industrial or religious instruction, but the broad

* Known in England as County, and in Ireland and Scotland as District Lunatic Asylums.

principle that it should form an important part in the treatment of the insane, is undisputed.

In reference to the second proposition, I beg to submit as follows:—Assuming that the insane should reside in the institutions where those of them who may be educatable are to receive instruction, four things appear necessary; 1st, suitable residences; 2nd, suitable staff for ordinary purposes; 3rd, suitable staff for educational purposes; and, 4th, suitable accommodation for the same. County Lunatic Asylums appear to me to be at present good institutions for the cure, improvement and care of the insane poor in all respects, except that of education, and in my mind they only want to have added to them the appliances specified under the third and fourth of the above heads, to complete the means required for the full treatment of all forms af mental ailment amongst the poorer classes. Much saving of time and expense would result from making those additions in preference to founding establishments totally new and separate.

It is to be apprehended, also, that totally new and separate establishments for educational purposes might be wanting in those special structural and staff arrangements, necessary to meet demands sure to arise when epilepsy, or a tendency to suicide, or violent excitement are present in the educatable class of the insane.

The expense of double sets of buildings and fittings for administrative purposes, for religious service, and for recreation, would be also saved or lessened by uniting all classes of the insane on the same grounds, in buildings detached, but adjoining and under one administration, both local and general.

Arrangements are quite practicable, by which separation of the several classes of the insane from one another might be provided for as effectually in one connected institution as in disconnected buildings.

I would earnestly appeal to my medical brethren joined with me in the care of the insane, and in the membership of this Association, to seize the favourable occasion that now offers of uniting their efforts with those of others to increase and improve the means for the suitable education of all classes of the insane I venture to make this call upon them chiefly for two reasons, first, because I believe that education aids the medical treatment and due care of the insane, or supplements what may be wanting in the latter for their improvement; and, secondly, because there appear to me to

be unmistakable signs that public opinion is becoming alive, not doubtfully or slowly, to the necessity that full State provision should be made for supplying suitable education to the educatable insane of the poorer classes. I believe that the action of this Association might greatly influence the determination of the question whether this education will be conducted in the County Lunatic Asylums or elsewere. I have a strong opinion that the position of District Lunatic Asylums would be considerably elevated if, by the addition or increase of educational appliances, they came to supply all the requirements of the insane poor.

Our institutions would receive sources of increased stability and strength which have become needful from their too rapid growth, and would be advanced towards their full normal development, if they were placed on a satisfactory footing as regards education.

If they are not so placed I fear that they may fall from the high estimation in which they are now generally held.

For the good of the insane and of the public, it would be better, in my mind, to provide whatever is wanted for the education of the mentally afflicted of the poorer classes by grafting it on the parent stock than by trying to rear up a new plant partly with the nutriment heretofore supplied altogether to the old. I fear that by this latter process the public would have two ill-fed weaklings far inferior in fruitfulness to one such vigorous, mature, and wide-branching tree as might be expected from giving existing establishments additional and undivided nourishment.

In relation with the foregoing remarks, I think further consideration is desirable as to a conclusion which appears to be held by the Committee, viz., that the education of such classes as the blind, the deaf, and dumb, and sane orphan children of the poorer classes should be disconnected altogether from that for the insane.

For a long time I have been led to regret (on abstract and speculative grounds) the complete dissociation which exists, according to their specific objects, between establishments for the cure of the poorer classes.

The wants of these classes, whether on account of infirmity of mind or body, or destitution, have, and ever must have, much in common. A common humanity forms a common bond of sympathy and union between them, and even the helpless of one class (if not at all times, yet at least occasionally) may contribute something towards the aid

of others suffering from the same or some different form of helplessness. In helping others they may also help themselves; for instance, the musical and vocal capabilities of the blind might be made available for the amusement and improvement of the mentally or otherwise afflicted. The acquirements of the sane, blind, deaf, and dumb, as well as of those without any bodily defect (supported in public institutions, such as industrial and reformatory schools, orphanages, and workhouses) might be better utilised. They might, for example, be used so as to contribute to the better and more economical working of institutions for the insane poor and other classes, maintained at the public cost by supplying wants which some of those classes may not, from different causes, be able to supply to themselves or to others.

The moral example of the well-conducted (that powerful lever for influencing the nature of man to good ends) might be brought to bear on the treatment of the insane. So, also, the sane poor; whilst they were made by judicious association to assist the feeble in mind and body, might get the lesson (so much needed by many), of more thoughtful consideration for the afflicted. In like manner the narrowing and deteriorating effects of constant association with only one phase of human nature might be more or less counteracted.

Again, if the public provision for the wants of the poorer classes were to be supervised by governing bodies having knowledge and control not of one only, but of all the departments receiving public aid, greater breadth of view and harmony of feeling would be promoted, and financial advantages might also be expected to result; such, as I am told, have resulted from the occasional association of Railway Boards of Directors. In fine, that co-ordination of purpose and of power which is at present a great desideratum would be thus supplied.

In visiting, some years ago, the admirable institutions at Leavesden—one for harmless lunatics and the other for the education of poor children—the speculative opinions just set forth appeared to be supported and illustrated by what I saw there. I could not avoid thinking that advantages were lost to those establishments by an administrative and social separation, much as if an unbridged river and not merely an ordinary road intervened between them.

The Relations of Drink and Insanity: Letters by Dr. Peddie *and* Dr. Bucknill.

The following letter has been written by Dr. Peddie, in reply to Dr. Bucknill's letter published in the last number of this Journal (July, p. 265):—

Dear Dr. Bucknill,—

I was much surprised, on reading your letters to Dr. Clouston, published in the July number of the "Journal of Mental Science," under heading of "Occasional Notes of the Quarter," to find that you have greatly mis-stated my opinions in regard to "The Relations of Drink and Insanity."

You ask Dr. Clouston (p. 270) to "read Peddie's and Bodington's papers on the subject (read last August before the British Medical Association, at Edinburgh), and you will, I think, see that I was justified in my statement," which statement is, "I am afraid that just now members of my profession are taking hold of the stick by the wrong end, and considering drunkenness not as a cause of disease, but as a disease in itself, which to my mind is a great mistake. If drunkenness was a disease, it was not a vice, and could not be dealt with by education, and repression and attempts to reform, but must be dealt with—as indeed many of his profession proposed to deal with it—by establishing hospitals for what they called the unfortunate drunkard," p. 266. This, too, you aver to be, without any qualification or reservation, the opinions and practice of certain physicians in America. But I leave them to fight their own battle, and I also leave Dr. Bodington to answer for himself, which I have no doubt he is able to do. As for myself, I cannot believe that you have read a sentence of the paper referred to, or seen my first paper on "Dipsomania," published in 1858, or my second one in 1860, in the "Transactions of the Society for the Promotion of Social Science," or my evidence before the House of Commons in 1872, which is fully reported in the Blue-book of that session, otherwise you could never have so much misrepresented my views.

You take credit to yourself for what you say against Dr. Bodington and myself in the following, not very complimentary, sentences:—"All I have said and written on this subject has been aimed at the mischief which I thought likely to arise from this unqualified opinion (namely, that drunkenness is a disease in itself). I never supposed that you (Dr. Clouston), or indeed any man able to bring a practised habit of thoughtful consideration upon a large observation of vice and mental disease, could adopt such an opinion without wide reserves and exceptions; but such a man with his quantitative and qualitative truth is not likely to appear as an agitator for a great change of law of doubtful wisdom upon a platform of disputed fact." You then

agree with Dr. Clouston, saying, "I think there is very little difference of opinion between *us*, if any. I fully recognize the cases you mention—the men who are 'facile, sensual, irresolute liars, devoid of the rudiments of conscience, self-control, or true affection,' and habitual drunkards withal, as 'diseased drunkards.'" "But," you go on to say, "these are not by any means the kind of men I have met with in Inebriate Asylums, nor the kind of men on behalf of whom Dr. Peddie and Dr. Bodington advocate an important change in the law of the land."

Now what I have to say to this is simply that my sentiments have ever been such as appear to accord with those you have quoted as Dr. Clouston's, and consequently that we are all three, in truth, agreed as to the persons who may be styled Dipsomaniacs! Your position, therefore, is the very serious and responsible one of aiming, from the supposed vantage ground of lunacy experience, to raise a cloud of psychological dust to defeat or discourage a highly philanthropic and long-wished-for movement among thousands of medical men and others, for the reformation—it may be, the cure—of those who, if left alone, cannot help themselves, and in consequence not merely suffer personally the inevitable consequences which vice, or disease, or both together—acting and reacting on each other—occasion, but entail on families, perhaps through generations, and on society many and deplorable evils. The mischief which might thus arise may be infinitely greater than from a too wide or loose interpretation of habitual drunkenness, even although in some instances there may be circumscription of the liberty, or rather, it should be called the license, of the subject, from a course of vicious drinking, which renders him a disgrace to his friends and a pest to society. Thus the line, although not quite correctly drawn at times, may not in itself be a very great evil or social grievance; but with the characters of dipsomania or insane drink-craving which I have drawn in the paper you have treated so ignoringly, and what has been more fully delineated by me formerly, I do not think the distinction between such cases and the vice of intemperance, is one of difficult diagnosis. But it is rather too much for you to assume that in this question it is only men engaged in the speciality of the care of the insane who should be listened to as authorities. From the fact that it is illegal compulsorily to control in asylums cases of drink-craving, unless associated with some other marked feature of mental unsoundness which can be made prominent in a lunacy certificate, specialists in lunacy cannot come in contact with many instances of genuine dipsomania. They can see only a fraction of such cases as come under the notice of physicians in ordinary practice; and the latter consequently are better able to understand how much in each case is due to physical and mental malady, how much to moral delinquency, and to say when there might be a reasonable prospect of benefit from strictly enforced and prolonged control, were that obtainable. Even non-professional common sense is not in this matter to be entirely

overweighted by any amount of psychological acumen and hair-splitting distinctions. And here let it not be supposed that I advocate for the cure of dipsomaniacs any connection with lunacy arrangements. For reasons now admitted by all, lunatic asylums are not adapted for the reformatory treatment required in such cases; and, on the other hand, the presence of dipsomaniacs has been found very detrimental to the comfortable working of such establishments.

However, I shall not at present go further into these matters, but address myself to the felt injustice of having my opinion ignored on the true nature of dipsomania from being only a physician, and not "able to bring a practised habit of thoughtful consideration" to bear on the subject! All that I will say is that I have given much thoughtful consideration to this matter—more, perhaps, than any other man in the profession, and probably before you began to think at all on it, so that if I am wrong in my opinions now, it is not from want of consideration. The heading of my paper might have shown you at once that I was not addressing an audience of doctors regarding the mere ordinary drunkard, but on "Insane Drinkers;" and had you read to the foot of the second column you could not have failed to perceive for which of the numerous classes of drinkers or drunkards I was proposing special legislation, however feebly or obscurely I may have done so. But it is not enough to ask you to read a few paragraphs of my paper to be convinced that I speak in it (as I have done publicly for eighteen years) of the same type of individuals whom you agree with Dr. Clouston in regarding as "diseased drunkards." I must ask him, as one of the editors of the "Journal of Mental Science," to permit the insertion of a few quotations from the paper, so that numerous readers may be furnished with an antidote to the mischief which your assertions, uncontradicted, may do in obstructing one of the most philanthropic movements which our profession has ever thrown itself into—if not for the sake of the dipsomaniac himself, at least for the many tender and important interests connected with his condition.

The paragraphs which I wish inserted are the following:—

"That some legislative enactment is required to meet the case of a large proportion of insane drinkers, psychologically termed dipsomaniacs or oinomaniacs—or, popularly, habitual drunkards—will be doubted, I imagine, by few, if any, assembled on this occasion. And I may further assume that little need be here said in considering who are to be viewed as insane drinkers. They may be briefly described as those—1. Who inherit the propensity to intemperance; 2. Who evince it as the principal manifestation of some form of cerebral disease; 3. Who are affected with it as a result of an injury of the head, or severe fevers, or other wasting bodily ailment, mental shock, heavy grief, reverse of fortune, and, indeed, from causes similar to those anteceding some other insanities; 4. Those who acquire it through a course of vicious indulgence in stimulants.

"In whichever way produced, or from whatever combination of causes, the distinguishing feature of this malady in its confirmed state is total loss of self-respect and self-control under an overwhelming craving for alcoholic drinks, although with little or no palatal relish for the same, which must be gratified at any cost, regardless of honour or truth, and, in fact, unaffected by appeals to reason or self-interest, the tears of affection, or suggestions of duty either to God or man.

"I must also assume that it is not necessary at this meeting to point out particularly in what respects dipsomania differs from the *mania à potu*, or, as also called, the delirium ebriosum, or acute mania from alcoholic excess; or how it is distinguished from delirium tremens, the toxic mania of alcoholic accumulation, or from the hydra-headed forms of the vice of drunkenness. Of the latter, we have abundant examples everywhere around us, in which we have the most marked types of constant tippling without entire unfitness for the business of life in persons drinking from facileness of disposition, from conviviality, and from the love of drink or the love of intoxication, but who have more or less power to abstain when they choose to do so.

"That the phase of intemperance which so utterly annihilates self-respect and the power of self-regulation is indicative of affection of the brain-plasm primarily or from exoteric influence through alcoholic action—in other words, an abnormal cerebral condition, occasioning unsoundness of mind—cannot be reasonably questioned; and, as in origin it thus resembles other insanities, it presents also similarities and variety in its course, manifestations, and terminations. Thus, in this malady, the irresistible craving may spring up suddenly, often in successive attacks of singular periodicity, or from the mere taste of anything alcoholic quickly bringing the system under the full sway of alcoholic poisoning; or it may pass through a slow, stealthy, insidious course ere the action, if not the nutrition, of cerebral matter becomes changed.

"It is developed in all classes and conditions of society; in the men of refinement and high mental culture as well as in the coarse-minded and ignorant; in the lady of rank and in the tradesman's wife; in all periods of life, in old age, in the adult, and even in early youth; in different constitutions and temperaments, manifesting various eccentricities of deportment and habits, wastefulness, destructiveness, perverted moral feelings and impulses, revenge, theft, violence, and invariably mendacity. It is occasionally cut short for a time by delirium tremens or acute mania, or goes on to drivelling dementia, chronic alcoholism, or some other form of insanity, if life be not brought to a close by accident or some superinduced disease.

"Besides, while this alcoholic diathesis, as it may be called, is transmitted from generation to generation, idiocy, epilepsy, paralysis,

and other forms of cerebro-spinal disease are the frequent legacy of drunken parents to their children.

"It is a remarkable fact, too, that, if there be any peculiar proclivity, any black spot in a man's moral nature, it is brought out under the weakening and perverting influence of alcohol. Hence, among the criminal class of dipsomaniacs, we have a variety of results, and often a most remarkable uniformity in crime committed by the same individual under successive states of inebriety. Thus one individual will invariably be guilty of assault, another of wanton destructiveness, such as smashing windows, another of theft, and not only so, but of stealing very frequently the same sort of articles. Did the limit allowed for this paper permit, it would be easy for me to treat of in greater detail, and to illustrate and verify with cases the various points now indicated.

"The mass of cases arising out of intemperance—purely the vice—carry with them their own pains, penalties, and checks, and must be judged of by the peculiarities of each individual case, and left to varied physical, moral, and religious teachings. But there is a link which connects, and a boundary line which separates, intemperance the disease from intemperance the vice. Here it is that legislative interference of any kind becomes, and very properly so, most delicate; and it is here that at first sight most formidable obstacles are supposed to exist against our present proposal. For the very worst cases of dipsomania, in which there is a manifest concrete of the malady, of irresistible desire for stimulants, with some other form of mental disease independent of alcoholism, the present law of lunacy clearly provides. The acute mania of drink is also, we would say, a fit disease for asylum treatment, if there be not convenience in private or in the strong room of a hospital; to which cases of delirium tremens also may be taken, when safe and judicious management cannot be carried out in private. But cases of well-marked dipsomania, which are so serious to the unfortunate individuals themselves, and so perplexing and injurious to friends and society, are without help or hope, either in private or from the law of the land; there is nothing in the future but certain degradation and ruin to themselves, often to those closely connected with them, and injury to the community.

"No doubt the voluntary clause of the last Lunacy Amendment Act was thought likely to meet to some extent the case of the dipsomaniac; but while there has of late been a gradual increase of voluntary admissions of the general insane, there has not been such of insane drinkers, and there are strong objections to the admission of such into lunatic asylums. It is not at all desirable that such should mingle with other lunatics in public or private asylums, or that a malady requiring special treatment should be brought under lunacy law arrangements. It is most undesirable also that asylums should be embarassed and annoyed by the care of dipsomaniacs, for it is a

necessity that an inebriate retreat should be a purely temperance institution which a general asylum cannot be, and consequently in such insane drinkers find opportunities, through other inmates, to obtain the supplies they crave; and so, by schemings and untruthfulness, produce endless misery and inconvenience to these establishments. That the habitual drunkard of this class, therefore, absolutely requires special care, is clear ; but, as in cases of legislation a definition must generally precede the proposed legislative provisions, he may be briefly defined as a person of unsound mind whom the habit of intemperance is such as to render, notwithstanding the plainest considerations of interest and duty, unable to control himself, and incapable of managing his own affairs, or such as to render him in any way dangerous to himself or others. . . . .

"From the nature of the malady, it is evident that, unless there be separation from the persons through whom, and places where, the morbid craving can be gratified, and well-regulated restraint placed on the habits, little can be expected in the way of treatment. Such separation is necessary in most cases of insanity ; but still more is it required in the case of insane drinkers, who, although unfit for attention to the proper duties of life, are full of devices (often most ingenious and clever) to obtain their desire (with them the one object of their life); and so cunning and deceitful are they in scheming for it, that they outwit the most vigilant attendants (women being in this respect even more talented than men); so that at best any good arising from ordinary restraint is extremely temporary."

I agree with every word which Dr. Clouston has said in his admirable reply to your Rugby speech. Every practicable general measure—educational, moral, religious, punitive—for the repression and reform of the extensively prevailing and deeply-rooted drunkenness in the country must be employed ; "but when," in certain cases—as Dr. Clouston well says—"the germs have grown, is there not room, is there not necessity, then for the disease theory and the disease treatment?" And such legislative facilities as are wished to enable us to deal with the morbid branch grown out of, or grafted on, the evil habit of intemperance, will not interfere with what you say you—as we all more or less—rely on, namely, the treatment of drunkenness as a great social question by the Legislature, dealing with it "upon the lines of their educational system." Drunkards of the worst kind, therefore, whose brain and nervous system have become so affected as to be entirely destitute of the power of self-control, we would place under treatment in special establishments well fitted in every respect for their care, and, if possible, their cure. This we desire to do just as we place in asylums the insane who require control and treatment on account of the effects of mental disturbance from the excitement, say of commercial speculation, gambling, or sexual excess, in all of which instances much might have been expected from education, and other means for the prevention of such vicious

and dangerous practices and results. In such sad cases as these, however, when the brain plasm has suffered, we surely cannot but pity the individuals and call them "unfortunate." And so we may—I think—under similar circumstances, speak of dipsomaniacs; and in the spirit of humanity do what we can in the hope of benefiting them while we are protecting the various important interests, private and public, which are involved in their conditions.

You lay great stress on the alleged failures of certain American Institutions for the Cure of Inebriates; but that is no reason to prevent us—warned in some things by such tentative experiences—from trying what we can do with our dipsomaniacs. With this view we would require to obtain sufficient legal powers to enable us to place under control in licensed institutions those who would not submit to it voluntarily; and to prolong detention for such length of time as appeared necessary for successful treatment. These institutions, too, would require to be well suited in all internal and external arrangements for the peculiar nature of the charge undertaken—not situated in populous districts or in the vicinity of places where alcoholic liquors could easily be obtained; and especially would they require to be under most intelligent and trustworthy superintendents and attendants. But on these matters and on various aspects of the question suggested by your speech and correspondence, I shall not further remark. It is enough at present to put before yourself my views as to the persons who should be regarded as insane drinkers, and to leave the readers of the Journal to decide whether you have dealt with the present discussion in a fair and right spirit.

I am, dear Dr. Bucknill,

Yours faithfully,

Edinburgh, 15, Rutland Street, A. PEDDIE.
21st July, 1876.

We have received from Dr. Bucknill the following comments upon the foregoing letter:—

TO THE EDITORS OF THE "JOURNAL OF MENTAL SCIENCE."

SIRS,—

Yesterday I received a printed letter from Dr. Peddie, addressed to me, purporting to be for publication in your Journal, and I naturally thought that I owed the sight of this letter, before actual publication, to his courtesy; but this morning I learn from the printer that this letter was sent to me in error. It can, therefore, scarcely surprise Dr. Peddie that, under these circumstances, I prefer to reply to his attack in a letter to yourselves.

In the friendly discussion which I have recently had with one of you on "The Relations of Drink and Insanity," I said—"If you will read Peddie's and Bodington's papers on the subject [read last August before the British Medical Association at Edinburgh] you will, I

think, see that I was justified in my statement." That is to say in the statement that "members of our profession were considering drunkenness, not as a cause of disease, but as a disease in itself." Little did I expect that this reference would have brought upon my head the accusations from Dr. Peddie :—

First.—That I have mis-stated and mis-represented his opinions about insane drinkers;

Secondly.—That I have ignored them;

Thirdly.—That I have not read them; accusations inconsistent with each other, and reminding one of the old pleadings which are now happily abolished, even in the casuistry of the law. It would help me if I knew which count of the indictment contained the real offence, because then, perchance, I might be able to remove or atone for it. To a gentleman who, according to his own statement, has given more thoughtful consideration to these matters "than any other man in the profession," "the felt injustice of having his opinions ignored" might possibly be capable of wounding his self-esteem. Let me hope that the opportunity which he has seized of placing one side of his opinions before your readers in lengthy quotations from his writings, and the further publication of the other side of his opinions which I must ask you to permit me to quote, will induce him to condone this part of my offence, which, I can further assure him, was committed most unwittingly. But if I have ignored his "sentiments" about dipsomaniacs, how can I have mis-stated them? That is a thing which no man can understand, unless his "*brain-plasm*" can unravel a mystery.

To the third count I must distinctly plead not guilty. Dr. Peddie says—"I cannot believe that you have read a sentence of the paper referred to;" but the real truth is that, before I wrote my letter to you, I had read his paper through several times, in the earnest effort to understand it.

Dr. Bodington—with whose wrath I am also threatened, but of which I am not much afraid, seeing that he leaves one in no doubt about what he means, and, if we differ, as we certainly do, the battle we shall have to fight will be about facts and their interpretation, and not about "sentiments"—Dr. Bodington says—"The confusion between drunkenness as a disease, and drunkenness as a vice, must be cleared up. For my part, I look upon habitual drunkenness as a disease, and I would boldly call it dipsomania. It is in its character as a disease that we physicians are entitled to deal with it. I would sink the notion of its being a mere vicious propensity. When fully developed there are not two kinds of habitual drunkenness. The cases are, one and all, cases of dipsomania, of irresistible, uncontrollable, morbid impulse to drink stimulants."

That, without doubt, is a sentence entirely devoid of "hair-splitting distinctions." No two sides of the same shield there painted different colours; or dark cloud with a silver lining.

Dr. Peddie has quoted a large portion of his paper (though it was already accessible enough in the pages of the "British Medical Journal") to prove that "my [his] *sentiments* have ever been such as appear to accord with those you have quoted as Dr. Clouston's, and, consequently, that we are *all three in truth agreed* as to the persons who may be styled dipsomaniacs!" But, if so, where is the need for dispute?

In point of fact we are by no means agreed, for the real gist and purpose of Dr. Peddie's paper turns upon his 4th class, namely, those who acquire "the propensity to intemperance" through a course of vicious indulgence in stimulants. About maniacal and delirious cases he admits that there can be no doubt; they are proper subjects for a hospital or an asylum, but it is for the "unfortunate individuals who are so perplexing to themselves and to society," and who cannot be placed in hospitals and asylums because they manifest no symptoms of disease of mind or body beyond the propensity to intemperance, it is for them that he advocates a change of the law under which they can be profitably kept in a new kind of sponging-house, or private gaol for drunkards instead of for debtors. When Dr. Peddie gave evidence before Dalrymple's Select Committee some of the members tormented him into a precise statement of his sentiments, and here they are:—

Question 1016. Dr. Playfair—You say that you would take a man and put him into forced detention; under what condition would you do that?—When a man could no longer control himself from the habit of intemperance, I would then consider him in a condition of unsound mind and requiring to be cared for.

1017. Even if he was only injurious to himself, and not immediately injurious to the public?—Yes, I think that we should do something more than provide against injury to the public; I think we have a duty as citizens and fellow-creatures to one who will not take care of himself.

1059. Mr. W. H. Gladstone—Do you not foresee great difficulty in determining when a man may be said to have lost his power of self-control?—No, I should not feel any difficulty; I think that it is a matter of medical diagnosis. There is not more difficulty in regard to the habitual drunkard than there is difficulty in regard to insanity of other forms; medical men have constantly cases of insanity brought before them, and the question in each case is whether or not such an individual is a proper subject for control in an asylum for curative treatment.

1060. Then do you think that a man who, when sober, is in complete possession of all his faculties, may still be said to have lost all self-control?—We know very well that we should be able to distinguish in that case his danger by the supposition that if drink was placed in his way the next day, or that very evening, he could not resist it, and that if he once tasted it he would go on from bad to worse; a craving would be set up of which there has been a frequent

opportunity of judging before, and that he would go deeper and deeper into the mire.

1061. Do you think that the impulse to drink, in a case like that, is different from other vicious impulses, such as, for instance, an impulse for gambling?—Yes, I think that the impulse is quite different.

1062. It partakes more of the nature of an external disease, like fever, which comes upon a person?—I consider it greatly in the nature of an internal disease; there is also alcoholic influence and some kind of change upon the state of the brain thus affecting its operations.

1063. But it is analogous to an ordinary disease?—It is analogous to an ordinary disease.

Surely I have a somewhat better right than Dr. Peddie to complain that my opinions about insane drunkards have been misrepresented when they are declared to be in complete agreement with those of a writer who maintains that a man may be an insane drunkard "who when sober is in complete possession of his faculties."

Dr. Peddie "would not feel any difficulty in determining when a man has lost his self-control." "It is a matter of medical diagnosis. There is not more difficulty in regard to the habitual drunkard than there is in insanity of other forms."

But is it not somewhat inconsistent with this avowal that Dr. Peddie should now insist that this diagnosis cannot be adequately made by men who have the greatest knowledge of insanity of other forms, because "specialists in lunacy cannot come in contact with many cases of genuine dipsomania? They can only see a fraction of such cases as come under the notice of physicians in ordinary practise."

As specialists in lunacy know so little about these genuine cases of insane drunkenness, it is not altogether unreasonable that they should be warned off this domain of the physician in general practice. Consequently "the cure of dipsomaniacs" must not have "any connection with lunacy arrangements." "Lunatic Asylums are not adapted for the reformatory treatment in such cases."

If these are the cases which when sober are in complete possession of their faculties, specialists in lunacy will not perhaps act unwisely if they resign the honour of their treatment to those who understand it so much better; but Dalrymple's Committee had other views as to the knowledge of such specialists in lunacy, or they would not have called before them as witnesses such men as Drs. Crichton Browne, Skae, Mitchell, Nugent, Boyd, and Mould, who contributed for their information many important elements of diagnosis which we do not find in Dr. Peddie's writings, notwithstanding that he has thoughtfully considered this matter for such a very long time. I am sure that these eminent specialists in giving their evidence desired no more to give a specialist colour to the facts garnered by their vast

experience, than in writing my letter to you I wished "to raise a cloud of psychological dust to defeat or discourage a highly philanthropic movement." The movement may be highly philanthropic, but there is another kind of dust, namely, gold dust, which seems to have some influence in urging it on, for to quote Dr. Peddie once more:—

"In order to call into existence houses or institutions such as would "be suitable for the upper and middle classes of society, a law to em- "power restraint and detention is manifestly essential. A few such "institutions on a small scale have existed in Scotland, but have "laboured under most discouraging difficulties from want of authority "to receive and retain a sufficient number of inmates, and for a suffi- "cient length of time, to become remunerative. This has stood in "the way of liberal investment for suitable premises, ground furnish- "ings, staff of service, etc. Thus the important essentials for efficient "treatment have been necessarily defective; and the result is, that "the care of a very small fraction only of insane drinkers has been "undertaken, and cure somewhat rare."

"The inmates, with partially restored sanity from enforced depriva- "tion of stimulants, become restless, and knowing that they cannot be "detained legally, demand liberty, and take leave, or else work on the "minds of friends or guardians by entreaties or threats, and get it. If, "however, the State will sanction, under proper checks, both voluntary "admissions and compulsory commitments, in cases of genuine dipso- "mania, permitting prolonged detentions, until real benefit is derived, a "sufficient number of homes or retreats, or by whatever name they may "be called, for the cure of persons in the upper and middle classes, "would certainly spring up, both through private enterprise and the "efforts of companies or associations, formed for the purpose, some- "what similar, indeed, to many existing and thriving lunatic retreats "and asylums, affording accommodation and means of treatment very "different in efficiency from those inebriate institutions which have, in "times past, struggled under cramping difficulties. Now, into such "houses as these, many unfortunate persons would enter voluntarily, "as they do in some of the American inebriate institutions, knowing "that, if they did not thus surrender themselves for treatment, they "would be compulsorily committed; and then, when they are under "control, the law, as I have already hinted, could prolong it for such "a time as might be deemed necessary to accomplish the humane ends "in view."

Alas! alas! that it should all come this! This highly philanthropic movement! These humane ends in view!

When I think, sir, of what the evil of strong drink really is among the lower classes in some parts of your country and of mine; when I think of what I saw in company with Sheriff Dickson in the drink haunts of Glasgow, on the night of Saturday the 27th of May last; when I think of the crowds of men and women, many of them infant-laden, whom I there saw steeped in the bestiality of drink, it makes

me right angry with these philanthropic *fribbles*, who, with eyes averted from the drunken and debased populace, fondle the subject of the casual rich man's drunkenness, with dainty considerations of how he is to be placed in a golden cage, "pleasing his palate in the way of good culinary arrangements," and his captivity made profitable.

Let Dr. Peddie carefully examine the wynds of Glasgow, their drink-shops, lodging-houses, and police-cells, on a Saturday night, and he will afterwards perhaps not think it so easy to perfume hell with rose-water.

As I said in the speech which has led to this discussion, some members of our profession are misdirecting the attention of the public in this matter. By the noise of their philanthropic drum, they would lead us, by false alarms, from the real field of battle. They dally with the tarnished fringe of drunken society, while its broad expanse is a funereal pall to myriads of lowly victims; and Dalrymple's Committee, with its foregone conclusion, unwittingly established the dreadful fact of alcoholic eremacausis in our swarming cities, and concluded by recommending a most dangerous and unconstitutional change in the law for the supposed benefit of those classes of society in which a drunkard is becoming a somewhat rare specimen of a decaying and dishonored vice. They made out the charge fully against the common folk, at least in certain localities, and they directed the main force of their proposed remedy against the stragglers and backsliders of the sober classes. They would scarify the field with a chain harrow when it stands in urgent need of deep draining and subsoiling.

Dr. Peddie, to give him his just due, has not altogether passed on the other side from the drunken crowd, for in his evidence before the Committee he proposed the establishment for the whole of Scotland of four public inebriate asylums, each to contain forty patients of the working classes. They were to be model institutions. He admitted that all four would not contain the habitual drunkards of Edinburgh alone, and, indeed, he may any day find nearly twice as many of the gentle sex in Queensberry House. But it was honourable to him, considering the example of some of his co-agitators, that he allowed his mind to dwell for a moment upon the treatment of drunkards who cannot pay. Public provision for the treatment of 160 working-class drunkards for the whole of Scotland, and for the idle class drunkards as many private houses of detention as the law of profitable investment, aided by that of "compulsory arrest," may develope, reminds one of the proportions of Falstaff's bread and sack, in the relative regard for the class which represents the staff of life, and that which drinks the wine of its wealth and luxury.

Dr. Peddie also suggests [see Appendix of "Report on Drunkards," p. 187,] that "the *pauper* class of drunkards should be taken care of "in the separate wards of a poor-house," and that "the *criminal* "drunkard class should be accommodated in wards or separate houses "connected with our chief prisons." "By these arrangements," he

thinks, "the unhappy individuals would have more chance of benefit "from a distinct and more *attractive* system of treatment."

In these separate wards, to be called Reformatories, work is "to be "made both agreeable and profitable by *a system of rewards and bene-* "*fits.*" For the rich drunkard the loss of liberty is to be sweetened by manifold attractions, of which "not the least would be *perfection* "*in the culinary department*" and "such new and *relishable* enjoyments "as might counteract or take the place of craving for alcoholic "stimulants."

All this, indeed, is philanthropy and not science, not even social science. Perhaps it is not even "non-professional common sense," for we should all wish to be Inebriates that we might enjoy ourselves under the protection of Dr. Peddie's wing, and he might become the only sober man left in the land. What a position, *Sanus, Solus, Sobrius, Rex ebriorum!* Only there would be no bread-winners and rate-payers left to support the drunkards—I beg their pardon—the Inebriates. But even this bit of a difficulty might possibly be averted by Dr. Peddie's ingenious suggestion that Inebriates may be allowed to carry on their work or business, their wages or profits being taken away from them, and "so leaving them *free to earn but not free to spend;*" a suggestion which indicates a knowledge of human nature more profound than even "non-professional common-sense" can fairly reach.

I am extremely sorry to have caused Dr. Peddie "the felt injustice of having his opinions ignored." The truth is, that when I wrote to you on The Relations of Drink and Insanity, I was entirely pre-occupied by the consideration of the question, and had no thought, purpose, or notion of giving Dr. Peddie the slightest offence. Should this letter also not please him, I must insist that it is no fault of mine, seeing that I have been constrained by him to introduce, most unwillingly, into the discussion of a scientific question, matters which may seem to have a somewhat personal bearing. But, when a man of Dr. Peddie's eminence asserts that in such a discussion you are unjust if you ignore my opinions, one is compelled, as it were, to stand and deliver one's opinions upon his opinions whatever they may be. I very much wish that mine could have been more in agreement with them.

I am your obedient servant,

JOHN CHARLES BUCKNILL.

39, Wimpole Street, August 24th, 1876.

CLINICAL NOTES AND CASES.

The Therapeutic Action of Hyoscyamine.

Dr. Lawson, of the West Riding Asylum, contributes to the "Practitioner" of July last his experience of the action of this drug. In sufficient quantities it produces a subdued form of mania accompanied by almost complete paralysis of the voluntary muscles, and ending in quiet and refreshing sleep. Having regard to these effects, he thought it probable that it might be useful in certain forms of violent sthenic mania, which, notwithstanding the virtues of ergot of rye, do appear to be met with in the West Riding Asylum, and be useful in this way—by substituting for the extreme forms of excitement a quieter form of mania, which, on disappearing in its turn, might leave the patient quiet. Experience seems to have established the correctness of this surmise.

First, in illustration of the treatment of recurrent mania, I shall quote a typical case. J. B., a male patient, aged 50, was admitted 4th October, 1875. This was the patient's third attack, and he was admitted on transfer from a private asylum where he had been for two years. During the two previous attacks he was under treatment at the West Riding Asylum for four and six months respectively. At the commencement of the first attack he attempted to shear off his genitals, and when admitted the cicatrix was fresh and raw. His excitement was extreme, and notwithstanding the vigilance of a special attendant, he succeeded in dragging his right testicle from the scrotum. It was replaced, however, and the wound healed readily under antiseptic treatment, without having produced any bad constitutional effects. Previous to this second attempt at mutilation he had been ordered to have half a grain of hydrochlorate of morphia every four hours. The effect was good, but for some time the patient continued more or less excited, and made numerous attempts at self-mutilation. In three days the medicine was discontinued, and about a fortnight afterwards he become much better and made a rapid recovery. The second attack was of a similar character.

When, after two years' treatment elsewhere, he was admitted the third time, he was exceedingly excited. His actions were grotesque and his language obscene and incoherent. His words were muttered through his teeth, were accompanied by a leering look, and followed by an apparently voluntary twitching of the whole of the muscles of the face. He had no marked delusions, but was quite incapable of

giving a rational answer to any question, though he appeared to understand clearly what was said to him. If he commenced to answer, his remarks were quickly interrupted by the comical introduction of some obscene observation at which he himself laughed heartily. He remained in this condition for about a month. At the end of that time he had $1\frac{1}{4}$ grs. of hyoscyamine. The time of administration was 3.53 P.M. The pupils at that time were $\frac{1}{8}$in. in diameter and the pulse 87. At 4 P.M. he was still talking incoherently and incessantly, but the pupils had become somewhat dilated. He was constantly winking, making grotesque movements, and directing passes over the medical officer "to put things straight in him." At 4·15 the pulse was reduced to 72. He could read as well as before, and his motion was unimpaired, but he was not so talkative. At 4·20 he commenced to rub his eyes, as if they were the seat of some sensation; and when asked to read and write, penned some ribald verses, which were apparently original. The pulse was now 88, and the pupils fully dilated. He could not read, on account of the development of hypermetropia. When attempting to walk he staggered as if drunk. At 4·30 the pulse was 106. He was very quiet, and did not speak unless to mutter an occasional piece of obscenity. He was now almost completely affected constitutionally. The tongue was dry, and had a triangular-shaped red band round the middle, and white edges. When asked to put his tongue out he did so, but fell fast asleep without retracting it. When awakened and requested to pick his cap off the floor he endeavoured to do so, but grasped at the floor on the proximal side of it. At 4·47 the pulse was 144, weak but regular. He was very drowsy, slept heavily, and when wakened immediately went to sleep again after the irritation had been removed. He never spoke unless when spoken to, and so indistinctly as not to be understood. At 4·50 he was sleeping soundly, unless when loss of balance on his chair wakened him. He made uncertain movements with his hands, like the pickings manifested in low fever delirium. At this period he was sent to bed. At 5·30 his pulse was 114, and he was fast asleep, his skin being dry and pupils fully dilated. The respirations were 18, heavy and snoring.

At midnight the pulse was 87, and he had taken food.

Next morning he was very subdued, and did not manifest the same amount of buffoonery. When asked how he was, he answered that he had met several friends (two other patients treated at the same time) yesterday, and that they had indulged in a social glass of physic, which he believed had done him a deal of good. His recovery progressed daily from this time. He soon came to occupy himself in the store, showed a reserve which contrasted strongly with his previous vagaries, and after a period of complete sanity was discharged from the Asylum, January 27, 1876. Only one dose of hyoscyamine had been administered. He had no other medicine whatever; the attack had lasted two years before the administration of the drug, and con-

valescence was traceable to the day after the establishment of the physiological action of the medicine.

The record of another case of recurrent mania may be sufficient to establish the value of the drug in such cases. J. H. F., male patient, aged 41, was re-admitted 29th December, 1875. This was his third attack. The first had occurred several years before, and had been characterised by delusions, hallucinations, and excitement. For the second seizure he was brought to this Asylum in March, 1875. After the removal of the excitement which characterised the second attack, he was detained for a considerable time. Notwithstanding this precaution, no sooner was he discharged than symptoms of mania again set in. Almost daily he made road journeys to the Asylum, inquired in an excited manner after his associates, and made irrational suggestions regarding the management of the labour of the institution. After an absence of about six weeks he was again certified and brought back in a state of intense excitement. He was in a condition of furious mania, giving vent to delusions of a somewhat optimistic character; smashing shutters and bed-stocks, refusing food, and threatening violence to all around him. One grain of hyoscyamine was administered after he had passed a sleepless night and persistently refused food. After the administration of the drug he slept soundly for about twelve hours, and on wakening took a good breakfast and was free from every trace of excitement. He threw aside his delusions and employed himself usefully. The quiescence continued till, after the expiry of a month from the date of his admission, his wife came to see him. The visit produced an outburst more severe even than the first. Hyoscyamine was tried, but with little effect. This result, however, was explicable by the discovery that the hyoscyamine employed had been kept for some time over a stove in an imperfectly stoppered bottle. When a new bottle of Mirk's alkaloid was opened and dispensed, one grain produced the same effect as before, and in a very short time the patient was again restored to, and still retains, the proper use of his reason.

After remarking upon the potency and permanency of action of single doses, in which respects it is not equalled by any other drug, he goes on to point out a class of cases in which it is particularly useful.

In the refractory wards of an asylum outbursts of excitement are constantly manifested which present more of the features of voluntary abandonment to angry passions than of pure insanity. Such patients are very aggressive, very loud in their denunciations, and very destructive of clothes and furniture. To such a patient a grain dose of hyoscyamine is a very ready and serviceable means of treatment. The violence and the alarming manifestations of muscular force which precede the administration of the medicine stand in very strong contrast with the helplessness, the absolute and conscious im-

potence, which follow shortly upon its exhibition. The vigorous rupture of rugs is succeeded by involuntary pickings of a superlatively feeble character; the mind directed from the stimulation of surrounding excitants, is fooled by delusions and hallucinations which the limbs are too weak to take action on, and a period of oblivious sleep is followed by a tendency not to waste energy to the annoyance of others, but to court the most absolute retirement and inaction. The sensations produced by the immediate action and after effects of the drug are such as to lead the recalcitrant lunatic to exercise a certain amount of self-control in order to avoid the employment of what such patients speak of as "the silly medicine." Many circumstances render such cases the most suitable ones for the use of the drug. Such patients are usually in robust health, have been eating well, and are not likely to suffer much from a temporary derangement of digestion, and none feel more keenly the inconvenience of being reduced to a state of helplessness. With patients suffering from acute or furious mania, however, the case is different. These not unfrequently are, when admitted, reduced to the last degree by the prolongation of extreme excitement, the loss of sleep, and the refusal of food. Their tongues and throats are generally dry, and the tube almost always requires to be resorted to for feeding purposes. Now in such cases, though hyoscyamine will produce a most certain and refreshing sleep, it will also by its physiological action increase the dryness of the throat, and thus both impede artificial feeding, and add to the constitutional disturbance which, even in a moist state of the throat, the passing of the tube is apt to induce. But I could adduce numerous instances in which the use of hyoscyamine in outbursts of maniacal excitement has been productive, not only of great temporary benefit, but of highly satisfactory cures. A few illustrative cases will be sufficient to confirm this statement.

S. J., male patient, aged 25, was admitted on the 21st of August, 1875. He was certified as being subject to attacks of maniacal excitement and irritability, in which he violently assaulted those about him and appeared to lose all control over his actions. He had been discharged from the army as incorrigible, and when brought to the Asylum had just completed a term of two months' imprisonment for an aggravated assault. While in prison he made repeated assaults on the warders, who accused him of acting the "balmy stick," or, in plain English, feigning madness. When examined on admission he was rational, but very talkative, and occasionally pugnacious. He affirmed that his principle was to "act in Rome as the Romans do," and adapt himself to all classes of society. On October 5th he had a severe attack of excitement, smashed an iron ventilator, and attempted to perpetrate a violent assault on an attendant. He was ordered:—Pot. bromid. ʒiv, tinct. cannab. Ind. ℥i., aq. ad. ℥viij. Sig. ℥i. ter. in die. This treatment was continued for ten days, but his excitement remained unabated. On the 17th he had grs. $1\frac{1}{2}$ of hyos-

cyamine. All the day he was prostrate with the drug, and when the immediate effects had passed off was very much subdued. During the next month, however, he had numerous outbursts of temper, and though he was a young fellow of slender build, was continually threatening and challenging much more formidable and equally pugnacious men. Medicine according to the formula already mentioned, and also digitalis and opium, were administered to him without effect, and on the 21st December he again had one grain of hyoscyamine. The usual primary effects of sleep, motor paralysis, and prostration were manifested in about ten minutes; but the after effects were much more enduring than on the previous occasion. In about a week he owned himself overcome by the "silly medicine," and went to work in the tailors' shop. There he employed himself with great industry. His reserved manner and great self-control contrasted strongly with the former aggressive impulsiveness, and after serving a satisfactory period of probation he was discharged recovered on the 12th day of January, 1876.

In epileptic excitement also the drug is productive of marked benefit.

E. H , male patient, aged 30, epileptic from birth, suicidal, destructive, and exceedingly dangerous, was admitted on the 17th September, 1875. When received into the asylum he was labouring under stupor, resulting from a succession of fits. Subsequently he emerged from his stupor, and his condition with regard to dementia, and his appearance and manner were found to be in all respects those of a confirmed epileptic. Seven days after admission he had a severe attack of excitement, in which he made a furious onslaught on several attendants. He was ordered half-drachm doses of bromide of potassium in combination with three-drachm doses of liquid extract of ergot. This mixture was administered for nearly a month, but during that time violent excitement was almost constantly manifested by him. He had gr. 1½ of hyoscyamine, and after a refreshing sleep began to take the food which during his excitement had to be administered forcibly. The bromide and ergot mixture was discontinued. For a month he was comparatively quiet, but on December 27th he again became very violent. During the night he wrenched a fixed bedstock from the floor of one of the strongest rooms in the asylum, and barricaded himself in such a manner that four men were unable to obtain admission without mechanical appliances. At the same time he maintained a dogged silence, so as to lead to the fear that he had again manifested the suicidal tendency which was certified as one of his symptoms. When admission was obtained he had gr. 1½ of hyoscyamine by the mouth, and in fifteen or twenty minutes was fast asleep. He has not since then manifested a trace of excitement, has been a cheerful and useful ward-helper, and has improved very much in physical condition. Similar good results have also been obtained in the analogous or collateral condition of epileptic status, inasmuch as the number of

convulsive attacks has been diminished with as much certainty as by the administration of chloral hydrate.

In referring to the treatment by hyoscyamine of acute, furious, or delirious mania, I can do little more than record at present that the drug possesses both great advantages and great disadvantages in such forms of derangement. The advantages are the certainty of producing repose if a sufficiently large dose is administered and the permanency of the effect produced, which is more marked after the employment of a single dose of hyoscyamine than after the isolated use of any other drug. The disadvantages are, that the dose required to combat extreme excitement may also be sufficient to produce such a physiological action on the heart and the respiratory system as to cause danger to a frame wasted (as generally occurs in such cases) by prolonged fury, starvation and loss of sleep. Also, as I have already said, the dryness of the throat following upon the use of the drug may interfere considerably with the success of forcible feeding, which forms so essential an element in the treatment of such cases. Combination with the tinctura pyrethri or some other equally powerful sialogogue may to some extent obviate this last disqualification, and I am about to institute observations on this point. It is not probable, however, that I shall have to alter the opinion already formed, that in cases of furious mania hyoscyamine is inadmissible unless in rare instances where violent raving is accompanied by the survival of such an amount of bodily vigour as may be sufficient to withstand the action of a large dose of an exceedingly active drug.

Recurrence of the same Erotic and other Delusions in a Patient, after being Twenty Years Dormant.

A. G., æt. 38, male. Admitted into the asylum on 22nd January, 1849. Carpenter by trade. Resides at Ratho.

Patient was a respectable, well-conducted, hard-working man until about two years ago, when, after a false accusation regarding the performance of some parochial duties, he became changed in his ways and manners, and his friends remarked that he was not like the man he used to be. Six months ago he began to exhibit mild symptoms of the same nature as he now labours under, and in consequence of which he was placed in the asylum. There is no hereditary history of insanity.

On admission he was maniacal and excited, had delusions of an extravagant nature, great incoherence of ideas, and dressed in a gay and extravagant way. Had marked erotic tendencies, believed every woman was his wife—wished to have connection with her, no matter where he met her— fancied men were women, and used most disgusting language. He stated he was connected with the Royal Family, that

he owned several palaces, and that he was Pope Pius IX., and that he had raised the most wonderful and powerful race on earth. If crossed in any way he at once became violent, and struck the person who he imagined was insulting him.

Patient remained in this excited state, labouring under the same delusions, until 1855, when a great improvement in his mental state took place. The excitement disappeared and he gave no expression to his delusions; he was somewhat enfeebled, but was able to work at his trade, make himself generally useful, and, in short, became more like what he had been previous to his illness, being the most trusted and privileged patient in the asylum. He remained a somewhat irritable and demented, but extremely useful, inmate of the asylum till this year, when the following was his condition. He had got weak in body, old-looking, bent, and suffered from paralysis agitans.

April 1st, 1876.—For the last few days patient has been flushed about the head and face, rambling in his conversation, dressing a little absurdly, laughing more than usual, talkative, and generally changed in his behaviour.

April 3rd.—Is more excited, very restless, wandering about the grounds; talks quite incoherently, laughs loudly to himself, and is also very irritable if in any way crossed.

April 5th.—To-day patient, besides being excited, exhibits delusions of much the same nature as is recorded in his case on admission. He is very erotic, and wished to have connection with several of the female patients—is preparing his room for that purpose in a style of what he calls great grandeur. Thinks men are women, calls the same attendant, John W., just as he had twenty-seven years before, "Fanny;" says he has raised a most wonderful and powerful offspring, that he also owns the place, and is going to sell all the books in it to realise an enormous sum of money, &c.

April 22nd.—Is getting more excited, has the same delusions, dresses gayly, is very erotic and disgusting in his language.

May 30th.—The patient has remained in the same excited state since last date of entry, has the same extravagant delusions, and the erotic tendencies exist as strongly as ever.

The above case affords an illustration of a relapse taking place in a patient who had been free from maniacal symptoms for upwards of twenty years, and the marked resemblance these symptoms bore to those of the first attack. In a patient of 65 years of age, we would more naturally have expected a class of symptoms such as occur in senile mania, and especially would not have looked for erotic symptoms. We find, however, the alteration in the patient's general behaviour, the excitement, the delusions, and the erotism were exactly of the character, and presented features precisely the same as they did on the first attack, with this slight differ-

ence, that they followed each other and became pronounced in more rapid succession. The delusions were the same for which the patient had been placed in the asylum twenty-seven years before, and it becomes an interesting question how far the patient was free from the delusions during the twenty years he remained unexcited.

OCCASIONAL NOTES OF THE QUARTER.

*Dr. Bucknill on American Alienists.**

At the Third General Meeting of the British Medical Association, held at Sheffield, on the 3rd of August last, Dr. Bucknill, by permission of the Council of the Association, made a further statement on the subject of the accusations made in "The Lancet" against the superintendents of American asylums, and especially against Dr. Nichols, of the Washington Asylum. Dr. Bucknill said:—

This was an age of international reciprocity in regard to many matters, and he thought it should be no less an age for reciprocity among the members of the scientific and medical professions under any circumstances in which an expression of sympathy might be deemed advisable (hear, hear). He wished on the present occasion to ask the kindly feeling of his medical brethren in this country on behalf of one of their own tongue and race who was now practising on the other side of the Atlantic. We were prepared to criticise American medical men honestly and fairly, and to invite a similar meed of criticism in return. But there was one point to which he wished to call their particular attention—they must be extremely cautious of the accuracy of what they read of their American professional brethren in the American press. The licence of the American political press was not generally known in this country in its attacks on private and professional characters. In America, when a man was said to be "too bad to live" and "too wicked to die," it generally meant that he voted with the opposite political party to that represented by the newspaper which said so (laughter). And if a medical man who had charge of a public institute in any way got into trouble which became the subject of enquiry, either before a civil or a criminal court, the newspapers of America were not prevented by any of the usages of the country from making the most severe comments upon the defendant during the trial, and not only upon him, but upon the judge, the jury, and the witnesses. They wrote such things habitually

* See "British Medical Journal," August 12, 1876.

as would subject the editors of newspapers in this country to be cited to appear before the court, and probably punished either by fine or imprisonment. A man might be abused in the American press—and such attacks were constantly made—who might be a most honourable man, and highly esteemed by all who knew him. Therefore, if the comments made by the American press were copied into the journals of this country, they were apt to mislead their readers very much, and ought to be received with due caution. In this country, if a medical man connected with or having charge of a public institution was charged with malpractice and extreme misconduct in carrying out his official duties, it was tolerably fair to presume that there was some basis for the charges made, because, if such were not the case, the proprietor of the newspaper could be quickly proceeded against under the law of libel. Recently, an injustice such as he had alluded to had occurred in America, the subject of the attack being Dr. Nicholls, the Superintendent of the Government Asylum for the Insane at Washington, and an old friend of his (the speaker's). Dr. Nicholls had been the subject of a political persecution in the shape of a secret committee of inquiry of the Congress. Some of the incidents of that inquiry leaked out during its progress, and were published in the "New York World," and from thence quoted in the columns of some of the journals* published in this country. Now, if those charges had been to some extent proved, yet the mode of proceeding adopted would have been altogether unjust to their American brother; but, when he told them upon the authority of Dr. Marion Sims, with whom he had had an opportunity of conversing upon this matter, that the investigation had resulted in the full acquittal of Dr. Nicholls, the committee finding that the charges made against him were entirely unfounded, he thought they would agree with him, that this was a case in point, which demonstrated the necessity of English journals being extremely cautious before quoting and circulating charges made against professional gentlemen practising in America (hear, hear). He felt certain that their American brother would in this matter, so far as he had been in any way unjustly accused, have the entire sympathy of the members of the Association with him (hear, and applause).

Intemperance and Insanity.

The causes that have produced the insanity in the 310 persons admitted are of great interest, socially and medically. We have a difficulty at the outset in finding out any cause of the disease in some cases, and in others to settle which is the real cause out of a number of events that all may have tended to produce the malady. When a man with a strong

† Erratum; for "some of the journals," read "a journal."

family tendency towards insanity, who has drunk hard previously, is thrown out of employment, and has not therefore sufficient food, and then becomes insane, it is very difficult to tabulate the exact cause of his disease. It is necessary, therefore, to divide the causes into predisposing and exciting, or remote and near; and then, for the sake of a systematic division, into physical and mental. The causes of insanity often influence its whole course and symptoms, so that a particular cause produces a special form of the disease. It is of much importance, therefore, that the Physicians to an institution like ours should be able to find out the causes of the disease as accurately as possible; and I am most anxious in the case of the rate-supported patients, who are usually brought to us by the Assistant Inspectors of Poor, that relatives who know something about the patients should also come along with them. The necessity for this will be apparent, when I say, that in 53, or 17 per cent. of the admissions last year, no sort of information on this point could be obtained at all.

Glancing over the summary of assigned causes (Table XI.), it is at once seen that intemperance stands out as by far the most frequent. It alone caused 48 of the 257, or about 20 per cent. of those in which the cause was known; and along with other allied excesses for which the patients had been themselves responsible it accounts for 72, or 28 per cent. of the cases. Much is properly said about the prevention of disease now-a-days. Most unquestionably the sum-total of the mental disease in our city might have been lessened by that amount, if the laws of nature had been better obeyed. Fifty of the cases thus resulting from drinking and excesses being paupers, each costing £27 a year to the public rates, over £1,300 will have been paid for one year's production of lunacy from very preventible causes; and, of course, this takes no account of the cost of the old incurable cases already in the Asylum from the same cause. I have no doubt that both the number of cases and the cost will seem small to some persons, and will seem large to others who have not had their attention directed to it. I am quite sure that intemperance was the remote cause of the disease in more of the cases; but even allowing for these, we cannot put this down as accounting in any way for more than one in four of all cases of insanity. Medical statistics seem definite on this point.

The forms of mental disease caused by intemperance are

of two types—one being of a more transient and curable nature, the other incurable, and being accompanied by organic diseases of the brain. Of the former class we had about thirty cases, of the latter about twenty. It is interesting to compare the prevalence of those types of disease here with other places. Such coal and iron mining counties as Durham and Glamorgan produce the most marked and fatal of all the brain diseases caused by excesses (General Paralysis) in twice the proportion (16 and 13 per cent.) we do (7 per cent.) ; while, on the other hand, we stand at twice the amount of the agricultural counties (3·6 per cent.) on this head.

When the number of pauper patients whose disease was caused by intemperate habits is compared with that of the private patients from the same cause, I find that there were about 3 per cent. more of the latter than the former. A better social position, more means of rational amusement, a better education, and the stronger public opinion of their class, do not seem to have saved any larger proportion of the better classes than of the poorer. In this respect our statistics for this year are in accordance with those of former years.

In assigning intemperance as the cause of insanity in a number of cases, two things must not be forgotten. The first is, that the taking to stimulants may not be a cause at all, but merely a symptom of the brain disorder, and, as a matter of fact, it is often one of the early symptoms in many cases ; the second thing to be kept in mind is, that there are many cases in which it is the real cause of the mental disorder, but the mental balance had always been so unstable, and the brain working so easily overset, that a very little alcohol indeed will bring on an attack of insanity in these persons, just as in those same people a fright or a little over-excitement will upset their sanity. This is the class of persons who, in my experience, get upset by religious revivals. The resisting and recuperative power that is really an essential part of a healthy nervous system, whereby the effects of not too long continued over-eating or over-drinking, over-feeling or over-work, are at once recovered from, is wanting in these people. Nature provides that short excesses don't do much harm to healthy people. It is a poor sort of boiler that bursts whenever the exact pressure needed for its daily work is exceeded.

And, before I leave this subject, I may mention, that I

have not reckoned in any way the mere drink-craving, or the inability to resist it, as constituting insanity. I believe this may or may not be a real insanity in different cases, but it was from developed and unmistakeable mental alienation that my patients suffered.

Taking all the cases in which any direct cause for the disease was assigned or known, 63 per cent. were physical causes, such as intemperance, injuries to the head, epileptic fits, starvation, or childbirth, &c.; while 37 per cent. were mental, such as grief, domestic or business anxieties, disappointments, religious excitement or fright. A comparison of our statistics here in regard to this point with those of other districts of the country exhibit very curious differences. Most people fancy that such mental causes as I have mentioned are far more frequent producers of insanity than mere physical conditions, and will be surprised at the frequency of the latter in our table of causes; but when I examined the reports of the Asylums for such mining and manufacturing counties as Durham, Glamorgan, and Stafford for five years, I find that physical causes are put down as producing the insanity in four cases for every one that is put down to mental causes. Mental causes, in short, only operate there with half the frequency they do with us. The reports of the Asylums for such agricultural counties as Wilts, Worcester, Somerset, and Salop, for the same period, show that in them the physical stand to the mental as three to one; and in the town populations of Newcastle, Liverpool, Birmingham, and Bristol, as two to one. Those are still below our statistics in regard to the frequency of mental causes; but the difference is explained, I find, by the fact, that this is a mixed Asylum for all classes, while all the Asylums for the counties and towns I have mentioned take in only pauper patients. When the causes of the insanity in our eighty-eight private patients are compared with those of the 222 paupers, the difference is most striking, and entirely bears out the general law already indicated. Of those eighty-eight private patients, mental causes produced the disease in about as many as physical, while in the paupers they were only as one to three. These facts tend strongly to show, that the higher in the social scale we go, the more strongly do purely mental and moral shocks act in upsetting a healthy mental balance, and that those causes operate more powerfully on the lower classes of a town population than on an agricultural. They also point to the fact, that our

workers in coal, iron, and the potteries, expose themselves, above all other people, to the physical causes which produce insanity.—*Report of Royal Edinburgh Asylum for* 1875.

An Imposing Female.

Among the patients who come here in a year, there are always many with the saddest of histories, and usually a few whose doings before admission were of a very striking character. In one case, a woman who, up to about a twelvemonth of her admission, had lived a quiet but honest and uneventful life, had then struck out a highly sensational course for herself. By a series of the most extraordinary misrepresentations and cleverly carried out impostures, she raised large sums of money on no security whatever, and spent them as recklessly; imposed on jewellers, so that they trusted her with goods worth many hundreds of pounds; furnished grand houses entirely at the expense of trusting upholsterers; introduced herself by sheer impudence to one great nobleman after another, and then introduced her dupes, who, on the faith of those distinguished social connections, at once disgorged more money. To one person she was a great literary character; to another, of royal descent; to another, she had immense expectations; to another, she was a stern religionist. At last all this lying, cheating, scheming, and imposture developed into marked insanity and brain disease, of which she soon died; and it was seen that all these people had been the dupes of a lunatic, whose very boldness, cunning, and mendacity, had been the direct result of her insanity.—*Report of Royal Edinburgh Asylum for* 1875.

Good Effects on the Poorer Classes of the Insane of Frequent Visits by Relatives.

We are in this peculiar and almost unique position in Scotland, that while our number of yearly admissions increase, our numbers left at the end of the year have diminished for the past three years. There are several causes for this. Our recoveries are very numerous, and a large number of unrecovered but quiet cases are removed, at my advice, by their friends. Our proximity to town, and the extraordinarily ready access provided by the tramways, are circumstances which most people, and among them many high authorities in lunacy matters, would consider great disadvantages. Their effect is to bring the relatives of our poorer patients out to the Asylum to visit them to an extent quite

unknown in country Asylums. In this way an interest in them is kept up, and very few of them indeed are forgotten and neglected by their kith and kin. This is an influence which often saves them from falling into incurable insanity, it gives many of them unbounded pleasure, it keeps alive home feelings and associations, and it brings a direct public opinion of the most unsleeping and critical kind to bear on the officers and attendants of the institution—all matters of incalculable importance, and much difficulty of attainment. When the relatives of patients see that the acute symptoms have passed off, they are often disposed to take them out for a day to see how they get on. If this succeeds, they try them at their usual employment, and if they do well, are often anxious to have them home altogether. It is by this most natural of all means that any undue accumulation of the incurably insane has been avoided for the past three years, and the problem of how to provide for such, which is so urgent in many parts of the kingdom, has been solved for us at no cost to the rates whatever. I find from the Report of the Commissioners in Lunacy, that Edinburgh is the only county in Scotland, the majority of whose population is urban, where the numbers of the registered insane, whether in Asylums or not, have absolutely diminished for the last three years.—*Report of Royal Edinburgh Asylum for* 1875.

Insanity and Crime.

We have been prevented, by great pressure on our space, from recording at the time, as we had intended to have done, some instructive trials of insane persons for murder. It is true that they serve only to illustrate an often-told tale, but it is perhaps well that the moral of the tale should be enforced by constant repetition, until it sinks into the hearts of those who may care enough for the progress of just doctrine to wish to see it prevail, and who may have influence enough to get it embodied in the legislative enactments of the country.

We quote from the "Times" newspaper, of July 24th, 1875, the report of a trial for murder in which Mr. Justice Brett asserted himself almost as aggressively as on the occasion when he passed the sentence upon the recalcitrant gas-stokers, which led to the quick abolition of the law under which such a sentence was possible. Pity that a similar result did not follow his charge on this occasion! What a sad pass things are coming to when the scientific observations

of doctors and the common sense of jurymen dare to repudiate the "law declared by the Judges of England many years ago!" Happy the country whose judges have discovered by intuition and proclaimed with confidence, many years ago, a criterion of responsibility which shall be a lamp unto the paths of generations and nations for all time to come! If Blampied knew that he was killing Catt by smashing his skull with the adze, and that killing was murder, what more was necessary to entitle him to the privilege of being hanged for the luxury in which he indulged? "Uncontrollable" is by interpretation "uncontrolled." Have not the mouths of the Judges of England spoken it many years ago?

Blampied was tried at the Maidstone Assizes for the murder of Catt, by whose side he was working. He had killed him suddenly, and without the least apparent motive, by striking him on the head with an adze.

The two men had been for some time employed in the masthouse at the dockyard, Chatham. A few months before the shocking occurrence they had had an altercation; but since they had been apparently on good terms. On the day mentioned they were at work together on the same mast, about 6ft. from each other, and the prisoner was using an adze. Just before the act of homicide the prisoner went twice to the foreman for directions as to his work, and seemed quite cool and sensible. Suddenly those who were near the two men heard the sound as of a blow, and heard the deceased man cry out, "Oh! oh!" One of the workmen ran to the spot and found Catt lying down and the prisoner standing close to him with the adze in his hand; and another witness who came up saw the prisoner move from the deceased. This witness cried out, "He has killed Jemmy." On which the prisoner said, "No, he has killed himself;" and afterwards he added that Catt had taken up his adze and killed himself. But, from the nature of the wounds inflicted, it appeared that this was impossible, the wounds being at the back of the head, and one of them of such depth that it had actually cleft the skull. The prisoner was quite cool and collected, and helped to remove the poor man to the surgery, where, however, he died in a few minutes. The prisoner went to the police office and said he had to report that Catt had taken his adze and had struck himself with it severely. He was then charged with having killed the man, and said he was innocent. There was no doubt that he had committed the act. The defence set up on his behalf was insanity, and he had certainly been in a lunatic asylum for some time, but he had been three years ago discharged as cured, and had been in the service of the Government in the dockyard at Chatham, to all appearance perfectly in the possession of his senses.

The prisoner, when called upon to plead, pleaded "Not guilty," with every appearance of sanity.

A shipwright, who was working with two others not far off in the same masthouse, stated that he had known the prisoner 14 or 15 years, but more intimately for the eight or nine months previous to the fatal occurrence. The prisoner, he said, had come to him for directions as to his work about half-past two, and there was nothing then in his aspect or demeanour at all unusual. The two men, he said, had worked together eight or nine months, and, so far as was known, were on good terms. At the time of the dreadful occurrence the witness and two other men were from 30ft. to 60ft. from the prisoner and the deceased, and on hearing the sound of the blow and going up to the spot he saw the prisoner standing with his adze in his hand. Witness was frightened and went back to get assistance, and on his returning to the spot the prisoner, who had then put the adze down, said that Catt had taken his (the prisoner's) adze and killed himself with it. The two men at the time were working within 6ft. of each other, and as the adze is 2ft. or 3ft. long the prisoner would only have to take a step in advance with his arm extended to bring it down on the head of the deceased. The prisoner just after the act was quite calm and collected, and there was nothing, the witnesses said, at all unusual in his appearance.

The inspector of police stated that the prisoner came to him and said he had something to report, and went on to say, "I have been employed in the masthouse, and when I turned round James Catt, who was employed with me, took hold of my adze and struck himself on the head with it, seriously injuring himself." The inspector said, "He's dead then?" To which the prisoner replied, "No; I don't know about that." "Where is he?" asked the inspector. "At the surgery," said the prisoner, adding, "He was a good mate, a good workman, and a good fellow." The inspector proceeded to write down the man's statement, and read it over to him, and he said it was correct. The prisoner was soon afterwards charged with murder, and said, "I didn't do it; he did it himself."

The surgeon who attends the dockyard stated that in April, 1874, the prisoner had been under his care for a few days for swimming of the head, and again for a few days in October suffering from *melancholia.* But this witness said he knew nothing of insanity, and had not studied the subject.

The surgeon of the police at Chatham, who saw the prisoner in custody the day after the occurrence and conversed with him, stated that he asked him, "Do you know what you are here for?" and he said he had "knocked his mate on the head, and the stupid fellow fell down dead." "Then you killed him?" said the surgeon, to which the man replied, "I knocked him on the head, and he fell down dead." This witness stated that in December, 1868, he had signed the certificate for the removal of the prisoner to Barming Lunatic Asylum as a

lunatic, where he remained until December, 1872, when he was discharged as cured. The witness said he agreed with Dr. Taylor that impulsive mania might come on and go off suddenly, and leave the person quite cool just afterwards.

The learned Judge observed that every impulse, of course, was sudden, or it would not be an impulse.

The witness went on to say that "swimming" in the head might be the effect of the impulse, and that if the man had been suffering from *melancholia* the swimming in the head might be a symptom of an attack.

Mr. Joy, the medical attendant of the gaol, stated that since the prisoner had been there he had had frequent opportunities of seeing him, and had conversed with him constantly, and was of opinion that he was of unsound mind, being, he said, mad on the subject of religion. In cross-examination, he said the man has expressed strange opinions on the subject of religion; and, in answer to the learned Judge, said he considered him of unsound mind on these subjects. He thought, he said, that it was a sudden act—an act committed from a sudden impulse.

The learned Judge—Do you think that he knew, when he struck that blow with the adze, that it was likely to kill the man?

The doctor said no doubt he knew that; but he believed the act was uncontrollable.

The learned Judge said that would not do.

The prisoner's counsel said it was laid down on high authority that it was so, referring to Dr. Taylor's work on "Medical Jurisprudence;" but

The learned Judge said though Dr. Taylor was a high medical authority, he was not a lawyer, and was no legal authority at all.

The medical witness said he believed the impulse to do the act was "uncontrollable."

The learned Judge—What do you mean by that? Supposing a person takes it into his head to steal something, is that an "uncontrollable impulse?"

The Witness—No!

The learned Judge—Why? In fact, he has not controlled himself, and in that sense the impulse was uncontrollable.

The witness said the man had been previously in a lunatic asylum, but

The learned Judge observed that he did not see how this affected the question. The man, he said, may be mad. I assume that he is so in the medical sense of the term, but the question here is, whether he is so mad as to be absolved from the consequences of what he has done. He is not so absolved, though he is mad, if he was not so mad as not to know what he was doing or not to know that he was doing wrong.

The medical attendant of the Lunatic Asylum at Barming, from

which the prisoner was discharged in 1872, stated that his grandfather was insane and also one of his sisters, and that when he was received there in 1868 he was suffering from *melancholia*, caused by religious delusions. But he was discharged as cured, and was believed to be cured.

The learned Judge, in summing up the case to the jury, said the prisoner's counsel had done his duty, and now they had to do theirs. They were not entitled to follow their own opinions, and say what ought to be the law, but simply to answer the questions proposed to them. The first question put to them was, whether the prisoner struck the blow; and if so, he told them, as matter of law, that he was *primâ facie* guilty of murder. If this were so, then it was for the prisoner to satisfy them not that it was doubtful whether he was mad, not even that he was mad, but that he was so mad as not to know the nature of the act he committed—that is, that he did not know what he did, or that he did not know that it was wrong. As to the medical evidence, he declared advisedly that it was not enough to show that a man was mad, or had what medical men called an "uncontrollable impulse," for, even assuming this, the law did not absolve him from the consequences of his act. If he knew what he was doing, and if he knew that it was wrong, then he was responsible for it. That had been declared to the House of Lords by the Judges of England many years ago, and by the law so declared Judges and juries were equally bound.

Mr. Justice Brett then read to the jury the well-known questions put to the Judges by the House of Lords, and their answers, and proceeded as follows:—

That is, the Judges laid down distinctly that, even although the act was done under the influence of delusions, with the idea of doing a public benefit, still if the person knew it was contrary to law, he would be criminally responsible for the act he had committed. The jury must be satisfied that at the time of the act the prisoner was under such delusion as not to know the nature of the act he was doing, or not to know that it was wrong. Then, did the prisoner in this case kill the deceased, and did he know he was killing him, and did he know that it was wrong or contrary to law to do it; if the prisoner did the act knowing that he was killing the man, and knowing that it was wrong to do so, then he was criminally responsible for his act. It had been urged that there was no motive, and that it was a sudden impulse, as no doubt it was: but if that was sufficient to establish the defence, then the less cause there was for a murder the more excuse there was for it. Again, it was urged that the man was cool just after the act, and that therefore he was mad, though that surely depended on the state of his nerves; for if they were strong then he would be cool and collected. If the defence was not fully established, then the jury were bound to reject it. It could not be seriously disputed that

the prisoner struck the blow, and it could not be accidental, as the men were six feet apart. Nor was it possible that (as the prisoner suggested) the deceased could have done it himself, as it was at the back of the head, and broke the head almost to pieces. The other men were from 30ft. to 60ft. off, and there was no one who could have done the act but the prisoner, who was found with the adze in his hand. It was impossible, then, to doubt that the prisoner committed the act, and then he was clearly guilty of murder, unless the defence was established. But the defence required it to be shown that the man did not know the nature of the act he committed, or that he did not know that it was wrong—*i.e.*, that he did not know he was killing a man, or that he did not know it was wrong to do so. No doubt the man was in a sense insane; that is, he was probably under the influence of delusion, and no doubt the act was sudden, and there was no apparent motive for it; but all this fell far short of the defence set up. He had been for two or three years working at his business, like other men, and as to the "swimming in the head," why, it had nothing to do with insanity, and might have been merely a symptom of the stomach being out of order. The man had been for two or three years practically sane, and treated as sane, and even though he were under the influence of religious delusions, that was far from showing such insanity as was required to establish the defence. It was said there was no motive—*i.e.*, no known cause—and that was true; but, in truth, there never could be an adequate cause for a murder. Then, as to the circumstances of the act. There were none which indicated insanity in the sense which was necessary. When he found the men coming up to him he put the adze down and said, "He has taken my adze and killed himself." Did that show that he was not conscious of the nature of the act, or that he was not conscious that it was wrong? Did it not rather show that he was quite conscious of it, and sought to avoid his liability for it? Then the prisoner went and made a statement to the inspector, which was quite coherent: but was it true? Was it not the sort of account which a man would give who sought to avoid the consequences of his act, rather than the incoherent account which would be given of it by a man who did not know what he had been doing? Was there evidence of insanity in the sense which had been explained to the jury? No doubt the man had been insane, and might have been so at this time, and it would be better to assume that at this time he was of unsound mind. But the question was not whether he was of unsound mind, but whether he was so insane as not to know the nature of the act he committed—that is, that he did not know that he was killing a man, or that he did not know he was doing wrong in killing a man. If the jury were satisfied of this, then they would acquit the prisoner on the ground of insanity; otherwise they were bound to find him guilty of murder. Their responsibility, he reminded them, was limited to the true and faithful discharge of their own duty, which was to answer truly as to the facts. The ulti-

mate responsibility as to the fate of the man would rest with others, who would, no doubt, discharge their duty as faithfully as the jury discharged theirs. But their duty was clear and simple; and it was simply to find their verdict with reference to the truth of the case and the effect of the evidence.

The jury retired to consider their verdict, and after being absent for about a quarter of an hour, they returned into Court with a verdict of "*Guilty*, but not accountable for his acts."

The Clerk of Assize: That is, you acquit him on the ground of insanity?

The jury: Yes.

The learned Judge: Insanity in the sense I have explained to you?

The jury: Yes.

The prisoner was then ordered to be detained during Her Majesty's pleasure.

A few days after this trial, the same Judge tried at the Croydon Assizes a man who was indicted for the murder of his wife and child, but who was alleged to be insane. Medical evidence of his unsoundness of mind was given at the trial. The case was very imperfectly reported in the "Times," and we give, therefore, the result:—

Mr. Justice Brett, in summing up the case to the jury, directed them as to the law on the subject of insanity, in accordance with the law he had laid down in the Maidstone case, that it was not sufficient to show that the prisoner was insane, unless it was also shown that he did not know the nature of the act he was committing, or did not know that it was wrong. He told them that they must disabuse their minds of the medical notions as to insanity, for the reason that these medical men had not met the Court upon the ground which they desired them to do, and that their opinions were founded on their own ideas as to what the law of insanity ought to be. He further said that even at the risk of appearing to sum up against the prisoner he must tell them that it was not enough for them to be satisfied that the prisoner was insane, but that he was so insane as not to know what he was doing, or if he did that he did not know he was doing a wrong thing, or that he did not know he was doing a thing contrary to law.

The jury, however, without any hesitation, found the prisoner *Not Guilty* on the ground of insanity, and the usual order was made as to his custody.

Insane or Not?

We extract the following interesting letter from the "Meteor," a small journal published at the Alabama Insane Hospital, Tukoloosa, and having the apt motto, *Lucus a non lucendo*:—

Editor of the Meteor,—I know you would do any service in your power to a fellow-sufferer. I have therefore determined to ask you to make room for a statement of some particulars of my own case. My object is to convince that I am not insane, though recognizing, as actualities of my daily life, circumstances which are so strange as not to have secured recognition, so far as I know, by the authors of our most advanced works on Physiology and Psychology. The only publication I have met with of similar experiences is in Mrs. Mowatt's "Autobiography of an Actress," and some late newspaper accounts of exhibitions of the power of mind-reading. Of the last the editor declared, that though remarkable they were vastly inferior to many others achieved by private performers.

I have been an inmate of several Insane Hospitals, and it was not until I had staid some time in the second one that the phenomena to which I wish to call attention made their appearance. I was sent, the first and second time, to a hospital not because I was thought insane, but at my own request, in consequence of a grievous melancholy which had long oppressed me, and which grew, partly out of impaired physical health, partly out of some circumstances of my past life. It was not until I had been about two years in the second hospital—two and a half in the two—that I became aware of my mind being open to the inspection of others; and for some time thereafter, say for three years, though habitually amazed at the inexplicable anticipation of my words, acts and designs, I did not propose any consistent explanation of the matter. I could conceive of none except miraculous power, and to this I was fain to resort, now and then, when sorely puzzled by it. In the course of the third year, after my attention was called to the mind-reading, I noticed another and equally strange phenomenon—various unusual sensations in different parts of my body. Some of these were pleasurable, some very painful, and after a huge mass of testimony of daily experiences, I was convinced that they were neither effects of the tonic medicine I was taking, nor of substances mixed with my food, nor of vapours thrown into my room—all of which theories I had entertained at different times. About this time I found in the library Mrs. Mowatt's "Autobiography of an Actress," and in that book an explanation of the circumstance of my thoughts being known to those about me. For an explanation of the pleasurable and painful feelings that afflicted me by day and by night, I at length adopted the theory of a force projected in some way by the nervous system of others upon my own. Mesmerism I termed it, but

there was not in its effects the slightest symptom of the comatose state usually implied by that word. I therefore became quite anxious to leave the establishment, that I might abandon the vicinity of those who possessed such fearful control of my nervous system.

After some years I was suffered to go, but all the way to New York, and thence to Memphis, I found myself still under the influence of mind-readers and nerve-vexers. The extent of my sufferings for a year or more it would be difficult to pourtray. For hours on many consecutive days, I would writhe in the agonies of unnatural chill, fever or headache. Returning to Alabama, I was, after the lapse of ten or twelve days, sent to this Hospital as a dangerous person, I having, when utterly exhausted of patience with the artificial pains, made demonstrations alarming to those about me. I staid here two years and a half, and was never supposed to be insane except upon mind-reading and nerve-fretting. My time was very usefully employed in reviewing my Latin, Greek and Mathematics. I also read much general literature, and wrote hundreds of pages of essays, tales, dramas and verses, much of which, without the change of a word, was published in popular periodicals, and highly commended. Yet during all this time not a day went by without evidence of the proximity of mind-readers and nerve-vexers.

Released in the middle of the third year, I went north to visit my only child, then about fifteen years old, and though I travelled as far east as Baltimore, as far west as Kansas City, and as far south as New Orleans, I nowhere escaped inflictions of the interest taken in my affairs by mind-readers and nerve-vexers. After eleven months I returned to Alabama on business, and was advised by my relatives to return to this Hospital and remain, as a mere boarder, until they should collect some money from notes left with them. But Dr. Bryce refused on my arrival to suffer me to remain except as a patient, and I have been here ever since. For some months I pretended to have given up a belief in the remarkable facts detailed here, but my detention continuing, I learned that I was kept, not for the strange beliefs, but for fear that I might base upon them courses of conduct detrimental to others.

I have turned over the pages of many a medical book for attestations of the reality of my supposed facts, and am to-day surprised that such important matters should not have been mentioned in the latest editions of our most advanced works on Physiology, Psychology, and even practical Medicine. If, as I believe, its most secret conceptions can be wrenched by another from the inmost recesses of the brain; if the direst pains may be inflicted by the mere act of another's will, all ought to know it. The vast import of such truths is obvious. It may be that not all brains are as open to inspection as mine; that not all nervous systems respond as readily to the force of another's will.

My chief object in this letter is to gain some clues toward the acquisition of the arts of mind-reading and nerve-vexing. Dozens of

persons, some of them quite insane, can read my mind while theirs is sealed to me. My nervous system daily responds to the force of others' will, while I cannot make any one sick at the stomach except with ipecac, &c., nor give them pain in the head unless with a hickory stick or some of its relations.

Brown Sequard's idea, that the nerve force cannot travel beyond the nerve filaments may be correct. Then the phenomena may result either from all mind being, like all matter, in perpetual and instant communication, or from the vibrations of a universal medium communicating the acts of one mind to another. In proof that it was not due to prepossession or dominant ideas--Carpenter's device for getting rid of facts which he cannot explain—I adopted several explanations of the sensations before settling upon what I am now convinced is the true one.

I have written this letter to call the attention of the public, and especially Superintendents of Insane Hospitals, to the subject, and to ask for information of similar experiences. I would also be greatly obliged if some one would send me a book, or the title of one, in which such matters are fairly discussed.* A PATIENT.

Marriages between First Cousins.

Mr. George H. Darwin, M.A., has undertaken a series of laborious and painstaking enquiries into the proportion of first cousin marriages to all marriages in the population, and into the effects of such marriages on the health of the progeny. The method which he pursued in his enquiry, and the results which he obtained, will be found described in an elaborate paper in the "Journal of the Statistical Society" for June, 1875.

To sum up the results of the whole investigation: It seems probable that in England, among the aristocracy and gentry, about 4 per cent. of all marriages are between first cousins; in the country and smaller towns between 2 and 3 per cent; and in London perhaps as few as $1\frac{1}{2}$ per cent. Probably 3 per cent. is a superior limit for the whole population. Turning to lunatic and idiot asylums, probably between 3 and 4 per cent. of the patients are offspring of first cousins. Taking into account the uncertainty of my methods of finding the proportion of such marriages in the general population, the percentage of such offspring in asylums is not greater than that in the general population to such an extent as to enable one to say, positively, that the marriage of first cousins has any effect in the production of insanity or idiocy, although it might still be shown, by more accurate

* Answers to this communication, addressed to the care of Editor of the "Meteor," will be promptly delivered to our bewildered friend.

methods of research, that it is so. With respect to deaf-mutes, the proportion of offspring of first cousin marriages is precisely the same as the proportion of such marriages for the large towns and the country, and therefore there is no evidence whatever of any ill results accruing to the offspring in consequence of the cousinship of their parents.

The results of Mr. Darwin's applications to the Superintendents of Lunatic Asylums were not satisfactory. Although those to whom he applied for information responded in the most obliging manner, yet most of them felt it necessary to caution him against placing reliance upon the statistics which they were able to send him. The difference of opinion regarding the effects of intermarriages showed at any rate that the statistics had not led to any uniform results. Dr. Crichton Browne thinks "that the great danger attending such intermarriages consists in the intensification of the morbid constitutional tendencies which they favour. Hereditary diseases and cachexiæ are much more likely to be shared by cousins than by persons who are in no way related . . . . are transmitted with more than double intensity when they are common to both parents. . . . They seem to be the square or cube of the combined volume . . . even healthy temperaments, when common to both parents, often come out as decided cachexiæ in the children." Dr. Howden, of Montrose, says—"As regards insanity, my own impression is, that unless there exists a hereditary predisposition the marriage of cousins has *no effect* in producing it. . . . Neither in insanity nor in any other abnormal propensity do two plus two produce four; there is always another factor at work neutralising intensification and bringing things back to the normal."

Dr. Howe, in his Report of the Massachusetts Asylum for the Blind, asserts that the intermarriage of near relatives, like all other violations of natural laws, is followed by some punishment. This may, perhaps, hardly be remarked for a long time, but close observation throughout succeeding generations proves the truth of it. "Conversing once with one of our eminent physicians upon the matter of blood relatives, I said "Why, Doctor, your parents were full cousins; they left seven or eight children, and yet where are the peculiarities in them?" "You don't see them, perhaps," said he, quickly, "but I tell you every one of us has a 'hair lick' in the brain."

PART II.—REVIEWS.

The West Riding Lunatic Asylum Medical Reports. Edited by J. Crichton Browne, M.D., F.R.C.S.E. Vol. V., 1875.

This volume is the largest and, on the whole, the best that has appeared. There is much painstaking work recorded, and if the results are in some cases merely negative, this is no more than has happened to scientific, and especially medical investigators before. There is one point of resemblance in nearly all the contributions which it would be well in future to avoid, and that is a tendency to introduce each essay with a flourish of trumpets, that leads one to expect more than is fulfilled, and then to abound in learned-looking references to other writers, as if the author had exhausted all sources of previous knowledge. This is not true art, it takes up much space, and it fatigues a busy reader.

Dr. Merson leads off with a paper on "The Influence of Diet in Epilepsy." He puts a number of epileptics first on nitrogenous and then on farinaceous diet, and the following is his conclusion:—

> On a review of the whole evidence furnished by these observations, I think, after making due allowance for all circumstances likely to tell in the opposite direction, that there are fair grounds for the conclusion that a farinaceous diet is likely to be more useful in the treatment of epilepsy than a nitrogenous.

Dr. Ferrier follows with an interesting paper on Menière's Disease, or Disease of the Semicircular Canals, with a peculiar form of Vertigo and Sickness. He says—

> Should the above observations be confirmed, they will serve to show that the semicircular canals are, as regards hearing, specially concerned in the reception and transmission of skull vibrations in contradistinction to aërial vibrations.

Dr. Lawson's very elaborate experiments on "The Physiological Action of Hyoscyamine," led him to the following conclusions:—

> 1. The smallest active doses of hyoscyamine, when administered to animals, cause numerical depression of the pulse, and increased arterial tension, reduce the temperature, dilate the pupil, and have little effect on the respirations.
>
> 2. Small doses cause reduction of the pulse, with increase of arterial pressure, followed by quickening, which after a greater or less persist-

ence, somewhat suddenly subsides, and sinks towards the normal point. During the action of the medicine there is restlessness, followed by motor paralysis, diminution of respiration, and reduction of temperature, about 4°. The drug in all cases produces dilatation of the pupil, and dryness of the mouth and throat.

3. Large doses elevate the pulse without previous depression, and this quickening is maintained for six or eight hours. Great fall of temperature, diminution of the respirations, loss of motor power, delirious excitement, and sometimes prolonged but interrupted sleep succeed, and are in their turn followed by sudden reduction of the pulse towards the initial point, and sometimes below it. This fall precedes complete recovery from the operation of the drug.

4. Lethal doses cause death either by syncope during extreme vascular excitement, or by coma following upon non-elimination of the drug by the urine, and imperfect aeration of the blood through impairment of respiration.

5. The drug generally produces increased urinary and diminished alvine secretion.

6. To rabbits, pigeons, and others of the lower animals, hyoscyamine is almost, if not altogether, as active a poison as to man; but in birds no dilatation of the pupil is produced by it, and no dryness of the mouth and throat.

7. Long-continued administration of the drug causes loss of weight, quickening of the pulsation, with increase of arterial pressure, quickening also of respiration and *increase of temperature.* Subsequently there is restoration of weight, but persistence of heightened pulsation, respiration, and temperature. Individual doses administered to an animal constitutionally affected with hyoscyamine cause not reduction, but elevation of animal heat.

8. The intra-thoracic changes, and the decline of temperature, are physiologically produced by stimulation of the sympathetic system, and depression of the cardiac and pulmonary distribution of the pneumogastrics. The elevation of temperature caused by individual doses administered to animals, persistently under the influence of the drug, is probably due to a tolerance of the substance by the pneumogastrics, while the sympathetic still remains affected by it.

9. The pupil is dilated by hyoscyamine through simultaneous stimulation of the sympathetic and depression of the third pair as distributed to the iris.

10. Local application causes dilatation of the pupil, commencing in from three to four minutes, increasing for fifteen minutes, persistent for about three and a half hours, gradually passing off and returning to the normal state in three days. After the internal use of moderate doses, the pupil begins to dilate in from two to three minutes, and reaches the widest diameter in twenty minutes. The maximum dilatation persists more than twenty-four hours, and the pupil does not return to its normal size for six days.

11. In man the cerebral symptoms are more marked than in the lower animals, and the motor, cardiac, respiratory, and thermal symptoms less so. With small doses the pulse is first slightly reduced, and at the commencement of the cerebral and motor excitement is elevated about twenty beats above the initial index. The pupil is dilated, and the vision becomes imperfect. During the hypnotic stage the pulse falls towards the starting-point. During the whole period the temperature falls 0·7°, and after the cessation of interrupted sleep some cerebral confusion remains, as is manifested by occasional incoherence and a liability to trifling delusions.

12. Larger doses cause direct elevation of the pulse and slight reduction of oral temperature. Dilatation of the pupil is followed by paralysis of ocular accommodation. Motor power is impaired, and interrupted sleep alternates with, and is followed by, delirium. Delusions and hallucinations, associated with rapid and imperfect ideation, are succeeded in six or seven hours by a renewed tendency to sleep, which is disturbed by dreams and by intervals of wakefulness, with hallucinations.

Mr. Bevan Lewis examined the great sciatic nerve in general paralysis, and found—

1. Funiculi greatly diminished in size.
2. A peculiar fasciculate atrophy of nerve tubuli, involving both medullary sheath and axis-cylinder.
3. Non-susceptibility of the axis-cylinder to normal, deep staining by carmine.
4. Increased vascularisation.
5. Hyperplasia of the intra-funicular connective element.

In regard to the effects of senile atrophy, or the effects on nerve-trunks of disuse, he thinks they are the following:—

The conditions therefore dependent upon this diminution of nervous activity may be summed up as follows:—

1. Degeneration of connective tissue.
2. Funiculi greatly lessened in size, and receding from their neurilemmal investments.
3. General diffused atrophy of nerve tubuli.
4. Proliferation of connective tissue within the funiculus with sclerosis of the arterioles and capillaries.
5. General fatty disintegration.

Mr. Bevan would have found that this subject had been fully investigated, had he looked at Bonnet and Poincare's book on the "Pathology of General Paralysis." Voisin also treats of the subject.

Dr. Hughlings Jackson discourses on the ever new subject of Epilepsy, and the temporary mental disorders that follow it

in some cases. He re-asserts his views as to the disease being in reality a wider one than the definitions would include. He gives many cases of the highest medical and medico-legal interest. He says, "Every one of the cases I have to relate is an illustration of Laycock's doctrine of Reflex Cerebral Action: in fact, I hope the cases will show that this hypothesis of Laycock, nearly forty years old, is one of inestimable value, both for scientific and practical purposes." Dr. Jackson scarcely believes in the occurrence of sudden mental outbursts coming instead of an epileptic fit, but rather that a slight paroxysm has occurred in these cases, "strong enough to put out of use for a time more or less of the higher nervous centres," the "mental automatism" thus resulting from uncontrolled ones—action of the lower nervous centres. Hence, if the patient is already doing anything, *e.g.*, playing the piano, eating, &c., he goes on, but doing it in an absurd and uncontrolled way. We regret that our limited space does not allow us to quote more largely from Dr. Jackson's paper.

Dr. Arbuckle, after trying nicotine, atropine, aconitine, hydrate of chloral, nitrite of amyl, prussic acid, strychnine, hyoscyamine, morphia, nitrite of amyl and atropine, each with picrotoxine, comes to the following conclusions:—

Summary.—Not the slightest visible alteration took place in the disc, retina, or choroid, during the powerful action of the several drugs administered.

I have, therefore, come to believe that the appearances of the disc, retina, and choroid are unreliable guides to the condition of the brain; that the condition, as regards heat and flushing of the face, ears, and conjunctiiva, and the state of the pulse, are infinitely more to be depended on as aids in diagnosis, while they are patent to, and can be observed by, every one.

Mr. Lennox Browne gives six good illustrations of "Othæmatoma" or the insane ear, and comes to the following conclusions:—

1. That prior to the occurrence of an othæmatoma, the tissues of the auricle undergo a softening process (Virchow), or chondromatic degeneration (L. Meyer). These changes are synonymous with the "vegetative disturbances" of Fischer and Nicol. No evidence has been adduced of the pre-existence of atheromatous disease of the vessels, as is believed by Gruber and others.

2. That the general nutritive derangement to which all othæmatomatous patients are subject, and the conspicuous absence of these tumours in the persons of patients suffering from monomania—a mental disease which involves only a portion of the cerebral machinery, or

in which, as in melancholia, the lesion is of the most airily material nature (Nicol)—induce a belief that the aural tumour is, in a large measure, the result of a general, and not of a purely local, condition.

3. That intense general excitement is an important and almost universal factor in the causation of these tumours, leading, as it does, to considerable vaso-motor disturbance, and that the intimate connection of the cervical and intracranial sympathetic ganglia with the vessels of the auricle strongly predisposes to vascular extravasation in this neighbourhood. Dr. Robertson's case, already mentioned, bearing on this point is of great interest.

4. That the vascular distribution of the part, receiving, as it does, branches from the terminal arteries of the external carotid, all freely communicating with each other, and anastomosing with vessels supplying the brain-structure itself, is sufficient to account for the preference of the auricle as the point for effusion. The helix being the thinnest portion of the external ear, is that part which is first attacked.

Lastly, that the left ear is most frequently affected, or where the hæmatoma is bilateral, is the first in which a tumour is developed. My own explanation of this fact is the nearer position of the left common carotid to the heart, and the more direct and less impeded arterial supply to the left than to the right side of the head.

It may just be noted that arachnoid cysts, so frequent in that form of mental disease in which othæmatomata may be expected, are more commonly found on the left than on the right hemisphere of the brain.

Dr. Major gives, as usual, the results of careful and reliable histological work, in his paper on "The Morbid Histology of the Brain in the Lower Animals." His beautiful plates should enable one clearly to realize why our old dogs and horses get stiff and stupid when their brain-cells become thus shrivelled and fibreless.

Dr. Milner Fothergill's paper is on Cerebral Hyperæmia, and Mr. Hankey describes a process of preparing sections of brain and dying them with anilene blue-black. It strikes one as being a most troublesome process, and to possess no advantages over those in use. He gives two lithographs, which are far "too good to be true."

Mr. Newcombe comes to the following conclusions as to epileptiform seizures in general paralysis :—

1. That there does not exist such a relationship between the age of a patient when attacked by general paralysis and his liability to epileptiform seizures as to indicate that the greater his age when attacked the greater his chance of having a seizure. In other words, that the liability of a general paralytic to epileptiform seizures is not proportionate to his age when attacked by general paralysis.

2. That the total duration of general paralysis is not shortened to any great extent by the occurrence of epileptiform seizures.

3. That in patients who have epileptiform seizures the disease is likely to be of longer duration in the younger than in the older.

4. The conclusion to be derived from this table is similar to, but better based, than that drawn from Table II., for while the *total duration* of the disease is calculated by the addition of the time during which the disease is conjectured by patients' friends (whose conjectures on this point are, for reasons already referred to, most unreliable) to have existed to the time of residence in the asylum, there can be no possible doubt as to the accuracy of the entries from which the length of asylum residence was in each case drawn out.

5 and 6. That although epileptiform seizures occur most frequently towards the close of the disease, they may also occasionally happen within a short time after the commencement of the disease. Griesinger states that epileptiform seizures *never* occur until the disease is far advanced.

7. That patients attacked by general paralysis at an early age are not likely to suffer from seizures so soon as those advanced in years at the commencement of the attack.

Dr. Crichton Browne's first paper is on the "Functions of the Thalami Optici," his conclusion that they are sensory ganglia being founded on the facts observed in the cases which he relates. He is unable to explain the diminution of reflex excitability which is seen in lesions of the thalami optici.

Dr. Wallis tries to make out a case for the use of chloral in epileptic convulsions. We fear he does not succeed. He says drachm doses are "quite safe." We predict that he will change his opinion if he gives many such doses.

Mr. Lennox Browne examined into the state of the larynx in general paralysis, and found—

First.—That in general paralysis of the insane the power of utterance is impaired proportionately to the advance of the disease, being good in the first and early part of the second stage and very bad in the third stage.

Secondly.—That the voice becomes thick and coarse at a very early period, and that it is not unfrequently hoarse.

Thirdly.—That the power of protrusion of the tongue is diminished from the commencement of the disease, and becomes gradually more and more impaired as it progresses.

Fourthly.—That the reflex excitability of the pharynx is markedly diminished from the beginning of the disease.

Fifthly.—That there is generally relaxation of the velum, and of the mucous folds and muscles of the larynx, with hyperæmia of the pharynx throughout the whole course of the disease.

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

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *German Retrospect.*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

it is said to contain. There was a slight out-break of Erysipelas in the spring, but it subsided in May, and only one death resulted from it. The death rate is 10·2.

TWENTY-NINTH REPORT OF THE KENT COUNTY ASYLUM, AT MAIDSTONE.—This should in propriety of speech be styled the MEDICAL REPORT of this Asylum, for the Committee of Visitors do not publish theirs, neither is the Entry by the Commissioners printed. The Report itself is written by Mr. Davies, then the senior assistant Medical Officer, and the chief subject of interest it contains is the announcement of the resignation of Dr. Kirkman, the Superintendent. Another resignation is that of "Richard Crowhurst, the Foul Laundryman," who has been granted a pension of £20, and whom we beg leave to congratulate, trusting at the same time that his successor in office has been accorded a less dubious title. The percentage of deaths on the average number resident is 11·18.

TWENTY-THIRD REPORT OF THE LINCOLN COUNTY ASYLUM.—Unless there is a mis-print, we are in this Report presented with the Entry by the Commissioners made in 1876. The documents published in an Annual Report should refer only to its own year, not to the following year. Dr. Palmer does not date his Report, but the presumption is that it was written on the 1st of January, and yet he alludes to an Entry made on the 29th of the February following. The death rate is 15·3, but there was no epidemic.

FIFTH REPORT OF THE CHESHIRE ASYLUM, AT MACCLESFIELD.—There is no want of matter in this Report, that of the Committee occupying 7 pages, that of the Commissioners 9 pages, and that of Mr. Deas, the Medical Superintendent, upward of 27 pages. As might be expected, the result is a good deal of repetition, but it is only fair to add that Mr. Deas' report contains some valuable observations, particularly on the subject of Escapes, of which he seems to have an unusual experience; and he repeats in substance the well-known truth that escapes are often of the utmost benefit to the delinquent himself. We observe in connexion with the Medical Tables of this Report, that the average of *recoveries* is calculated on the admissions after the subtraction of "79 chronic transfers and 2 not insane." However justifiable this may be in theory, it is obvious that it is not capable of universal application, and therefore, its partial adoption, in tables which are designed for universal reference, must lead to the greatest confusion. If the recovery table is to be calculated on the principle of excluding what each Superintendent deems *chronic* transfers, on the same principle the death rate ought to be calculated after deducting such cases as were admitted in what he considered a *dying condition*, and all the element of certainty which the tables contain at present will be virtually destroyed. The death rate is 14.

FIRST REPORT OF THE ASYLUM FOR THE COUNTY OF NOTTINGHAM.—This is the first year of the existence of this Asylum as a

purely County Asylum, it having for upwards of sixty years previously existed for the advantage of the Borough, as well as the County. It appears that the County has agreed to buy out the interest of the Borough, and to receive the Borough patients at the same rate as that charged for those of the County, until the end of 1876, after which an extra shilling per head per week will be charged. The total value of the property is estimated at £43,169, and of that sum the Borough is entitled to receive one-third from the County. On the whole, unless the Borough be compelled to build, it has the best of it, for the interest of the third will probably more than pay the shilling a week. Mr. Phillimore, the Medical Superintendent, seems to have had a very unfavourable class of cases to deal with. Speaking of the Admissions, he says, "18 were of ages varying from 60 to 81 years; 11 were epileptic, 13 were suffering from general paralysis, three from hemiplegia, and 38 from diseases of the heart or the lungs. Two women were pregnant, another had cut-throat, and a third was nearly moribund from voluntary starvation. One man was blind, three persons were found after their reception to be affected with typhoid fever, one of whom died within twenty-four hours, and a second within nine days." The death rate is 11·01 per cent.

Thirty-first Report of the Aslyum for the Counties of Salop and Montgomery.—There was a serious outbreak of Erysipelas in this Asylum in 1874, due, in the opinion of the Commissioners, to over-crowding and bad drainage, and what they say is probably correct, for when the Committee relieved the over-crowding and put the drains in order, the disease disappeared. Dr. Strange, like Mr. Phillimore, has the admission of hopelessly feeble cases to report, but it is easier to complain of this than to carry out a remedy. The death rate is 8·4.

Fifth Report of the Ipswich Borough Asylum.—With the exception of the appointment of an Assistant Medical Officer, there is not much of particular interest noted in this Report. The death rate is 11·05.

Report of the Asylum for the North Riding of Yorkshire.—We observe in the Entry by the Commissioners in Lunacy that the charge for private patients in this Asylum ranges from 15s. 2d. to 42s. per week. If the provisions of the 43rd. section of the "Lunatic Asylums Act, 1853," that all lunatics not being paupers "shall have the same accommodation in all respects as the pauper lunatics" be duly attended to, those paying 42s. per week must be a source of considerable profit to the Asylum, where the average cost per head is 10s. 3½d. per week, or about 12s. 5d. if the building rate be included. The percentage of deaths is 9·3.

Fifteenth Report of the Bristol Borough Asylum.—The chief point of interest in this Report are the remarks on the water supply to the Asylum. The continued recurrence of typhoid fever just after the pumping of water from a certain well raised the suspicions of the Commissioners, and on enquiry they found that the

well in question is probably supplied by percolation from a neighbouring stream which receives some of the drainage of a Workhouse. Mr. Thompson, the Superintendent, had the water analysed, and after a perusal of the analysis, we heartily endorse his by no means too strongly worded opinion, that "it is expedient that a new source should be looked for." The death rate is 14·9.

FOURTH REPORT OF THE ASYLUM FOR THE EAST RIDING OF YORKSHIRE.—Dr. Mercer refers, like some of his brother Superintendents, to the caution with which the alleged causes of Insanity in the admissions should be received. He very truly says, that on enquiry "it will be found that an hereditary or constitutional taint exists in many cases where drink alone has been blamed." It is not necessary here to prove the truth of this, but we would fain hope that some member of the Association would really take up the case in earnest, and make a thorough investigation into the causes of Insanity. We are sure that every other member with statistics at his disposal would be willing to help him. The death rate is 16·44.

MEDICAL REPORT OF THE ROYAL LUNATIC ASYLUM OF ABERDEEN.—Speaking of the over-crowding of this Asylum, one of the Commissioners states that he is of opinion that further accommodation should be sought in other directions. The present building cannot, he thinks, from its position so near to Aberdeen, command the purchase of as much ground as is necessary for the occupation of nearly 500 patients. The actual number of patients on the 31st of December was 477, but of these, 175 were private cases, and in the majority of them it is difficult to make much use of open air employment. We had always thought that the Scottish Board of Lunacy were pre-eminently in favour of everything which tends to the freedom of the lunatics in Asylums, and the following extract from the Entry has, under the circumstances, rather surprised us:—"During the day the halls themselves are relieved by the free access which is given to the airing courts; but this free access, although under the circumstances expedient, *is not favourable to discipline and good order, and must tend to foster degraded habits.*" Of course this really means that circumstances alter cases; but why cannot the Board candidly say so? The death rate in this Asylum is 7·2.

TWENTY-THIRD REPORT OF THE ABERGAVENNY COUNTY ASYLUM.—There is nothing particularly worthy of remark in this Report, except a passage in the Entry by the Commissioners, where they say; "Three men and 12 women only appear to have been secluded; the former on three occasions and for a total duration of eight hours, the latter on 28 occasions and for 151 hours. *It has not however been the practice here to record as 'seclusion' the locking of patients in their own rooms by day, where the window shutters have not also been closed!*" It is not easy to see what the window shutter has to do with it, because "seclusion" in Asylums means putting a patient in compulsory isolation by day, and the fact of the shutter being unclosed has no more concern in the matter than the fact of the ventilator being open.

Nothing is more desirable than that the Commissioners, having once defined "seclusion," should see that the rules which follow on the definition are observed. Until they do so, those who act upon their definition minutely are likely to be little encouraged in their resolution to be honest in the matter. A few cases treated for two or three days each in this way, the one recorded as "seclusion" and the other not, make a great and most unfair difference in the number of hours at the end of the year. The death rate is 11·2.

Report of the Sligo and Leitrim Hospital for the Insane.—The peculiar nature of the duties of a Medical Superintendent of an Irish Asylum obviously makes it impossible to compare his report with those of his brethren on this side of the Channel. They are so multifarious that his report necessarily alludes to matters which we should think quite improper in those of an English or Scottish brother officer. By the English Statute it is expressly provided that the Superintendent shall not be either the Clerk or the Treasurer, the evident intention being that he shall hold office in a Medical Capacity only; and though the spirit of the law is too often broken, and he is made responsible for a great deal with which he properly should not be troubled, still he has never yet, so far as we know, been called upon to certify to the accuracy of the Balance Sheet, as Dr. McMunn has to do. Another thing we notice is that most Irish Asylums have a Visiting Physician at a large salary, and no Assistant Medical Officer. The Visiting Physician is the relic of an old system which is now happily obsolete, and we would suggest as vital to the well-being of the Irish Asylums, that the Visiting Physicians and Apothecaries should be done away with, their places filled by an Assistant Medical Officer, and that the Superintendent should be relieved of the Clerk and Treasurer portion of his duties; his authority over all the officers, male and female, being established as absolute. The death rate is 8·31.

Report of the Londonderry District Hospital for the Insane.—In this Asylum the Visiting Physician gets £100 a-year and the Apothecary £30, for which an Assistant Medical Officer might be paid and boarded, to the far more satisfactory working of the establishment. The death rate is 8·45.

Fifth Report of the Ayr District Asylum.—Both the entries by the Commissioners are to the effect that there is little to be desired in the management of this Asylum. They as usual direct attention to the necessity for devoting untiring energies to the decorations of the wards with mirrors, &c., and one of them mentions that the old-fashioned eight-day-clock can always be obtained at a reasonable price "through a Glasgow auctioneer." The death rate is 13·25.

Report of the Montrose Royal Asylum.—Dr. Howden's Report is never dull reading, and it generally furnishes matter for reflection. It is not possible that a Superintendent can find something novel to say of treatment year after year; but there is a way of writ-

ing suggestively of familiar principles which is in no wise akin to the utterance of mere platitudes. His Report this year is quite up to his average, and we have read it with benefit and gratification. The death rate is 8·32.

Twenty-fourth Report of the Derby County Asylum.—In this Asylum there was an outbreak of 13 cases of Erysipelas, and one death ensued from this disease. It is said to have been due to the leak in a soil pipe, which certainly contaminated the air; and, if the Asylum is supplied by wells, it probably contaminated the water also. A bad smell is very disagreeable to those who have to live in it and should be remedied, if possible, but it is far from proved that it has so ill an effect on health as impure water, and it is likely that many epidemics of fever which are charged to vitiated atmosphere are really due to other causes. The death rate is 14·4.

Twelfth Report of the Argyle and Bute District Asylum. —This is said to be the Report for 1874, but the Commissioners' Entries are both dated in 1875; a confusion which is not dispelled by the fact of the Report of the Committee being dated the 7th July 1875, and referring to both of these entries, one of which was made on the 25th and 26th August following. These entries, as might be expected, speak in the customarily high terms of the system which is said to prevail at this Asylum. One part of this system appears to be the total abolition of night nursing, with the result of having an average of eight wet beds *per diem*, in a population which is said to be in an excellent sanitary condition. The disuse of supervision, as it is generally understood in Asylums, seems to have led to a large number of escapes, and the Commissioner expresses the opinion that they are "perhaps more numerous than they might be if the surveillance were more active." The death rate is 6·1.

Eleventh Report of the Inverness District Asylum.—Dr. Aitken gives a long and interesting Report of this Asylum. The prevalence of Phthisis amongst the insane of that district has long been a subject of remark, and it appears to have been aggravated by the serious deficiency in the supply of milk to the Asylum during the cold months of the year. The average quantity daily required is 270 pints, and at one time it fell so low as 70. This in a population whose staple of diet is, we presume, oatmeal porridge and milk cannot but be attended with grave consequences. We notice by the way that the Scottish Reports do not as a rule give the Diet Tables in use in the different districts; they ought to be given, because they are of great importance in connexion with other things, in comparing rates of death, maintenance, &c. The death rate is 6·7.

Report of the Dorset County Asylum.—The Committee of Visitors of this Asylum are not disposed to carry out the wishes of the Commissioners in Lunacy with reference to the continuous supervision of the Epileptic and Suicidal patients. The structural difficulties in the way are considerable, but the Committee are in addition opposed to the alteration on the grounds of its general inexpediency. The

Commissioners are not easily beaten, however, and we suppose they will return again and again to the subject until they win their point. There is nothing particular in the Report of Mr. Symes. The death rate is 6·58.

Report of the Roxburgh, Berwick, and Selkirk District Asylum.—Mr. Grierson seems to have much difficulty in procuring and retaining the services of a proper class of attendants and nurses. The Commissioner reports 17 changes in about seven months, which cannot fail to have a most serious and prejudicial influence on keeping up the routine of the Asylum. Mr. Grierson ascribes the evil in a great measure to the difficulty the married men have in procuring accommodation for their families near the Asylum; if such be the reason, it is one which demands the instant attention of the Committee. There is no falser economy in any condition of life than a system of management under which servants are reasonably dissatisfied. The death rate is 6·1.

Report of the Asylum for the South Riding of Yorkshire.—Dr. Mitchell is of the opinion that Asylums should have "appliances for enforcing lazy patients to undergo that amount of physical exertion which is necessary for the maintenance of their bodily health." He does not say what "appliances" he alludes to; but there can be no doubt that the dread of appearing harsh with the Insane operates on many Superintendents as an absolute bar to the due enforcing of industrial habits on a class of lunatics who stand greatly in need of them. The death rate is 15·2.

Report of the Broadmoor Criminal Lunatic Asylum.—Dr. Orange reports that the custom of sending to Broadmoor convicts who go insane whilst undergoing penal servitude is dying out, and we congratulate him and the inmates of this Asylum on the fact of the Authorities having at last taken a step in so excellent a direction. The association of unfortunate men who, having gone insane, commit certain acts which they would regard with horror were they sane, with the basest dregs of the population, who wind up a career of infamy and disgrace by becoming insane, is so flaring an act of injustice, not to say of hardship, that we wonder it has been tolerated so long. Broadmoor was never intended for the reception of such cases, and we trust that in his next Report Dr. Orange will be able to say that none such are now sent to him. The death rate is 2·78.

Sixty-second Report of the Glasgow Royal Asylum.—Dr. Yellowlees advances a point of doctrine which we think he has a little mistaken. He says, talking of the restlessness of some of the Insane, "The friends of patients are so apt to mistake the restless efforts of excitement for real strength, and are so imbued with the notion that insanity confers herculean power that from the best possible motives they withhold the necessary amount of support. * * * The popular impression that the insane possess a marvellous strength which it is almost impossible to control or resist is to a large extent erroneous. It is in the will, rather than in the muscles, that the

insane strength lies," &c. Dr. Yellowlees has here, to use an unpolished expression, got hold of the wrong end of the stick. All the strength of will in the world would not console a man who had to tussle with an infuriated Sampson. The truth is that it is in the muscles that the strength of the insane, as of any one else, lies ; they are neither stronger nor weaker than others, and the reason why their efforts appear so terrible to the unskilled is because they are so utterly without method. A large fire in one's grate is a very pleasant thing, but the same amount of burning coals scattered about the floor would be hardly so soothing. The death rate is 9·0.

Fifty-sixth Report of the Dundee Royal Asylum.—Dr. Rorie reports that he has begun to test the alleged virtues of the "*Colour*" system in the treatment of the more intensified forms of insanity. "Two rooms" he says, "have recently been fitted up, one for the admission of red, the other of blue light. On two occasions marked diminution of excitement was found to result from placing a patient in the blue chamber, but as yet the cases submitted to treatment have been too few to warrant a more decided opinion being given. The benefit of placing certain patients in darkened rooms and thus removing them from all sources of excitement and irritation has long been known. It is not improbable, therefore, that similar if not more marked benefit will result from what may be regarded as a more highly developed and more scientific application of this fact." There may be benefit to be derived from this form of treatment, but it should be borne in mind that it is only Seclusion under another name. It bears the same relation to Seclusion indeed that "Packing" does to Restraint. The death rate was 7·47.

Eleventh Report of the Borough Asylum, Newcastle-on-Tyne.—Mr. Wickham reports: "Of the admissions, a large proportion were in a very feeble state of health, and although the death-rate has been surprisingly low, it is feared that in spite of all care it will rise considerably in 1876. The types of insanity have been much the same as usual, but the number of patients suffering from general paralysis has increased, and the cases themselves were in a particularly advanced stage. * * * The total amount of hours in which seclusion was employed is large as compared with some other Asylums ; and in the Report of the Commissioners in Lunacy of their statutory visit special attention is directed to this subject. Some of their remarks refer to eleven months of 1874, and it must be borne in mind that their Report includes a period of exactly 18 months. Of the three men to whom they particularly refer, one has been discharged recovered; another was a case of general paralysis in a large powerfully built man, who was at the time passing through that intractable stage of mania to which so many of them are subject, and which is so nearly allied to epileptic mania; and the third was a man who, as was reported last year, was removed to Fisherton House Asylum. This was a case of determined homicidal insanity whose fixed intention it was to murder the superior officers, and who, while the arrangements

for his removal to Fisherton House were being made, was placed in seclusion. Every year or so we hear of savage and brutal assaults on, and not unfrequently of the murder of, asylum officers by desperate lunatics who retain only the outward form of a human being; and I am quite at a loss to see how the cause of humanity, science, or anything else good is promoted by allowing such persons to be at large even in the asylum wards. They are objects of terror to the well-disposed patients, and the feelings of the quiet and orderly, who, be it remembered, do all the work that is done in asylums, should be considered when one is resolving to attempt the task of eradicating the disease in such a case as the one under remark. When an accident happens in an asylum, and an officer or attendant is either severely wounded or killed outright, what is generally reported is to the effect that the patient was 'of a refractory class, but not considered actually dangerous.' This is simply an admission that those in charge of him were ignorant of one of the most important symptoms of his malady; and I respectfully suggest that he who finds out such a symptom and, taking steps to prevent evil consequences, so avoids the probable loss of one or more valuable lives, is more deserving of credit than he who never finds it out at all until irreparable mischief has been done. It will be understood that these remarks are made in reference to a particular case of which the old saying may be quoted, 'desperate diseases require desperate remedies.' Since the visit of the Commissioners in July, 1875, I have, in deference to their very strongly expressed wishes, almost entirely relinquished the use of seclusion. It would be premature to speak of the results of this change, but although far from thinking that there is anything wrong, inhumane, or retrograde in seclusion, I am quite willing to give the other system as prolonged a trial as I have already accorded to seclusion, provided, of course, that the cases continue to be suitable." The death rate was 4·7.

(To be continued.)

PART IV.—NOTES AND NEWS.

ANNUAL GENERAL MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

This was held in the Library of the Royal College of Physicians, London, at 11 o'clock, on Friday, July 28th, 1876, when the following Associates were present:—

Dr. Parsey, Dr. Duncan, Dr. Maudsley, Dr. Wood, Dr. Paul, Dr. Lalor, Dr. Petit, Dr. Courtenay, Dr. Clouston, Dr. Murray Lindsay, Dr. Lyle, Mr. Thompson, Dr. Hack Tuke, Dr. O. Woods, Dr. Fox, Dr. Grabham, Dr. M'Dowall, Mr. Denne, Mr. Mould, Dr. Davey, Dr. Harrington Tuke, Dr. Hayes Newington, Dr. Jepson, Dr. Sutherland, Dr. Green, Dr. Boyd, Mr. Bayly, Dr. Anderson, Mr. Gill, Dr. Ward, Dr. Sankey, Dr. Hewson, Mr. T. O. Wood, Dr. Manley, Dr. Wilkie Burman, Dr. Kirkman, Dr. James Stewart, Dr. J. Langdon Down, Dr. Staden, Dr. Bucknill, Dr. Blandford, Dr. Donald Mackintosh, Mr. E. H. Byas, Dr. Mickle,

Dr. Daniel, Dr. Fletcher Beach, Dr. Gilland, Dr. George Mickley, Dr. G. L. Latour, Mr. G. Henry Pedler, Dr. Wm. P. Kirkman, Dr. Guy, Dr. Lockhart Robertson, Dr. Crichton Browne, Mr. Hy. Manning, Dr. Boyd, Dr. S. Wordsworth Poole, Dr. Rhys Williams.

Dr. DUNCAN, the President, took the Chair, and the minutes of the last Annual General Meeting having been taken as read and confirmed, he said it was his pleasing task to vacate the chair, but he could not do so without thanking the members for their kindness in having placed him there, and the support which he had received from them. He regretted that he had not attended more of the intermediate meetings of the Association. He then vacated the chair, which was taken by—

Dr. PARSEY, who said he would at once take the opportunity of thanking the Associates for the compliment they had paid him. Although his attendances at the meetings had not been very regular, he could assure them he had the interest of the Association at heart.

Dr. MAUDSLEY then proposed, and Dr. MURRAY LINDSAY seconded, that the next meeting should be in London.—Carried.

ELECTION OF OFFICERS.

Dr. DUNCAN said he had great pleasure in proposing Dr. Blandford as the President-elect. He was a gentleman who stood very high in the profession, and besides was well acquainted with private asylums.

Dr. MAUDSLEY, seconding, did not think they could get a better man, and the motion was carried unanimously.

Mr. MOULD begged to propose that Dr. Rhys Williams should be re-elected Hon. General Secretary.

Dr. WOOD seconded, and the motion was carried unanimously.

Dr. HACK TUKE proposed the re-election of Dr. Paul as Treasurer, remarking that he had provided them with a good balance, and he was sure they could not possibly have a better man.

Dr. GRABHAM seconded, and the motion was carried unanimously.

Dr. HACK TUKE next proposed that the present Editors of the Journal, Dr. Maudsley and Dr. Clouston, should be requested to continue their services. He was frequently brought into contact with them, and he could thus speak personally of their uniform courtesy and of the ability with which they conducted the Journal.

Dr. LALOR seconded the motion, which was carried unanimously.

Dr. CLOUSTON proposed the election of Dr. Rutherford as Hon. Secretary for Scotland. He was a gentleman well known in Scotland, where they had but a small body of members, and could not afford to disagree. They were unanimously agreed that Dr. Rutherford, of the Lenzie Asylum, was the best man. He said the change was occasioned by the resignation of Dr. Frederick Skae, their late Secretary, who had asked him to place his resignation in the hands of the meeting, he having gone as Inspector of Lunatic Asylums for the Colony of New Zealand. He did not know whether this was the proper time to propose, or whether it was the proper thing to convey, the thanks of the meeting to Dr. Skae who had served them well.

Dr. MURRAY LINDSAY seconded, and the motion was carried.

A vote of thanks to Dr. Skae was proposed and carried unanimously.

Dr. RHYS WILLIAMS read a letter from Dr. Fredk. MacCabe, enclosing his resignation as Honorary Secretary for Ireland, he having been appointed an Inspector under the Local Government Board for Ireland, and desiring him to assure the Association that he (Dr. MacCabe) had esteemed their selection of him for the post as one of the greatest honours that could have been conferred upon him, and that he resigned the office with regret, a regret all the keener from the fact that their meeting last year in Dublin had brought him personally in communication with so many distinguished members of the Association,

some of whom he ventured to regard as friends. He suggested that Dr. Maziere Courtenay, of the Limerick Asylum, should be appointed his successor.

Dr. LALOR had great pleasure in proposing the election of Dr. Courtenay, and that the thanks of the Association should be awarded to Dr. MacCabe for his thorough zeal and activity during his term of office as Hon. Sec. for Ireland.

Dr. DUNCAN seconded, and the motion was carried unanimously.

Dr. RHYS WILLIAMS said there were four members who retired from the Council, Dr. Campbell (Essex), Dr. Monro, Dr. Howden and Dr. Courtenay, who had now become Hon. Sec. for Ireland.

Dr. Lalor, Dr. Fraser, of Fife and Kinross Asylum, and Dr. Rogers, of Rainhill Asylum, were duly elected members of the Council.

Dr. MAUDSLEY said there was still one other Member of Council to be elected, and he was sure the name he should mention would commend itself to the approval of every member present, if it was in accordance with the rules to elect him, and that was the name of Dr. Bucknill. Dr. Bucknill was an ordinary member of the Association for many years, till he became Chancery Visitor, when he was elected an honorary member, but he had now resigned his honorary membership, and been elected again, at his own request, an ordinary member.

Dr. HACK TUKE had great pleasure in seconding the motion, which was carried.

On the motion of Dr. MAUDSLEY, seconded by Dr. LALOR, Dr. Hack Tuke was appointed Auditor.

Dr. RHYS WILLIAMS said that by the direction of the Association last year he had written to the family of the late Dr. Robert Stewart, expressing the deep sympathy of the Association, and he had received a letter in reply, thanking the Association very much for their kind expression of sympathy

HONORARY MEMBERS.

Dr. J. Crichton Browne and Dr. John Gray were unanimously elected Honorary Members.

NEW MEMBERS.

The following were then elected—by ballot—Ordinary Members of the Association:—

Baker, Robert, M.D.Edin., The Friends' Retreat, York.

Blackall, John Joseph, M.D., Qu. Univ., Irel., Assistant Medical Officer, Richmond District Lunatic Asylum, Ireland.

Day, Edward Joseph, M.R.C.S.Eng., L.S.A., Dorset County Asylum.

Dickson, Francis Kennedy, F.R.C.P.Ed., Wye House Lunatic Asylum, Buxton, Derbyshire.

Kebbell, William, L.R.C.P.Lond, M.R.C.S.Eng., Assistant Medical Officer Three Counties Asylum, Stotfold, Baldock, Herts.

Kenyon, John Kilshaw, M.R.C.S.Eng., L.S.A., The Old Hall, Billingborough, Lincolnshire.

King, William Louis, M.R.C.S.Eng., Suffolk County Asylum, Melton, Woodbridge.

Kitchen, Walter, M.R.C.S.Eng., Heworth, York.

Newcombe, Charles Frederick, M.B. Aberd., Assistant Medical Officer, County Lunatic Asylum, Rainhill, Lancashire.

Owen, Harold, M.R.C.S. Eng., L.R.C.P.Ed., Resident Medical Proprietor, Tue-Brook Villa Asylum, Liverpool.

Powell, Evan, M.R.C.S.Eng., L.S.A., Assistant Medical Officer, Kent County Asylum, Barming Heath.

Rogers, Edward Coulton, M.R.C.S.Eng., L.S.A., Senior Assistant Medical Officer, Three Counties Asylum, Stotfold, Baldock, Herts.

Thomson, William A., F.R.C.S.I. (Exam.), Assistant Medical Officer, Kent Lunatic Asylum, Chartham Down.

Townsend, Charles Percy, M.R.C.S.Eng., Assist. Med. Officer, Barnwood House, Gloucester.

Wade, Arthur Ian, B.A., M.D.Dub., Worcester County Asylum.
Wallis, John A., M.B. Aberd., L.R.C.P.Ed., Medical Superintendent, Boro' Asylum, Kingston-upon-Hull.
Williams, William, M.D., Qu. Univ. Irel., M.R.C.P., Lond., 70, Rodney-street, Liverpool.

STATEMENT OF ACCOUNTS.

Dr. Paul (the Treasurer) then made his Annual Statement, stating that there was a balance in the hands of the Treasurer amounting to £393 0s. 7d.—about £150 more than they had ever had at any period of their existence—and he should be very happy to know what to do with the money. At the request of Dr. Thompson he read over the several items.

(For Treasurer's Balance Sheet see opposite page.)

The President did not suppose that the funds of the Society had ever been so satisfactory, and he was sure great praise was due to Dr. Paul for his energy and determination. But what must be most gratifying to all was the increased sale of the Journal. This must be most satisfactory to the Association, and for that they had to thank most sincerely the Editors for the trouble they had taken in the matter. Had it not been for their zeal and ability, the Journal would never have been sold outside the Association.

The Accounts were adopted.

Dr. Maudsley said he had been asked to make a statement by the Members of the Committee which was appointed last year at Dublin to consider the question of the best form of applying the surplus funds of the Association, so as to secure the advancement of science, and also promote the interests of the Association. The Committee had met, but they had not this year agreed upon a report. They were of opinion, subject to the ruling of the meeting, that it would be desirable for them to continue in office another year, when they would report their conclusions. By the standing rules of the Association, it was ordained that any surplus funds should be applied to the maintenance and support of the Journal, but he did not suppose Dr. Paul would care to have an application of that kind made to him for his entire surplus. It had been suggested that the best plan would be to institute prizes for scientific essays, or for some similar object, but there were no such prizes needed on the present occasion, owing to the munificent liberality of the Tuke family, who had offered a prize of one hundred guineas for the best Essay on Insanity or on subjects connected with insanity. Until that prize had been awarded, it did not seem necessary that the Association should institute another, and for that reason no harm could accrue by the delay of a year. The best way, he suggested, would be to re-appoint the Committee, and ask them to present to the meeting another year a full report of what they proposed to do.

Mr. Mould begged to move the re-appointment of the Committee. After the munificent hospitality they received at Dublin, he was not at all astonished to hear that they required another year to take the matter into consideration (laughter).

The President thought it well that he should read the original motion, which was put last year:—"That a Committee of this Association be appointed to take into consideration the question of devoting a portion of the funds of the Association for the advancement of Medico-Psychology, and to report to the next Annual Meeting." The Members of the Committee named were, Mr. Duncan, Dr. Maudsley, Dr. Clouston, Dr. Lalor, Dr. Crichton Browne, Dr. Paul and Dr. Hack Tuke. It had now been proposed and seconded that this Committee should continue to act for another year and make their report. Three was one member of the Committee who appeared to him would have, as a matter of course, to resign, having become an honorary member, and as the Committee should consist of ordinary members, this would give an opportunity for another gentleman to be elected.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Treasurer's Annual Balance Sheet, 1875-6.

RECEIPTS.	£	s.	d.
To Balance Cash in Hand	265	14	2
To Subscriptions received	262	6	0
By Secretary for Ireland	33	12	0
By Secretary for Scotland	42	0	0
By Sale of Journal, Messrs. Churchill	105	8	0
	£709	0	2

EXPENDITURE	£	s.	d.
By Annual Meeting	6	6	0
By Editorial Expenses	8	8	0
Printing, publishing, engraving, advertising, and postage of Journal	269	7	10
Sundries—Advertisements ... ... By Printing and expenses of Quarterly Meetings	10	3	11
By Treasurer	6	6	0
By Secretary for Ireland	1	14	0
By Secretary for Scotland	9	9	10
By General Secretary	4	4	0
By Balance in Treasurer's hands	393	0	7
	£709	0	2

Examined and found correct,

JOSEPH LALOR.

J. H. PAUL,
Treasurer.

Royal College of Physicians, London, *July* 28th, 1876.

It was then decided that the Committee should continue in office for another year, and, on the motion of Dr. DUNCAN, that they should have power to add to their number.

THE BALLOT.

Dr. DUNCAN said he had been very much struck at the absurd process of sending round the ballot-box with a whole list of names that could not be carried in the recollection. He thought it would meet the wishes of the Association and the members generally if they adopted some other system. He suggested that the names of candidates should be sent to the Secretary about a week or so before the annual meeting, so that they could be sent to members with details as to claims for admission, and with the mover and seconder. They would then have all the persons before them, and put yes or no opposite each individual name. This would give members an opportunity of expressing their individual opinion as to the fitness of every candidate.

Mr. THOMPSON said there were several of the names that morning he had never heard before.

Dr. HARRINGTON TUKE was of opinion that the names of the proposer and seconder should be a sufficient guarantee; and, besides, the names generally brought before them were those of men who had passed a considerable canvass in order to get their appointments. He objected to throwing the slightest possible difficulty in the way of those whom they should be always glad to hail amongst them. He only knew of one objection to a candidate during a period of eleven years.

Dr. OSCAR WOODS had great pleasure in seconding the original resolution, believing that what was worth doing at all was worth doing well. Supposing he had wished to object to one of the names proposed, how could he have done so?

Dr. HARRINGTON TUKE said the matter could be easily settled, if a candidate were objected to, by a member calling for the ballot to be taken in rotation. In that case no name need be mentioned.

Dr. LANGDON DOWN thought the example set by other associations—the Medico-Chirurgical and Pathological—the one best to follow, one vote against the mass causing them to be taken individually.

Mr. THOMPSON proposed, as an amendment, that they should proceed to business, and this course was adopted, Dr. DUNCAN remarking that he merely wished to know the feelings of the meeting.

LUNACY STATISTICS.

Dr. CLOUSTON—Mr. President: The motion I have to make is, I think, an important one. You are aware that many years ago this Association appointed a Statistical Committee, who drew up a number of very valuable tables, namely, the tables of the Medico-Psychological Association, which have ever since gradually come into use. They are now used in almost every asylum in Great Britain. I think we all agree that those tables are most valuable for the information they contain, but this Committee seems to have died a natural death; at all events, they have not done anything for some years back. Now we know that though these ten tables are very important, yet still there may be some additions that would be important in the future. I think that medical psychological science has advanced during the last 10 or 12 years, so that we could embody in a statistical form some important information now. We have all used these tables for 10 or 12 years, and most of us have acquired ideas which we could embody in our reports without going into very troublesome matters. Now, not as a basis, but as showing what can be done, both in France and in Germany they have a series of tables containing a great deal more information than our tables contain, and the consideration of these French and German tables might be one work of the revived Statistical Committee, to see if any of that information

would be useful for us to embody in our new tables. Since the committee last met, I have no doubt that pathological research has been much more carried on in asylums. There are a number of facts resulting from post-mortem examinations performed in asylums that could be embodied in statistical tables. There are many facts which have been brought out by Dr. Boyd, of Somerset Asylum, a most distinguished superintendent, which we might very well copy, and which the Committee might study. I am merely taking some illustrative things—such as this and heredity and causation of insanity generally. I have no doubt there are facts in regard to those matters that could be brought out and which would be extremely important. There are facts, too, on the result of treatment; but this is not the time or place to go into the labours of the Committee —we shall leave that to them. What I wish to propose is this: "That a Statistical Committee, for the purpose of taking into consideration the tables of the Medico-Psychological Association, be appointed." This Committee would meet and would report at the Annual Meeting. I think that the extremely valuable labours of the former Committee, to whom we cannot but be thankful, should be the strongest argument for the appointment of a new Committee. It is true we have lost Dr. Thurnam, the venerable president of the former Committee, whose advice and assistance were so very valuable, but still I have no doubt there are many among us who will be able to suggest to us additional tables of great value.

Dr. LALOR—I have very great pleasure in seconding Dr. Clouston's proposal, and I may at the same time mention what may appear to you a curious thing. I don't think there is a single asylum in Ireland which adopts the tables of the Medico-Psychological Statistical Committee, and I wish to explain the reason of that. It is not that we are insensible at all to the value and importance of those statistics, but we are obliged, by official authority, to make out such a number—amounting to 40—that though adopted in England and Scotland, we cannot adopt them in Ireland without adding them on in some way with our other tables. Perhaps the Statistical Committee, if it is reappointed, may see their way to having us relieved in Ireland from such an enormous mass of statistical tables, amounting to 40, some of which we think completely valueless. Then I think we should be most happy—on the part of my Irish friends I say we should be most happy—to adopt a uniform set of tables. In a statistical table the great point is, that it should be uniform over all the districts it affects—that there should be uniform tables all through. It militates against their usefulness if you have not similar tables in Ireland, because you have no means of making comparison on the different points in England, Scotland, and Ireland. I have great pleasure in seconding the proposition, and I hope the Committee will see their way to include Ireland.

The resolution was put to the meeting and carried, and, after some discussion, the following were appointed the Committee:—Dr. Lockhart Robertson, Dr. Major, Dr. Ashe, Dr. Boyd, Dr. Wilkie Burman, Dr. Hayes Newington, Dr. Clouston, Dr. Sibbald, and Dr. Murray Lindsay.

AFTERNOON MEETING.

The President resumed his seat at two o'clock.

Dr. BLANDFORD—I have to thank you for the honour you have done me in electing me as President for the ensuing year. I have always considered it the greatest honour that could be conferred on anybody to be elected President of a Society by one's fellow workers. That honour you have conferred on me today, and I can only say I will endeavour to the utmost of my ability to fulfil the duties of that office after the examples set me by yourself and so many illustrious gentlemen who have been your predecessors in that chair.

Dr. WOOD—Perhaps you will now allow me to do what we ought to have done this morning, to offer a vote of thanks to the retiring President. It has been usual, I believe, to propose such a vote at the morning meeting, but by some accident it was omitted. At all events, we are all agreed that we don't

intend it simply as a compliment, but as heartfelt thanks for the way the late President has fulfilled his office.

Dr. Rhys Williams—I have very great pleasure in seconding that resolution. I was present in Dublin last year, and the hospitality and courtesy we received from our Dublin friends has not been excelled anywhere.

The President—I am sure this will be the unanimous vote of you all, and I shall not think of putting it to you (applause).

Dr. Duncan—I can only say I did not anticipate this vote of thanks, for I feel I have had a full return for what I have done. I only regret that we in Ireland have done so little to advance the Association, but I do think that a frequent visit to that country may have the effect of stirring us up, and showing that there are some resources in the country which only require to be brought out.

The President then gave his Address. (See Original Articles, p. 343.)

Dr. Bucknill.—Mr. President, I am sure we are very much obliged to you for your able and practical address. It deals with subjects which at the present time press for a solution, and it will, I am sure, aid us very much in our judgment as to how those important matters should be dealt with. I have rarely had the pleasure of hearing a more able and practical address, and I am sure that in the name of my colleagues and associates, I may say that we are all exceedingly pleased and obliged to you for it (hear, hear). I am personally most gratified to see you in that chair; I do not know that anyone has a greater right to be gratified than I have after the intimate knowledge I have had of you for 30 years as a friend and fellow officer, and during that long period I have become more and more deeply impressed with your moral worth and intellectual force. I hope the production of this able paper will lead you to change in some respects that which has been the habit of your life, and that we may hope for some further literary efforts from your pen which, while we all knew you were so capable of using, from your having devoted your life to the practical cares of the treatment of the insane, we have not had the benefit of until the present time. There is one point in your address in which I take more interest than any other, and I am happy to be allowed to refer to it as an opportunity for asking this association to follow your advice in their hearts and minds, and to reserve their judgments as to the accusations which have been made in this country against our psychological brethren in the United States. Some of those accusations have been quite recent, and of those I will speak first. They are contained in the *Lancet* of the 8th of this month, and they are of a peculiar nature, to which I wish to draw your attention. They are mere copies from American newspapers of accusations which have not been proved in evidence; one especially is copied from the *World* newspaper of New York, and professes to be the charges made against Dr. Nichols, of the Washington Asylum, before a Committee of Congress. Now I should like to read to you part of a letter which I have from a gentleman, whose name is never mentioned among alienists without respect, on that very subject. It is from Dr. Thomas Kirkbride, the venerable and venerated head of the Pennsylvania Hospital for the Insane, Philadelphia. He says: "Dr. Nichols is just now going through a most infamous persecution by what is called an 'investigating committee,' started by the Democratic majority in Congress, with the determination to blacken, if possible, the character of everybody connected with the Government. One would have thought that such a man and such an institution would have escaped, but where the testimony of discharged employés, uncured patients, and personal enemies is eagerly sought after, in a secret investigation, there is little probability of even an approach to justice being done." Now I dwell upon the word "secret" there, not because I think such an investigation might not very properly be secret, but because it will show to you that the charges which the *Lancet* has published have been obtained either on information which has been stolen or which has been betrayed. And I ask you to put

it to your own minds, whether, if such charges made against any of the Superintendents of the English Asylums were liable to be published in the medical press as if they had been proved, any Superintendent could ever feel that his character was safe? Dr. Nichols is the President, and has been for many years, of the American Association of Superintendents of Asylums, and he is a man who, until these accusations were made, was held in high and good repute. I am far from wishing to defend Dr. Nichols from any charges of wrong doing which can be proved against him, but I do think that this is a pointed example of the necessity of your wise counsel, that we should hold our judgment suspended. I remember a short time ago a pamphlet being published in this country, purporting to have come from a Society of Supposed Lunatics, in which charges were made against many of us. They were not taken up, because we all of us had sense enough to see that a clique of crazy women and their imbecile supporters were not worth powder and shot (laughter). But if the *Lancet* had transferred those charges to its pages, I think that Journal would very quickly have had to pay heavy damages for libel. Dr. Nichols, I suppose, stands as a foreigner in a different position to that we should have occupied, and as he cannot defend himself, such attacks are the more inexcusable. I hope I shall not be wasting the time of the Association if I refer to the commencement of this discussion, and very briefly tell you what was said by the *Lancet* in its leading article on November 13th last. It is a very consistent tissue of indiscriminate accusations against the "*Mad Doctors*," as it calls them, of America. There is no mistake, it is all wool, there is no cotton in it; it is an accusation against them from the first to the last line—against these American "mad doctors." It commences by dividing the treatment of insanity into three stages, the first is the barbaric, the second is the humane, the third the remedial, and it declares that the "mad doctors" of the United States have not made much progress out of the barbaric into the humane stage, but have remained for the most part in "that stage in which the lunatic is simply regarded as a wild and dangerous animal, from which society needed protection, and which might be kept in chains, tamed or destroyed, as convenience should dictate." That is the charge against the alienists of America. It then proceeds to make special accusations against them, namely, that they "resort to contrivances of compulsion, they adhere to the old terrorism tempered by petty tyranny; that they use at least the hideous torture of the shower bath as a punishment in their asylums, although it has been eliminated from the discipline of their gaols, and worse than all, if the reports that reach us may be trusted, their medical superintendents leave the care of the patients practically to mere attendants while devoting their own energies principally to the beautifying of their colossal establishments." These are definite charges, and it gives the reason why they should do all these things on the broad principle that "there can be no question that the custom of slave holding and the brutalising *regime* from which it is inseparable have blinded and blunted the sensibilities of the people." I do think the *Lancet* might have asked some little boy in the street about the brutalising *regime*, and the probability is that it would have been told that the *regime* of slave holding only extended to a portion of the States, and that it was detested in the remainder. But with great consistency the *Lancet* applies that principle to the whole of the people, as it applies its other accusations to the whole of the "mad doctors." Now on reading this I felt that I should be ashamed to see the names of such men as Edward Jarvis, Thomas Kirkbride, John Gray, Isaac Ray, Pliny Earle and many others even in print, if it was left unanswered. I therefore did answer it in a letter in which I claimed justice for those who were innocent, admitting at the same time that there were asylums in the States, and that I had seen them, which were disgraceful. In this matter I was not consistent, at least according to the opinions of the *Lancet*, whose consistency seemed like that of King David

who said in his haste, "all men are liars" (laughter, and "hear, hear"), as the consistency of the *Lancet* consisted in saying that all the people, and therefore all the "mad doctors" of America, were under brutalizing influences. However, the *Lancet* invited me to make known what I had seen in America, saying that, "no information could be more important and trustworthy." I accepted this invitation, and sent my Notes. Now, I was under the apprehension that, in writing those Notes, I had expressed my sense of the evils which I saw very unreservedly, and that I might, perhaps, have offended those whom I most earnestly wished to convert, and I think that those of my associates who have done me the honour of reading my remarks will agree with me that I did run a very considerable risk of doing so. But I attempted in what I wrote to distinguish the good from the evil, to discriminate between those who were justly accused and those who were not. Now, the *Lancet*—and I hope I am not going into a matter which may be thought personal, for the manner in which I have been treated did not greatly surprise me, knowing, as I did, that those who play at bowls must put up with rubbers, and those who contradict editors must take the consequences; but I do think it a matter of extreme importance to our specialty to know how we may expect to be dealt with by a journal which takes upon itself the censorship of the treatment of the insane in this country and abroad.—I was proceeding to say that the *Lancet*, on the 8th of this very hot month, having "nursed its wrath to keep it warm" ever since last November, "sums up" the subject, as it says. First of all it calls attention to my "extraordinary inconsistency;" accusing me of having confounded the good with the evil. That is exactly what the *Lancet* itself had done in the first instance, it confounded the good with the evil; it made indiscriminate and sweeping charges and accusations, which it has not substantiated; it says I have written in defence of restraint, and leaves it to be inferred that I have tried to prop up the tottering system of restraint. I can only appeal to you to know whether that is a fair inference to be drawn from what I have written. I don't myself think it is, but the very opposite. Then it censures me because, with reference to the Washington Asylum, where I saw restraint in use, I used these words:—"It must have been imposed because it was thought the best mode of treatment." Now, gentlemen, did or could any of you think that, by my saying that, I meant to express my opinion that it was the best mode of treatment? Why, if I were to say that the *Lancet* perverts everything that an opponent writes, and that the *Lancet* thinks this a fair and candid way of conducting a discussion, none of you would believe that I thought myself it was an honest way of conducting a discussion. Yet that is an exact parallel. I must beg, however, to tell you why I did not ask for any explanation why this restraint was used. I had been expressly told that any discussion on the subject would be unwelcome and disagreeable, and I think that after that warning it would have been bad manners and discourtesy on my part to have demanded such an explanation. The *Lancet* also censures me severely because I did not ask to be permitted to inspect the register of injuries and accidents. Now, may I ask if any one of you, in going unofficially round an asylum, have ever asked for the register of injuries and accidents? I should like to know if anybody has done so? If he has I should like to hear him say so. I pause for a reply. I suppose, then, no one has done so. Perhaps the *Lancet* Commissioner might have done so, for his knowledge of lunacy appears to consist of the crusts and crumbs of information which he has picked up in his raid upon us by unreserved questioning. But I venture to think that, as a stranger in a far country, it was right not to return impertinence for courtesy; and that to do so is not the right way to obtain or impart information under such circumstances. The indiscriminate accusations of the *Lancet* have produced in America nothing but angry opposition, but I am happy to know that the descriptions which I have given in a more discriminating and tempered vein have done some good (hear, hear). I have recently had a letter

from Dr. Edward Jarvis, saying that my descriptions of American Asylums are, he believes, quite true. That is something from such an authority. Then I have had letters from Dr. Landor, the Superintendent of the Ontario Asylum, who has made a tour of American Asylums since I left, and he tells me that my Notes have induced some of the Superintendents to make a trial of non-restraint. And farther, I have had other letters from America, assuring me that my Notes have awakened a desire among Superintendents to visit this country and examine our system, after the bustle of this Centenary year has passed. If books and pamphlets could have converted the Americans, they would have been abreast of us long ago, but in a matter of this kind seeing is believing; and I have faith that, when the American Superintendents do come to this country, and carefully and conscientiously examine for themselves into our system of treatment, they will very generally adopt it. And when they do come, gentlemen, allow me to say that you will find them most friendly, kindly and agreeable men, whom you will be happy to welcome into professional and domestic circles. In their own country they are most hospitable. In this country I am sure they will be welcomed as they deserve to be. I should wish that this great association should, under these circumstances, say a kindly word to them, and while I entirely concur in the wisdom of that reserve which our President has recommended, I shall ask of you to adopt a resolution which I have framed, and which I will put before you for discussion. I am not sure it is such as you will approve, therefore I submit it for alteration if you think fit. It is:—"That this Association, while reserving its opinion on the general question of the treatment of the insane in America, and in matters which are under inquiry, desires to express its sympathy with the medical men engaged in the treatment of the insane in the United States who have been made the subjects of unfounded accusations or imputations either in the United States or in this country" (hear, hear). I have now only to thank you for your indulgent attention (applause).

Dr. Clouston—I have the greatest possible pleasure in seconding the resolution which Dr. Bucknill has so very ably proposed. I am sure what he has said many of you know to be quite true, and I think it will be taken as a sympathetic act on our part that we should have sent this word of kindness to them at a time when they are being so traduced.

Dr. James Stewart—As I have had the good fortune to have received their hospitality, it would not be becoming in me to allow a resolution to be put from the chair on the subject without having said a few words. I went over to America to judge for myself, and to see wherein the truth lay with regard to the great many statements I have read. It was my good fortune to be received hospitably, and from personal observations I can corroborate what Dr. Bucknill has said with regard to the unfair way in which various things are managed connected with the asylums. I know this by an incident that came under my observation during the time I was there. It may be a new thing to the members of this Association when I tell them that a number of the appointments that are held by the medical superintendents of the institutions corresponding with our county asylums, are held really as political appointments. I have in my possession, and if I had known I would have brought it, a letter from a gentleman, which I received quite recently, and in which he alludes to the fact that as the government of his province has changed he was not sure but what he would be turned out of his appointment very shortly. This gentleman is a fellow associate of my own, and I am sure we shall be very glad to give him a helping hand if his hour of trial comes. His hour of trial is not at all unlikely to come. Dr. de Wolf, of Nova Scotia, recently wrote me a letter saying that the government having gone out, and as he was known not to have the same views politically as the government which had come in, it was quite "on the cards" that he would get his *congé*. I only mention this fact in order that we may, as far as we can, realise the position that they

occupy, and that the hands of our medical brethren abroad may be strengthened by our resolution. We require to look at these things from quite a different light to what we are accustomed. We are accustomed to be treated in a very different way to what they are on the other side of the Atlantic, whose cause Dr. Bucknill has so nobly espoused.

Dr. Wood—I thought I would confer for a moment with my esteemed friend Dr. Bucknill. It strikes me that the resolution we are about to propose is rather weak, and if we mean really to express the feelings we entertain for our brethren on the other side of the water, we should do it in somewhat warmer terms. It strikes me the resolution before the meeting seems to say, "You have got into hot water, and we hope you will get out of it." There ought to be some general expression of opinion as to our confidence in them and the esteem in which they are held as professional men. I find Dr. Bucknill was under the impression that if he made it too gushing it would not be unanimous. I think, if we do pass a resolution at all, it should be something to convey an expression of our feelings, and not something like that we are simply sorry for them.

Dr. Bucknill—Allow me to say that when I drew up that resolution I did it with the object of so expressing the opinions of the Association that we could have no dissentients, and therefore I made it as pale as I could. I think as it stands there could be no dissentient. I could not before I came into this room know how far the sympathy of the Association would be unanimous, and allow me to say I should be very well satisfied to withdraw it in favour of a resolution which expresses our feelings more warmly, if Dr. Wood or any other gentleman would have the kindness to draw up such a resolution.

The President—I think it very likely a warmer and more cordial resolution could be put, but it ought to come from you.

After some conversation, the following resolution was carried unanimously:— "That this Association, while reserving its opinion on the general question of the treatment of the insane in America, and on matters which are under inquiry, desires to express its esteem for the medical men engaged in the treatment of the insane in the United States, and its sympathy with those who have been made the subjects of unfounded accusations and imputations either in the United States or in this country."

Dr. Bucknill—Allow me, Mr. President, to propose, as a rider upon that, that a copy of the resolution be sent to Dr. Curwen, of Harrisburg, in the State of Philadelphia, he being secretary to the Association of Superintendents in America.

Dr. Duncan—I beg leave to second that.

The following resolution was then put, and carried unanimously:—"That a copy of the foregoing resolution be forwarded by the Secretary of this Association to the Secretary of the Association of Medical Officers of Asylums and Hospitals for the Insane in America."

Dr. Bucknill—I believe, sir, I began what I had to say with the intention of proposing a vote of thanks to you for your paper, but it slipped out of my mind in consequence of the matter which intervened. I hope, however, you will allow me to do so now, and I therefore propose a vote of thanks to you for your valuable, able, interesting, and practical paper.

Dr. Grabham—I have very great pleasure in seconding that. I am sure we have all been very much interested in your paper. I myself have been especially interested in it, as one of a Committee which has originated from the Charity Organisation Society, who have been considering for some months past the expediency of separating the chronic lunatics and idiots. We would be very glad to be relieved of a few idiots. I shall not take up your time beyond just stating that a number of resolutions have been passed by this Committee (see p. 503), which have been referred to a sub-committee, and I think we shall soon see an attempt at legislation on the subject.

Dr. Duncan—I had intended to have proposed this resolution myself. I will, however, put it to the meeting.—Carried unanimously.

The President—It is a great gratification to me that anything I could have brought before you to-day should have elicited any commendation from you, because I did not profess to come here at all as a teacher—I came to learn, and I generally carry away with me a certain amount of information. I have been merely a practical worker among the insane, and any observations which I have brought before you are perhaps not those which should have been submitted to you on an occasion like this, but it was a practical subject in which I take some interest, and to which I have paid some attention, so I thought it wiser to refer to that, though tedious to you, than to attempt something upon which I could say very little at all. I shall be very glad indeed if anything I have said to-day can throw any light upon the subject of the treatment or the management of the insane, which are now rather blocking up our asylums and workhouses. I am afraid it is a step which will be the work of time. I have to thank you very much indeed for your vote of thanks.

ASYLUM ATTENDANTS.

Dr. Clouston then read a paper on the question of getting, training, and retaining the services of good asylum attendants. (See Part I.; p. 381.)

The President—I should be sorry such an interesting paper should pass without discussion. I do not propose going into details, but I may say my own experience has been that the difficulties are not really so great as some people imagine in getting a good class of attendants. The principle I have gone on has been to endeavour always to keep what I may call a permanent staff. I set very great value upon that staff, and endeavour to keep them with me for years. Having that, I am very independent of my juniors. I don't care how often I change them, providing I have the good fortune to retain those who appear to me to be likely to be good attendants. I object to having attendants from another asylum; although they may bring some good training, they generally bring a good sprinkling of bad habits. I may say for myself, I have attendants who have been with me very many years, my head attendants 15, 12, and 14 years, and my under attendants some perhaps a few months. With regard to inducements, I try different methods. I don't think myself there is a very great deal in high pay, but there is I think in the pensions which may be offered to them. It has been my principle, when those pensions have become due, that they should be paid up to the full. I have never had to recommend anybody for a pension, but that my committee has given them the whole value of the appointment. That has acted as a great encouragement to the elder servants to retain their positions. We endeavour to give them every facility for amusement, which they appreciate, but my own opinion is a great deal may be done by ourselves by identifying ourselves with them. With regard to my own case, though my establishment keeps on increasing, and the numbers are getting so large, I allow every one of them to look up to myself, not as their head, but as their personal friend and adviser. If they want any advice, they come to me. By inducing that feeling throughout your staff, you have a greater chance of keeping them well together. That has been my experience, and I have not been, thus far, disappointed. I should be very glad to hear the experience of any other of those gentlemen who have a large staff under their supervision.

Dr. Clouston—May I venture to ask you how many changes you probably have, whether you have about the number mentioned by the Scotch Commissioners?

The President—Certainly not. My under attendants certainly do change often, but my upper attendants are of not less than four or five years' standing —they range from four to five to about fifteen, on the male side. I have just now pensioned off one man of tolerably long service. The females I have from two to ten or twelve.

Mr. Mould—I thoroughly believe in the humanizing influences that women have in the male wards. I do believe this, that nothing will help us so much as the introduction of women into the male wards. They have an instinctive power of nursing which men do not possess—to men, as a rule, nursing is distasteful. We know this, that women have much less pay than men, but what is small pay to a man would be very large pay to a woman. I know several asylums which have been infinitely improved by the introduction of women. In my own asylum it has quite changed the character of the wards, and I may say changed the character of the attendants, for bad language is rarely used in the presence of the women. The attendants and patients are not so depraved as to use bad language before women. I believe, if we introduced more women into the male wards, we should do better. We should give male attendants better facilities for marriage, by providing them with good cottages and such like, for it is very rarely indeed that a good married attendant leaves you. If we could only have the men Dr. Clouston has pictured to us, we should be living in Utopia, but we are not likely to be there yet. We cannot give such a class of men wages sufficient to keep them amongst us, but we can give other advantages to a man which might happily induce him to be surrounded by a wife. I believe nothing ties a man to a place so much as a woman (laughter). Certainly, my attention has been directed to getting able, conscientious, good women attendants, and I have found very great benefit from it. I had a most disagreeable, cantankerous fellow, who was always complaining, and not a single male attendant could do anything with him. I placed with him a very good looking woman, in whom I had great moral confidence, and from that time that man never made one single complaint so long as he remained with me. When one is ill, one knows how infinitely better it is for a woman to attend upon one than for a man to do so.

Dr. W. P. Kirkman—I have had from eight to ten years' experience as medical officer, and consequently I can speak with some experience. I think the causes of change are two-fold—general and special. The general cause is an increased desire to travel, and the unfaithfulness of characters given by masters and mistresses, as well as the ease with which they can get places without characters at all. As an instance of the unfaithfulness of characters—and I have suffered very severely from it myself—I had to all appearance a very eligible person apply to me for an attendant's place in my asylum; I received an excellent character with that young woman from the Mayor of the town, as well as from one of his colleagues, and I received also an excellent character from the Matron of the Infirmary of the town. After she had been three days in the asylum, my attendants came to me and said they would not hold their places if they were to associate with such a character. I immediately produced the character I had had of the girl. I read it to the servants who came to me, and I said I had an excellent character from those gentlemen who had known her for many years; had been constantly in the habit of meeting her; that she had been in the Infirmary for so many months, and could be spoken of very highly. I immediately went to the town, and made special inquiries. The result was, I found that her characters had been given on the following knowledge of her:—The Matron knew her because she had been in the Infirmary some eight months for syphilis, and the Mayor and his colleague had seen her pass their houses constantly when on her professional duties as street-walker. That was the only way in which those gentlemen had known her! There was a general desire amongst servants now to travel and a desire for change. They have not the means of travelling the same as persons have in the upper classes, and the consequence is they change their places to become acquainted with the world. I think that as a rule the great thing is to make them happy. I don't think that in some of the asylums they are thoroughly happy and comfortable. I think also interference is a rock upon which we have to split. The Superintendent is not high enough, and the Committee of some

asylums do not take the broad principle of the meaning of the statute which provides that they should appoint the servants. A great drawback is the often vexatious and petty appeals allowed to be made, even from the kitchenmaid, to the Committee. As regards the keeping of servants, the best thing is to cultivate domesticity, and, as regards the class of servants, I have always found that those persons who know nothing about asylums generally turn out to be the best. As regards soldiers, sailors and policemen, they always give me the most trouble. I think I can ratify what Dr. Clouston has said about chaplains; they do an immense deal of good and an immense deal of harm, by their gossip and interference. I may mention that in the Devon Asylum you could pick the eldest attendants of any in the kingdom, yet a year ago there was not a servant in Devonshire who had been there five years. As regards wages, my experience is that it is not of much concern, but I think they ought to have good wages. There is one matter which is of very great importance, and that is the pension clause. My experience is this, that attendants and servants do not pay any attention to the pension until they have been there about ten years, and then they begin to ask how about a pension. They have the pension clause published, but as they find the pension clause not compulsory, they pay no attention to it. If the pension clause was made compulsory, then it would be an inducement for them to stop.

Dr. John Kirkman—I have myself had 45 years' experience, and have had three attendants who have been with me 15 years. I have not had the slightest inconvenience by encouraging domesticity, and I have never heard a rude word spoken. I believe if attendants are treated with kindness, not in the "stand-off" form, but with uniform kindness, they will invariably be found to do their duty well. I have always taken extreme interest in attendants, because I think they are a class who have not received all that they ought to receive. I have had them 12, 15, and 25 years, and never had any reason to be dissatisfied. The great objection is not giving the Superintendents paramount power. If Committees are to receive complaints and that sort of thing, the whole place goes to the wall, and there is no proper supervision because the attendant goes for the higher appeal. I do think if there is a simple domesticity encouraged, and uniform kindness shown, attendants will do their duty.

Dr. James Stewart—There is one point I had hoped Dr. Clouston would have drawn attention to, inasmuch as he has been connected with establishments for private as well as pauper patients. In my small experience of private asylums, I find that the people of culture will often resent the way some attendants have of expressing their wishes, from no desire to be unkind, yet expressed in such a way as to be repulsive. They would say, "Who is Sarah, that she should tell me to go to such a place?" A practical point is, can we have anything in the shape of what is established in our hospitals generally? can we have Sisters of Mercy introduced into private asylums? This was hinted to me by a gentleman who thought it was a very strange thing it had not been attempted. I should think something of an intermediate character might be tried. In these days of Lady Helps, it seems strange we don't have a suggestion of them in Asylums.

Mr. Bayley—I may say, with reference to those remarks, that this system was tried some years ago in a hospital of which I am now Superintendent, and it was an utter failure. They had what was called a "Lady help," and she did a great deal of harm.

Dr. Manley—Out of my seven servants I have five pensioners, and I cannot agree with Dr. Kirkman. In some cases their pension is absolutely as large as their pay; they are married, and with families, and I have no better attendants. One man has just left me now. He had a pension of £40 a year. I had a female nurse come to me a short time ago; she stayed her month, and then went to another asylum. When she left, one of the old nurses told me she was getting her expenses paid from one asylum to the other, and she was so making a tour of England.

Dr. Bucknill—I should like to say a few words, and it will be mainly to express my very full concurrence with Dr. Clouston's able and suggestive paper. I hope he will carry it into some practical shape. I also wish to say how entirely I agree with what Mr. Mould says about women in male wards. The experiment was first tried by a very dear friend of mine, and a very great supporter of this Association, and that was Mr. Ley, of Littlemoor. He carried it out to a large extent, It was a hobby of his, and a very useful hobby it was. I am only surprised it has not come into more general use. If I had remained the superintendent of an asylum, I should certainly, after his experience, have tried to follow in his steps, but I have, in a small way, made some use of his experience in the treatment of lunatics living in their own homes, and I have, on various occasions, when I have met with a troublesome, disagreeable, unmanageable lunatic, who never could get on with any attendant for him, suggested that a nurse should be placed instead of the keeper—as the male attendant used to be called—and with the happiest results. With regard to the *materiel* of attendants, I fully concur that we should have what the French call *bon naturel*, a quality which I don't think we have an English word to translate fully. But if a man or woman has those high qualities, morally and physically, which would make a good attendant, and if that man or woman is in a pretty good position of life, it is not likely that such qualities will be thrown away by his taking such a place as attendant in a lunatic asylum. If you find them in a lower class of life, you can cultivate them, and make the very person you desire to have. The very first attendant I engaged will, I think, bear me out in what I say. The only knowledge I had of him was that he had been an exceedingly good second horseman, and was a very decent, honest fellow, with plenty of good sense, and a man to be trusted. I engaged him, and I think Dr. Manley, Dr. Kirkman, Dr. Parsey, and others will remember John Bettry. I left him behind, and he was the best attendant I ever had in my life.

Dr. Clouston—I have only to say I am very much obliged to the members for the reception they have given my paper. The paper has done exactly what I wished it should do—created a discussion. I have now to suggest that a Committee of three members be appointed to report to the next annual meeting of this Association on the advisability of the formation of an association or registry of attendants in connection with this Association and the best manner of carrying it into effect.

The resolution was seconded and carried, the Committee to consist of Dr. Bayley, Dr. Clouston, and Dr. Mickle, with power to add to their number.

THE EDUCATION OF THE INSANE.

Dr. Lalor read a paper (see Original Articles, p. 416) on the "Education of the Insane."

Dr. Hack Tuke—I am very glad Dr. Lalor has brought forward this subject, and everyone who knows what he has done in his own asylum knows that no one is better qualified to bring such a subject under our attention. I think it is due to this Association that it should know the action now being taken by the Charity Organization Society, and I will just read the reference made by the Council to the Sub-committee appointed in April last on this subject. I think by that means you will be better put in possession of the facts:—"That the Council, recognising the expediency of placing institutions for idiots, imbeciles, and harmless lunatics on the most comprehensive and satisfactory footing, resolved that a Committee be formed to consider and report upon the whole subject." That subject has been under consideration for about three months, and a Committee has been appointed to draw up a report. I do not agree myself with the view Dr. Lalor takes, that it is undesirable to have a separate administration for idiots and imbeciles from lunatics; on the contrary, there are many men well calculated to be superintendents of lunatic asylums who are not calculated to take charge of idiots and imbeciles. I believe there

should be not only separation, but distinct superintendence and management. But although I differ from him on that subject, we both agree entirely as to the propriety of some fresh action being taken, and some better legislation devised. The subject is such a very large one, that I don't at all intend to enter into the various points, and therefore I will venture to propose a resolution. I think I am in order in bringing this resolution forward upon the paper which Dr. Lalor has read. I intended bringing the subject forward a year ago in Dublin, but until I knew the resolutions which the Committee ultimately adopted, I hardly felt justified in asking the Association to express even a general assent to the action taken by the Charity Organization Society. I think a very general resolution would strengthen the hands of that Society without at all asking you to give your adhesion to the details—"That this Association, having had the proceedings of the Charity Organization Society in regard to idiots, imbeciles, and harmless lunatics brought under its notice, desires, without committing itself to the immediate line of action the above Society might think proper to take, to express its satisfaction that it has taken up the subject of educational and custodial establishments for this class." I think there are probably many points of detail from which some of us would dissent, especially with regard to harmless lunatics, but I think a general resolution of this kind would leave us quite unshackled. When a Society outside ourselves has been considering a subject of this kind for so long, I think it is about time we should appreciate their intentions, at any rate.

The PRESIDENT—They have kept their proceedings rather quiet, but I shall have great pleasure in seconding the resolution.

Dr. HACK TUKE—The Editors of the Journal are going to give the resolutions in their next number.

The motion was then put and carried.

Dr. LALOR said he would next propose a vote of thanks to the President and Fellows of the Royal College of Physicians for the use of the room, not only on this, but on former occasions.

Dr. CLOUSTON seconded, and the motion was carried.

Dr. BUCKNILL then proposed, and Dr. HACK TUKE seconded, a vote of thanks to the President, which was unanimously carried and acknowledged.

The proceedings then terminated.

The members of the Association and their friends dined afterwards at Greenwich.

IDIOTS AND IMBECILES.

The following resolutions have been passed, after full discussion, by a Special Committee of the Charity Organisation Society in regard to idiots and imbeciles and harmless lunatics :—

In reference to the question, "How far capable of Improvement," the following resolution was agreed to :—

"That a small proportion may be made self-supporting; that a further larger proportion may be trained to do some useful work; and that, as a general rule, the habits of the remainder can be improved so as to make their lives happier to themselves and less burdensome to others."

The Committee then proceeded to consider the several heads of the second Section, entitled, "General Principles of Treatment," and the following resolutions were come to, after discussion, in reference to the five first heads :—

1st. "That idiots and imbeciles should be treated distinctively from other classes."

2nd. "That they ought not to be associated with lunatics in asylums."

3rd. "That they ought not, unless in exceptional cases, to be associated with paupers in union houses."

4th. "That the distinctive treatment suited to idiots and imbeciles ought to be applied collectively, especially in the earlier stages of education;" and

5th. "That idiots and imbeciles cannot with advantage be placed in ordinary schools with other children."

A motion made by Sir Charles Trevelyan, that "Feeble-minded Children ought not to be associated with Adult Idiots," was discussed in detail, and on its being shown that, under certain circumstances, mutual aid might with advantage be interchanged among those diversely afflicted, and the elder might act as nurses and helpers to the younger, and having regard also to the improvement likely to be effected by early training in the habits of this class, the motion was withdrawn.

The Committee then proceeded to consider the remaining heads of the second Section of the agenda, entitled "General Principles of Treatment," and passed, after discussion, the following resolutions:—

6th. "That the improvement of idiots and imbeciles would not be promoted by boarding them out, but in certain cases, boarding out, under proper supervision, is not unsuitable to harmless lunatics."

7th. "That the education of idiots and imbeciles should be based on physical considerations."

8th. "That the education of idiots and imbeciles should commence at the earliest age at which they can dispense with a mother's care, and the subsequent stages should depend upon the capacity developed by them."

9th. "That idiots and imbeciles should have a thorough industrial training, so as to enable them, as far as practicable, to support themselves, or at least to contribute towards their support, when circumstances render it necessary;" and—

10th. "That idiots and imbeciles of all classes should, as far as may be prudently done, be also encouraged to cultivate any literary, scientific, artistic, or mechanical faculty they may happen to possess, or be otherwise furnished with employment, so as to promote their self-respect, and to make them feel that they are of some use in the world, or, at any rate, to occupy them pleasantly."

The Committee next considered the third section of the agenda, entitled "Treatment of Adults," and, after discussion, passed the following resolutions:—

1st. "That the treatment of adult idiots and imbeciles must depend upon the degree in which the character and faculties have been developed by previous education and training."

2nd. "That a small proportion may be permanently improved, so as to take care of themselves, either at their own homes or elsewhere, and to earn their own living."

3rd. "That a larger proportion may be improved so as to support themselves under proper safeguards."

4th. "But that there is also a large proportion of cases which, having achieved a certain improvement, are unable to get beyond this, and are, indeed, liable to retrograde, and for these cases suitable institutions, or departments of institutions, where suitable classification may be carried out, are indispensable."

5th. "Not only can idiots and imbeciles in asylums be employed with advantage to themselves, and the asylums be managed as industrial establishments for manufacturing or agricultural industry, but it is essential to the moral and mental well-being of the class that such a system should be adopted; and, under good management, it may be made advantageous to the institution in a financial sense by diminishing the cost of maintenance."

The Committee then considered the first five heads of the fourth section of the agenda, viz., "Administrative Arrangements," and passed the following resolutions:—

1st. "Voluntary charity has directed attention to the claims of this neglected class, and made great progress towards the establishment of a model for general adoption; but it has not proved equal to providing a remedial machinery co-extensive with the evil."

2nd. "Assuming that the returns of the census of 1871 are within the mark, only about three per cent. of the idiots and imbeciles in England and Wales have been suitably provided for by voluntary charity."

3rd. "Adequate provision for all the idiots and imbeciles in England and Wales of the poorer classes, whether juvenile or adult, cannot be made without the intervention of the State."

Under the 6th head letters were read from Mr. Jonathan Pim and Professor Hancock, stating that the provision made in Ireland for idiots and imbeciles was simply that they might be confined in Lunatic Asylums as being insane, or in prisons as criminals, or in workhouses as paupers, excepting only the Stewart Asylum, established about eight years ago, in which there are at present 43 inmates; but that a report is being prepared by the Charity Organisation Committee of the Dublin Statistical and Social Inquiry Society, under the several heads of the agenda, so that the Committee may have uniform information for all parts of the United Kingdom, as a basis for an uniform law for the helpless classes.

The existing arrangements for the education and care of idiots, imbeciles, and harmless lunatics in Scotland were then considered, under the sixth head of the fourth section of the agenda, and letters were read from Dr. Mitchell, member of the General Board of Commissioners in Lunacy for Scotland; Mr. Skelton, secretary to the Board of Supervision for the Relief of the Poor in Scotland; and Dr. Ireland.

Under the seventh head of the fourth section it was determined to postpone the consideration of new legislation until it shall be seen what arrangements may be recommended to be made.

Under the eighth and ninth heads it was resolved "That the arrangement which has been made for idiots, imbeciles, and harmless lunatics in the Metropolitan Asylum District is applicable, in its main principles, to the rest of England; viz., that idiots, imbeciles, and harmless lunatics should be removed from workhouses and county lunatic asylums, and that young persons of those classes should be suitably educated and trained."

Under the tenth head it was resolved "That the education and care of idiots, imbeciles, and harmless lunatics should be conducted by governing bodies specially appointed and responsible for that purpose; that such governing bodies should be composed—

"1. Of representatives of the local magistrates;
2. Of representatives of the local guardians; and
3. Of persons appointed by the Crown."

Under the eleventh head, "That such governing bodies should also be charged with the education and care of blind and deaf and dumb children of the poorer classes."

The Committee then had before them the fourteenth head of the fourth section of the agenda, "Administrative Arrangements," and after considering a paper, prepared by Mr. Millard, on the number of idiots, imbeciles, and harmless lunatics, under and above 20 years of age, who had to be provided for, unanimously passed the following resolution:—

"That the country should be divided into districts each sufficiently large to fill an asylum containing not more than 2,000 adults, and schools containing, at the utmost, 500 young people."

And under the fourteenth head the Committee resolved, by 10 to 5—

"That, besides the supervision of the Commissioners of Lunacy, the schools and asylums should be inspected and reported upon to the Local Government Board."

Appointments.

BROWN, J. J., M.B., F.R.C.P.Ed., has been appointed Senior Assistant Medical Officer to the Royal Lunatic Asylum, Morningside, Edinburgh, vice Maclaren, appointed Medical Superintendent of the Stirling District Lunatic Asylum.

CASSIDY, D. M., M.D., C.M., has been appointed Resident Medical Superintendent of the County Lunatic Asylum at Lancaster, vice Broadhurst, resigned.

EAGER WILSON, L.R.C.P.Lond., M.R.C.S.Eng., has been appointed Medical Superintendent of the Suffolk County Asylum, vice Kirkman, resigned.

HUTCHINGS, R. L., M.R.C.S.E., has been appointed an Assistant Medical Officer to the Lancashire Lunatic Asylum, Prestwich.

JONES, R., L.R.C.P.Ed., L.F.P.S.G., has been appointed Junior Assistant Medical Officer to the Warwickshire Lunatic Asylum, Hatton, vice Seed, resigned.

MAJOR, H. C., M.D., has been appointed Lecturer on Mental Diseases at the Leeds School of Medicine, vice Browne, appointed a Chancery Visitor of Lunatics.

NICOLSON, D., M.B., has been appointed Deputy Medical Superintendent of the Criminal Lunatic Asylum, Broadmoor, vice Cassidy, appointed Resident Medical Superintendent of the Lancashire Lunatic Asylum, Lancaster.

THOMSON, J., M.B., C.M., has been appointed an Assistant Medical Officer to the Southamptonshire Lunatic Asylum, Knowle, vice Levinge, resigned.

TURNBULL, A. R., M.B., C.M., has been appointed Junior Assistant Medical Officer to the Royal Lunatic Asylum, Morningside, Edinburgh, vice Brown, promoted to Senior Assistant Medical Officer.

Correspondence.

To the Editor of THE JOURNAL OF MENTAL SCIENCE.

DEAR SIR,—Allow me to correct a mistake that inadvertently, no doubt, was made by Dr. Langdon Down, when he ascribed to a Doctor Granville, of Paris, a work "*On the Measurement of the Palate in Idiots and Imbeciles.*" There is no Dr. Granville in Paris. The only work ever published in France on this subject is the one of which I have the pleasure to send you a copy, together with a copy of my "*Recherches sur l'Epilepsie et l'Hysterie,*" which is just out.

I am, yours sincerely,

BOURNEVILLE.

Paris, July 12th, 1876.

ERRATA IN JULY No. OF THE JOURNAL.

Page 213, line 12—For finny, read fenny.
,, 338 ,, 21—For Dr. Harrington Tuke, read Dr. Hack Tuke.

THE JOURNAL OF MENTAL SCIENCE.

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No. 100. NEW SERIES, No 64. JANUARY, 1877. Vol. XXII.

PART 1.—ORIGINAL ARTICLES.

Contribution to the statistics of insanity. By Arthur Mitchell, M.D., LL.D., Commissioner in Lunacy for Scotland.

I. Nature of the inquiry.

1. In this inquiry all the asylums of Scotland are regarded as one asylum, and the different institutions merely as different wards of the asylum. A patient transferred from one institution to another is thus regarded as never leaving the asylum, but merely as passing from one ward to another. The words—*the asylum*—therefore, in this paper, mean an asylum made up of all the asylums of Scotland.

2. The inquiry does not deal with the whole population of the asylum. It deals only with the patients who were admitted into it during some single and remote year, and who had never been under asylum treatment before—in other words, who were admitted during the year in question for the first time.

3. The history of each of these patients is followed from year to year down to a certain fixed period. No cognisance is taken of the existence of any other patients. The wards of the asylum might thus have been empty when these patients went into them, so far as concerns this research, and in like manner no fresh admissions need have occurred during the time over which it extends. The inquiry is limited to the new cases which presented themselves in one remote year; and, at a fixed and comparatively recent period, it is asked, what has become of these patients?—how many of them are still in the asylum? —how many of them have died there?—how many have

gone out and returned to it?—how many are out of it in life and sanity?—how many are out of it in life but in a state of insanity?—how many have died after leaving it, and what was their mental condition at the time of death? These and other such questions are asked, and as far as possible answered.

4. It is important to bear in mind that the whole history of each patient has been separately tabulated.

5. It is scarcely necessary to say that I am indebted to my official position for the means of making an inquiry of this kind.

II. General results.

1. During the year 1858, there were 1297 patients admitted for the first time into the asylum, and in the year 1870, or 12 years after, it is asked what has become of them. I am able to speak definitely regarding the condition of 1096, or about $\frac{11}{13}$ths of the whole.

2. It is found that 412 had died in the asylum, and that 273 remained in it. We thus account for 685, or about 53 per cent. There remain 612, or about 47 per cent, who had disappeared from the asylum—neither having died in it, nor being found in it at the end of the 12 years.

3. The inquiry has gone further, and an effort has been made to find out the history of the 612 patients who had disappeared from the asylum. With reference to them it has been ascertained that, at the end of the year 1869,

42 had died in a state of insanity,
78 had died in a state of sanity,
94 were living in a state of insanity,
and 197 were living in a state of sanity.

This accounts for 411 of the 612, leaving 201, regarding whose condition at the end of the 12 years no trustworthy information could be obtained.*

* From what became known to me while making this inquiry, and from knowledge otherwise acquired, I think we may safely assume that what was found to be true of the 411 would have been found to be substantially true also of the 201, had we succeeded in getting the information regarding them which

III. The results considered in their bearings on recoveries, relapses, and deaths.

1. The broader features of these results are given in the following table:—

Year.	Admitted	Discharged. Recovered.	Discharged. Not recovered.	Discharged. Dead	Re-admitted.	Remaining at 31 Dec. of each year.	Mean number resident.
1858	1297	320	88	103	47	833	416
1859		220	55	80	91	569	701
1860		75	36	56	65	467	518
1861		45	27	32	50	413	440
1862		39	10	33	42	373	393
1863		33	11	23	34	340	356
1864		20	11	14	34	329	334
1865		22	5	19	20	303	316
1866		28	4	13	35	293	298
1867		16	6	15	29	285	289
1868		20	5	11	28	277	281
1869		13	2	13	24	273	275
Totals.		851	260	412	499	——	——

was desired. On this assumption, we should have the whole 612 thus accounted for:—

62 as dead, being in a state of insanity at the time of death,
117 as dead, being in a state of sanity at the time of death,
139 as living, and in a state of insanity,
and 294 as living, and in a state of sanity.

If we combine these figures with the figures in paragraph 2, we find that the 1297 patients admitted for the first time into the asylum in 1858 are accounted for in 1870, or 12 years after, in the following manner:—

(1.) As insane—			
(a.) Dead—while in the asylum ...	412		
„ —after leaving the asylum	62		
		474	
(b.) Alive—in the asylum	273		
„ —out of the asylum	139		
		412	
			886
(2.) As sane—			
(a.) Dead—after leaving the asylum		117	
(b.) Alive—out of the asylum......		294	
			411
Total......			1297

2. These figures, however, lose much of their interest, if they are not examined in connection with the statement which gives the whole history from year to year of each patient separately. In this inquiry, a patient, however often he may be discharged either as recovered or as unrecovered, or however often he may be re-admitted, counts throughout as one and the same patient. The effect of being able thus to deal individually with the 1297 patients will be apparent, when we discuss separately the discharges of the recovered and the unrecovered, the re-admissions, and the deaths.

(*a.*) *Recoveries.*

1. The table shows that the 1297 patients yielded during the 12 years 851 discharges of recovered patients, or 65·6

Giving the figures in percentages, we have the 1297 patients accounted for thus:—

1.	As dead in the asylum	31·7 p.c.	
	As dead after leaving the asylum but insane at the time of death	4·9 p.c.	
			36·6 p.c.
2.	As still alive, and in the asylum	21·0 p.c.	
	As still alive, but out of the asylum, and in a state of insanity	10·7 p.c.	
			31·7 p.c.
	Yielding a total, for all those who had either died in a state of insanity, or were still living in a state of insanity, of		68·3 p.c.
3.	As having died out of the asylum, being in a state of sanity at the time of death	9·0 p.c.	
	As still alive, and in a state of sanity	22·7 p.c.	
			31·7 p.c.
			100·0

More briefly stated, these figures stand thus:—

36·6 p.c. are found to have died, being in a state of insanity at the time of death,

31·7 p.c. are found to be still alive and still insane,

and 31·7 p.c are found to be either still alive and sane, or to have died being in a state of sanity at the time of death.

These calculations are given in a foot note, because they involve the assumption (which I believe to be a safe one) that the 201 patients, regarding whose condition no trustworthy information was obtained, would present substantially the same results as the similarly situated patients regarding whom satisfactory information was secured. In no other part of the paper is anything introduced which involves any assumption.

p. c. If we add the re-admissions (499) to the admissions (1297) we have 1796, of which number the whole recoveries tabulated constitute 47·3 p. c.

2. But these 851 discharges refer only to 538 patients, who are 41·5 p. c. of the patients admitted, and 30·0 p. c. of the patients admitted and re-admitted taken together.

3. Of the 538 patients who were at any time during the 12 years discharged as recovered it is found that—

	67	were re-admitted and were found in the asylum at the end of the 12 years,
	33	were re-admitted and died in the asylum,
and	9	were re-admitted and were ultimately discharged as unrecovered.
Total	109.	

If we deduct these (109) from the whole number of patients ever discharged as recovered (538), we have 429 as the number of patients who permanently disappeared from the asylum as recovered—that is, 33·0 p. c. of the original number admitted, and 23·8 p. c. of the numbers both of the admitted and of the re-admitted taken together.

4. A large proportion of the recoveries occurred in the case of patients who had not been longer than from a year to a year and a half in the asylum. Of the 538 patients, who were at any time during the 12 years discharged as recovered, 505, or about 94 p. c., were so discharged during the first two years.

5. The recoveries, which occurred during these first two years, appear to have been the most satisfactory of all the recoveries which took place. We have evidence of this in the facts that 295, or 58·4 p. c., of the 505 patients discharged as recovered during these two years never entered the asylum again, and that 263 of these 295 patients are included in the total number of patients (411) who appear to have been either alive and sane at the end of the 12 years, or to have died in a state of sanity during those years.

6. If we take the three first instead of the two first years, these results are still better marked. Thus:—Of the whole

number of patients ever discharged as recovered (538) we have 515, or about 96 p. c., who were so discharged during the first three years, leaving only 23 to be for the first time discharged as recovered during the other 9 years, viz., 7 in 1861, 5 in 1862, 3 in 1863, 2 in 1864, 2 in 1865, and 1 in each of the 4 last years. Of this small group of 23 patients, who were from 3 to 12 years continuously in the asylum before being discharged as recovered, it happens that no fewer than 15 are accounted for as being among the insane still at the end of the 12 years—some being alive and insane, and others having died in a state of insanity.

7. In view of these statements it may be asked how there can be 13 recoveries registered in the last of the 12 years. The explanation is simple :—11 of the 13 recoveries registered in 1869 refer to patients re-admitted in 1868 or 1869. So it is with the recoveries in the other years towards the close of the duodecennial period: they are almost entirely recoveries after recent re-admission.

(*b.*) *Re-admissions.*

1. The whole number of re-admissions is 499, but the number of patients in whose history re-admission appeared is only 316.

2. It follows, of course, that some patients must have been often discharged and often re-admitted. So true is this, that it is found that 81 patients contributed 264, or more than one half (52·9 p. c.) of the whole re-admissions—45 patients being re-admitted twice, 11 three times, 9 four times, 7 five times, 3 six times, 3 seven times, 2 ten times, and 1 eleven times.

3. Re-admission presented itself somewhat more frequently in the history of patients discharged as recovered, than in the history of patients discharged as unrecovered—234 patients discharged as recovered giving 404 re-admissions, and 82 patients discharged as unrecovered giving 95 re-admissions.

(*c.*) *Discharge of the unrecovered.*

1. The number of patients discharged as unrecovered is in

the first year 21 p. c. of the mean number resident. In no other year is it above 8 p. c. In one year it is below 1 p. c. The average for the last 8 years is between 2 and 3 p. c.

(*d.*) *Deaths.*

1. Of the 1297 patients admitted, it is found that 412, or 31·7 p. c. had died in the asylum during the 12 years.

2. Of these 412 patients who died in the asylum, it appears that 370, or about 90 per cent., had died in it without ever having left it after admission. In other words, of all the patients who died in the asylum 90 p. c. had never been out of it after admission. Of those who thus entered the asylum to die there, 103 died during the first year after admission, 76 during the second year, 51 during the third year, and so on—10 of the 13 who died during the twelfth year never having been out of the asylum, and all of the 14 who died in the seventh year having been 7 years in the asylum.

3. The 499 patients, in whose history re-admission appeared, yielded only 41 of the 412 deaths.

4. The rate of the mortality during the first 3 years was 24·8, 11·4, and 10·8 per cent. of the mean number resident. During the next three years it fell to 7·3, 8·4, and 6·4 p. c.; and during the last 6 years it fell still further, and was generally about 4·0 p. c., only once rising to 6·0 p. c.

5. The mean age of the whole number of patients admitted was 39·6 years. The mean age of the 103 who died during the first year was 49·5 years. The mean age of the 24 who died during the last two years was 55·8 years at the time of their death. The mean age of the 273 patients who were found remaining in the asylum at the end of the 12 years was 47·9.

6. The deaths of the first year thus occurred among the older of the patients admitted—the mean age of those who died being 10 years above the mean age of the admitted. Entering still further into details, it appears that of the 103 patients who died during the first of the 12 years, 11 were between 70 and 80 years old, 17 between 60 and 70, 17

between 50 and 60, and 25 between 40 and 50. In other words, about 70 p. c. were above the mean age of the admitted.

7. Many of the very aged are thus immediately and finally disposed of, but there occurs coincidently a final disposal of many of the younger by permanent recovery, so that the mean age of those who remain at the end of the first year does not differ much from the mean age of the admitted.

8. Those remaining at the end of the 12 years are made up largely of the younger of the patients originally admitted. Their mean age at the end of the 12 years was 47·9 years, so that their mean age at the time of admission must have been 35·9, or about 4 years below the mean age of all admitted.

9. The patients who died during the two last years had a mean age of 55·6 years, and were older than those who died during the first year, whose mean age was only 49·5 years. Their age at the time of admission was also above that of the mean. The range, however, between the ages of the oldest and youngest of those who died in the two last years was much lower than the range in the case of those who died in the first two years.

10. It thus appears that the lower death rate of the later years is not supplied by a younger but by an older population.

IV. Concluding remarks.

1. All these things might possibly be found to be not even substantially true of a second group of patients who were admitted for the first time during some other year and whose history was examined in the same way. It happens however, that we possess evidence that the study of such a second group would, in fact, yield results which would be in very close accord with all that has been disclosed regarding the 1297 patients admitted for the first time in 1858. This evidence is furnished by the following table, which I extract from the 18th Report of the Scotch Board of Lunacy (p. xx.). If it is compared with the table given in this paper (p. 509), the progressive history of the one group of patients will be found to resemble that of the other in a very striking manner.

Year.	Admitted.	Discharged.			Readmitted	Remaining at 31 Dec. of each year.
		Recovered.	Not recovered.	Dead.		
1868	1319	305	97	107	38	848
1869		209	70	94	83	558
1870		51	23	60	40	464
1871		38	25	48	42	395
1872		26	13	28	39	367
1873		23	15	25	26	330
1874		15	11	13	23	314
1875		16	9	13	21	297

2. I have confined myself as much as possible in this paper to a mere statement of the results of an inquiry, which, so far as I know, has not previously been made, and which in some directions teaches new lessons, and in others gives precision and certainty to opinions already entertained.

On the Prevalence of the Causes of Insanity among the Ancients. By D. HACK TUKE, M.D., F.R.C.P.

(*Concluded from* p. 381.)

Passing from the Egyptians to the Greeks and Romans, we proceed to pursue, in regard to these, the same line of enquiry as that which we have already attempted in regard to other nations. Were their habits, their social life, the character of their civilization, such as to lead us to expect that there must have existed among them, in any well marked degree, the clearly recognised causes of insanity? In this investigation we must carefully distinguish between their early and heroic age and the period of their highest culture and refinement, otherwise we shall fall into the error of comprising under the same term widely different conditions of society, and in the endeavour to compare them with our own —that is to say, modern civilized life—shall draw a totally false inference. The seeds of insanity may have been widely sown among the people of one age, and but sparsely among those of another. We have abundant evidence in the immortal verse of Homer of the general character of the

civilization of the Greeks at the period to which he refers —the legendary and heroic age of Greece; not as a state of barbarism, assuredly, but one which we feel differs widely from our own. They were far removed, doubtless, from the savage condition of certain early Greeks, described by Thucydides, marked, as he represents it to have been, by piracy—men falling upon towns which were unfortified and like straggling villages, and rifling them without disgrace, but rather with glory. He adds that in many other respects it might be shown that the Greeks, at the period of which he is speaking, lived in a manner similar to "the barbarians of the present age," implying by this that their food consisted of milk and what the chase afforded, uncooked, and that they were clothed in undressed hides. To the people who were in this rude condition the remarks we have already made on barbarous tribes would apply; and we can have no doubt that the causes of insanity were then prevalent in only a limited degree.

Although, however, the Greeks of Homer were by no means savages, a robust simplicity marked their mode of life. They had no knowledge of coined money. There is not conclusive evidence that they were familiar with the art of writing, or that they had advanced in the arts of painting and sculpture. "All the varieties of Grecian music, poetry, and dancing arose later than the first Olympiad"—B. C. 776 (Grote). It must be admitted that, although we have spoken of simple manners, there were not wanting indications of wealth. "The halls of Alcinoüs and Menelaüs glittered with gold. Copper and iron were stored up in the treasure chamber of Odysseus and other chiefs" (op. cit.). In illustration of the condition of Homeric society, it may be remembered that in the Iliad Paris constructs his own house. He brought together some skilful designers, or architects, but he "himself the mansion raised." If it be objected that this only implies that he built himself a house in the general sense in which we ourselves speak at the present day, we may refer to the account of Ulysses, which is still more definite. He cements the stones, he roofs his dwelling, he hangs on the doors. Royalty in that age did not disdain, but gloried in manual occupations, while now-a-days an ex-Premier is thought to act rather strangely, and cannot escape a sly hit from "Punch," because he delights to take the axe into his own hands and fell his trees.

Ulysses boasts of his skilful mowing and ploughing, and

cares not for the toilsome length of the day. He protests to Eurymachus that he would prove a match for him with his well-bent sickle in his hand, or with the plough-share, making a straight furrow through the glebe.

Women, even of noble family, concerned themselves in what would now be regarded as unbecomingly menial occupations. Irrespective of rank or freedom, they are constantly engaged in spinning and weaving. The dress of both men and women was homespun. In this occupation "Helen as well as Penelope is expert and assiduous. The daughters of Keloës at Eleusis go to the well with basins for water, and Nausicaä, daughter of Alcinoüs, joins her female slaves in the business of washing her garments in the river" (Grote). But we must not extend these references, our object being merely to show that when regarded as a psychological study, the general state of Greek society at this period must be clearly recognised. When, with the same object in view, we pass from the more or less legendary to the truly historical period of Greek history, and see the gradual advance made in the arts and in the mode of life, we are conscious that there are springing up fresh elements of psychological importance, or at least a development of some already in existence, but comparatively powerless. But it is when we come to that period of Greek cultivation and refinement which culminated in the era of Pericles that we recognise a degree of civilization which resembles in many respects that of the Europe of to-day, and which without a doubt must have involved mental loss as well as mental gain, and must have entailed no inconsiderable peril to mental health both on the side of luxury and on the opposite but ever accompanying side of pinching poverty. In this connection one aspect of Greek life, before effeminate habits marked the decline of the nation, is important, namely, a brave and hardy national spirit. It is not necessary to show that a condition of society in which hardihood and active habits are enjoined and practised is more favourable to psychical health than one of great wealth and luxury. Hence Greek politicians encouraged a willingness "to brave at all times personal hardship and discomfort; so that increase of wealth, on account of the habits of self-indulgence which it commonly introduces, was regarded by them with more or less of disfavour" (Grote).

Intemperance.—To the question, was intemperance prevalent among the Greeks? the general reply must certainly

be that they were by no means strangers to the vice, but that they were, as a race, much more temperate than the nations of Northern Europe.

Women and children drink wine in the Iliad, but not to excess. Achilles is described as "spitting out the wine in froward infancy" (Il. ix. 487). Nausicaä and her companions take it (Od. vi). Athenæus says the Greek women were ill thought of, on account of the liberty allowed them in this respect compared with other nations. Homer dilates on the good qualities of the earliest known wine—the Maronean—so strong that it required dilution with twenty measures of water. But Agamemnon does not appear to have favoured such aqueous dilutions, for he says to Idomeneus, "Though other long-haired Achæans drink by measure, thy cup stands always full, like my own, to drink when the desire prompts thee" (Il. iv. 263).

Lycurgus only allowed wine for the purpose of satisfying thirst, and ordered that those who were returning home from a feast should find their way without a light. The Lacedemonians recognised the custom of drinking healths as a frequent cause of drunkenness. Solon's laws made drunkenness in an archon a capital crime, and he found it necessary to revive a former rule that wine drunk at feasts should be mixed with water. The Senate of Areopagus punished those who were given to drink and convivial company.

Again, Dionysius, the Sicilian, offered at a feast a golden crown to him who should first drink a cup containing a pint, and Xenocrates was the successful winner of the prize. Aristotle says that Dionysius was sometimes drunk for three months together. His sons were drunkards. Plato, in "the Laws," says, "Shall we not lay down a law that boys shall not taste wine at all, until they are eighteen years old? . . . . thus exercising a caution about the mad-like habits of young persons; but afterwards to taste indeed wine in moderation until they are thirty years old; but that a young man is to keep himself, by all means, from intoxication and much wine; but on reaching forty years to indulge freely in convivial meetings, and to call upon the other gods, and especially to invite Dionysus to the mystic rites and sports of old men, in which he kindly bestowed wine upon man as a remedy against the austerity of old age, so that through this we might grow young again, and that by a forgetfulness of heart-sinking, the habit of the soul might become from a harder state more soft," &c. (Bk. ii., c. 9). All which is very

clear proof that the Greeks in Plato's day were so well aware of the evils resulting from intoxication that restrictive legislation seemed desirable in a model state.

In Mitylene, where wine was very abundant, Pittacus, the lawgiver, instead of allowing drunkenness to be an excuse for a crime, directed that it should entail a double punishment.

There is an anonymous address to Simonides,* which is of much interest in this inquiry. "To him who will drink let them pour out without stint—it is not every night that we enjoy such luxury. But I—for I am moderate in honey-sweet wine—will court soothing sleep when I have gone home, and will show you how wine is most pleasant for man to drink. For neither am I too sober a man, nor am I very intemperate. But whosoever exceeds a measure in drinking is no longer master of his tongue or his mind, and talks recklessly of things disgraceful to the sober, and is ashamed of nothing, though modest when he is sober. Now you, perceiving this, drink not to excess, but either retire before you are drunk . . . or else stay and do not drink. But you are ever babbling that silly word, 'fill your glass,' and so you get drunk. For first comes the health of the guests, and then a second cup is left ready before you, and a third is for a libation to the gods, and so you know not how to refuse." He ends with recommending good conversation around the bowl, and "so our feast will not want in refinement."

There is a great deal said in Greek writings about copious potations of wine, but it must be borne in mind that this was often diluted with water—probably three parts of water to two of wine. Equal parts made people "mad," says a comic writer. Some writers are at a loss to decide whether Greek wines were stronger or Greek heads were weaker than ours; but, whichever it may have been, it is quite clear that the wine drunk was capable of producing the evils which arise from its abuse. Euenus says "that wine taken out of measure is the cause of grief or weakness;" adding, "in company with three (water) nymphs he is most suitable" (quoted by Mahaffy). When the Greeks drank wine without water they were said to act like a Scythian.

Diotimus the Athenian was nicknamed "the Funnel," because, putting a funnel into his mouth, he would allow any

* The praise of wine by the contemporary of Simonides, Anacreon, is too well known to require proof. He was at once a sign and a cause of the free use of the wine bottle, though he himself was reputed temperate.

amount of wine to be poured into it. Xenarchus, an excessive drinker, was called "the nine gallon cask." One of the Deipnosophists says that wine being the cause of madness, and all sorts of debauchery, might be called the "metropolis" of these evils. A quotation made by Athenæus from Alexis clearly shows that the extent of intoxication, if comparatively limited, was quite sufficient to cause much misery, and some madness. "Is not, then, drunkenness," he asks, "the greatest evil, and most injurious to the human race?" It has been given as a proof that the Greeks were at one period at least addicted to drinking, that whenever any one drank without taking his breath, the company applauded, saying *long may you live*, and that those who refused to drink at entertainments were in most places obliged to leave the room, by that celebrated law of good fellowship, *Drink or begone!* In fact, many examples of intemperance among the Greeks are given by Athenæus, in whose work ("The Deipnosophists") is an epitaph on Arcadion, written by his sons, which leaves no room for doubt as to the dipsomaniac habits of their father:—

> This is the monument of that great drinker
> Arcadion——
> And know, travellers, the man did die
> From drinking strong wine in too large a cup.

Greek women have been frequently charged with drunkenness, but we are satisfied that although not necessarily teetotalers, they did not imbibe to anything like the same extent as the women of England. Indeed, the Milesian ladies are said to have only drunk water.* The number of wine flasks left daily in the waiting rooms of English Railway Stations by the ladies who frequent them is something extraordinary, and forms a striking proof of an amount of female tippling which would have shocked the fair sex in Greece at any period of their existence.

A story of psychological interest, and to our purpose, is told by Timæus of some young men who got drunk at Agrigentum, and were so mad that they thought they were sailing in a trireme, and were being tossed about in a storm, and so threw all the furniture out of the windows, fancying the captain had ordered them to lighten the ship. The

* "Of course ladies were never present except at strictly family dinners. The ladies who frequented men's society, though they too affected the same modesty, were often led away to greater indulgences than were consistent with the purest attic salt" (Mahaffy, "Social Life in Greece," p. 317).

prætors next day found the young men lying "sea-sick," as they said, and they replied to questions put to them that they had been in danger from a storm, and been compelled to throw the cargo into the sea. The prætors were evidently bewildered with the mental condition of the men—one of whom said, "I, O Tritons, was so frightened that I threw myself down under the benches and lay down as much out of sight as I could"—and dismissed them with a reproof, and a warning not to indulge in future in too much wine. True to their delusion, the young men replied that whenever they arrived in port they would erect statues to them as their deliverers!

The facts we have now given convey the impression of an essential sameness between the drinking customs of all but the early Greeks and our own; and we are forced to conclude that with them as with us, insanity must have been not very unfrequently induced by too copious potations of alcohol. There is, however, no evidence that even in the most corrupt period of Grecian history there was the widespread tippling which disgraces England; and we know that the masses did not suffer like ours from the demoralization of innumerable gin palaces and beershops—in reference to which the "Times" says that "in other parts of the world may be seen the frenzy of an African when excited by rum, the contortions of an Arab under the influence of hashish, Malays furious from bang, Turks trembling from the effects of opium, or a Chinaman strangely emaciated from inordinate use of the drug, but for a scene of horrid vice and lust and filth and frenzy, all drawn into one pit and there fermenting, a man might search the world all over, and not find a rival to a thriving public-house in a low gin-drinking neighbourhood." We firmly believe he would not have found it in Greece. And just as firmly do we believe that there was not so much drink-made madness in Greece as in England, in Athens as in London.

The festivals in honour of Bacchus must have exerted a baneful mental influence upon the Greeks. It is impossible to doubt that permanent insanity must have frequently resulted from the excessive excitement of the religious and alcoholic frenzy temporarily induced. In this connection, also, some form of divination must have bordered closely on insanity. The relation between the worship of Bacchus and prophetic frenzy is not a simple one, for it is difficult to decide how much was due to intoxication merely. Tiresias,

the blind seer of Thebes, is represented by Euripides in the *Bacchæ* as saying of Bacchus, "This god is a prophet,—for Bacchanal excitement and frenzy have much divination in them. For when the god comes violent into the body, he makes the frantic to foretell the future." That this does not refer to intoxication altogether, if mainly, would seem to follow from the next passage in which he says that the frenzy of Bacchus is also displayed in the terror which sometimes flutters an army when under arms before they touch the spear. Pentheus tells Tiresias, when he sees him with a thyrsus, that but for his hoary old age he would make him a prisoner for introducing these wicked rites, "for where the joy of the grape cluster is present at a feast of women, I no longer say anything good of their mysteries." To punish the opposition to the worship of Bacchus he has rendered Agave, the mother of Pentheus, a victim to the madness by which the Mænads were affected, and he has done the same to her sisters, Ino and Antonoë, who were also opposed to Bacchus. Others have joined them in their frenzy, and they celebrate the rites of the god in the mountains. Pentheus threatens to put a stop to this "ill-working revelry," by hunting these fanatics and binding them in iron fetters. The Bacchæ or Mænads are described by a messenger as driven by madness; and no wonder, when we read of them dashing at everything they came across, one tearing asunder a fat, lowing calf, another a cow, so that hoofs and ribs were thrown wildly about, while myriads of maiden hands assailed and threw down the fierce bulls, dragged children from their homes, and contended with armed men.

Whatever form, then, the Bacchantic excesses assumed—whether a wild, contagious, violent and destructive excitement, or a form of divination—there was an amount of emotional disturbance which may well have actually unhinged some of the minds of those engaged in them.

Defective Nourishment, Poverty, &c., as shown in the Mode of Life.—The style of living in the Homeric and Hesiodic days—the table of the chiefs or even the king—would have presented a very different appearance from that of a luxurious age. The Greeks had then, it seems, only two meals a day. Homer, at least, never mentions more. They had a moderate breakfast, soon after the sun rose; and ended the day with a supper, to which they, no doubt, did justice, and slept well, the active muscular exertion in the open air preventing any ill effects—dyspeptic or hypochondriacal—arising from "a

heavy supper." Menelaus makes a feast when Telemachus dines with him, and Homer certainly says (Od. iv., 65):—

> The table groaned beneath a chine of beef,
> With which the hungry heroes quell'd their grief.

But he never, as Dioscorides points out, "put rissoles or forcemeat, or cheesecakes, or omelettes, before his princes, but meat such as was calculated to make them vigorous in body and mind; and so, too, Agamemnon feasted Ajax, after his single combat with Hector, on a beefsteak; and in the same way he gives Nestor a roast sirloin of beef. And Alcinous, when feasting the luxurious Phæacians, and when entertaining Ulysses and displaying to him all the arrangements of his house and garden, and showing him the general tenour of his life, gives him the same dinner. Homer never once represents either fish or game as being put on the table to eat ("The Deipnosophists"—Bohn's edit., vol. i., pp. 13-14, 41).

In the heroic age, the relation borne by the poor to the wealthy would probably resemble that of the serfs to the barons in the middle ages. Actual poverty, or destitution of the kind with which we are so familiar, would not be likely to prevail, nor in subsequent times would the great slave class in Athens and other cities be what we should understand as a pauper class. That there did exist in Greece a considerable number of poor persons, however, and sufficient poverty to constitute one cause of mental disease, I do not doubt. The popularity of Solon arose in part from his kindness to the poor; the freedmen finding it difficult to make a livelihood in consequence of so much being done by the slaves. In much later times, also, the poverty existing side by side with wealth and luxury is frequently referred to by Greek writers. Still, there is no proof that at any period were there so many squalid, half-starved, poverty-stricken men and women in Greece as there are in England, in process of manufacture for our county asylums.

Causes chiefly Moral.—It is certain that emotional excitement of various kinds must have exerted no inconsiderable influence upon the Greek brain. The excitement immediately attending war cannot be reckoned among the potent causes of insanity. In a war-like age, at any rate, the effect would be much less than in an age accustomed to peace. This cause, therefore, except as a means of producing misery and scarcity, cannot be sup-

posed to have induced much mental disease. Political excitement may have unhinged some minds fired with patriotism or ambition. A circumstance meriting notice, as serving to contrast the early period of Grecian history with modern society in England and English-speaking countries, is the relation subsisting between the people and the ruling power in heroic Greece. The authority claimed and secured for the king was of no limited character. The position taken in the Iliad that "the rule of many is not a good thing, let us have one ruler only, one king, to whom Zeus has given the sceptre and the tutelary sanctions," is shown to be fully borne out by the history it contains, not only proving "the passive, recipient, and listening character" of the general Assembly (the Agora) but exhibiting "a repulsive picture of the degradation of the mass of the people before the chiefs" (Grote, vol. i., p. 464). The treatment to which Thersites was subjected for daring to act an independent part, and venturing to express his own opinion in opposition to that of Agamemnon, so graphically described by Homer, illustrates the servility expected from this professedly popular gathering, in which his companions enjoyed, instead of resenting, the treatment to which he was subjected. The subjection to kingly authority in the assembly here depicted, indicates a condition of society at that period which would not be likely to favour much individual freedom of action, or encourage undue political excitement and mental perturbations. With this repressed and passive state of the people generally might be contrasted the oligarchies which subsequently arose in Greece. The condition of society of which it is an indication, and which it fosters, marks an advance to a form of civilization and political life, which, by allowing of and encouraging individual thought and action, more frequently accompanies a loss of balance of the mental powers, than the opposite state of passivity. Thus, as might be expected, we find the very important and significant fact that political power had lost, according to the historian of Greece, "its heaven-appointed character," and consequently "the ground was laid for those thousand questions which agitated so many of the Grecian cities during three centuries." He tells us that they elicited "much profound emotion, much bitter antipathy, and much energy and talent." In the days of Pericles there may have occurred as much, or nearly as much, excitement in Athens, as there was in London at the time of the Reform Bill, or in Paris in 1848. In the above description

we have unquestionably those elements of modern civilized society which act so powerfully on the minds of men, excite such active thought, arouse such intense feeling, and which, while invaluable in counteracting dead-levelism, increase the liability to a loss of mental balance. We believe that these influences were more limited than in France or England in the present century, even when we have regard to the most active periods of Greek life, but it must be admitted that the political intrigue and lust of power which existed not only in Athens, but in the small free towns, must have both stimulated the activity of thought, and excited the emotions; indeed, Mahaffy goes so far as to say that politics corroded the social life as well as the literature of Periclean Greece. The profound philosophical and religious questions which stirred the thinking men of Athens in her palmy days must not be overlooked here; some minds, it may reasonably be supposed, went astray,—lost in the bewildering mazes of speculative thought.

Among moral causes, the share played by licentiousness among the Greeks cannot be regarded as inconsiderable. We have touched upon it already in connection with Mænad madness. Insanity from this cause must have been far from rare. The chivalry of the Greeks has been described by Mr. Symonds as a compound of military, amatory, and patriotic passions, meeting in one enthusiastic habit of soul; only differing in his view from mediæval chivalry in its being "patriotic," where the latter was "religious," but as a *Saturday Reviewer* points out, this combination when it occurred was accidental with the Greeks, while with the mediæval knights the object of their affection represented the entire sex to which that object belonged, and they became the protectors of innocence and weakness; but to place the friendship of Greek men among the elements of chivalry is unfounded, and may be compared to planting the image of a satyr amid the shining synod of Olympus. "The introduction of the word 'amatory' into the characteristics of the Greek ideal betrays the rotten spot, while it seeks to cover it with a bold ambiguity."

Thirlwall draws the inference from the character of the stories of their gods, that female purity was not very highly valued, and that the faithlessness of the wife was neither rare nor regarded with much disfavour, while Mahaffy points out that the Homeric lady was the property of the stranger, so that much delicate feeling vanished in practice, notwithstanding

the ornamental outside. He criticises, however, those writers who, in forgetfulness of the splendid characters which figure in the tragedies of Euripides and other dramatists, regard the morality of the Athenian women with disgust, and fancy that the most refined civilization could have existed alongside with the worst possible demoralization of domestic relationship.

Intellectual Strain.—Recurring to the doubtful practice of the art of writing in the Homeric age—Grote maintaining that the Iliad was handed down orally for some two centuries, and that no reading class existed in Greece until the middle of the seventh century before Christ, the intellectual food of the nation consisting not of true history or philosophy, but mythical tales—we need not hesitate to dismiss the idea of intellectual strain as a cause of insanity at that period in Greece. Epic poetry was the "solitary jewel" of the heroic age. The people were, the above writer considers, poetical and religious at that period—not reflective or philosophical, although, even then, displaying much mental vigour. In regard to mere school education among the Greeks, this, of course, must have varied at different periods, but, when it reached its highest point, its range and amount must have been within very narrow limits indeed, compared with the extent of learning demanded in the present age. We have no reason to think the brains of children were injured by early forcing, nor that an enfeebled nervous system often resulted from the course of study pursued, sending its possessor out into the world less able to meet its cares and perplexities, unless the passage from Aristophanes below refers to study. It has been maintained that, from a moral point of view, the Greek parent acted more carefully and wisely than we do, for that, instead of casting their sons into public schools, where they lose alike their simplicity and their innocence, they placed them under the strict supervision of a slave tutor—in short, a male duenna (Mahaffy). This involves however a moral rather than an intellectual element. Obedience to parents was implicit, and the scholar was very docile. Even in his day, Aristophanes, in "The Clouds," makes the "Better Cause" complain of the degeneracy of youth in these and other respects. In the good old days it was incumbent that no one should hear a boy utter a syllable, still less contradict his father, that he should march to the harp-master's school unprotected from the snow, though it fell as thick as meal,

that he should not sit cross-legged, and that he should be well thrashed if he made mistakes—a system, it is contended, which made the men who fought at Marathon. The "Worse Cause" considers such a youth would be a booby. The "Better Cause" replies that, under the old system, he would have a stout chest, a clear complexion, broad shoulders, and a little tongue; while "the youths of the present day" pursue a course likely to produce a narrow chest, a pallid complexion, small shoulders, and a big tongue; they have to be carefully wrapped up, they are not to be found blooming in the gymnastic schools, but chattering in the market place, or dragged into court. The days have gone by when it was not allowed, if one was dining, for youth to snatch from their seniors dill or parsley, or to eat fish, or to giggle, or to keep the legs crossed! "Happy," says the Chorus, "were those who lived in those days, in the times of former men!" The absence of any intellectual requirements on the part of the women has been pointed out by Mahaffy, who has shown that ladies of rank at Athens, and in other cities, had not enough education to shine in conversation.

Although, therefore, during the most brilliant period of Greek literature there must have been much active culture of the mind, and while the study of philosophy must have taxed the mental powers of a certain number, while I doubt not there were some heads that ached from deep thought, and that "much learning" may have made one "mad" here and there, I do not think that over study, or rather the accompaniments of over study, can be credited with much influence as a cause of mental disorder in Greece.

Glancing back now on the various causes of mental disease in their relation to Greek life, it is unquestionable that they must at certain periods have exerted a considerable influence. Intemperance in general, Bacchanalian orgies, vicious habits, cannot fail to have induced attacks of lunacy. At the same time there is no proof of that chronic besotted drunkenness and the half-starved families associated with it which distinguish our pauper population, and, therefore, there is no doubt a difference in degree between the influence exerted by intoxication and mal-nutrition in Greece, at any period, and in England. Of other causes, those of a moral nature, and associated with excessive refinement, susceptibility, self-dissection, morbid religious feelings, the Greeks may well have experienced the effects to a certain extent; to *what* extent it is impossible to determine, but we

do not think that moral causes of this nature were so powerful as in the present day. It is also probable that the causes of insanity exert a cumulative effect, and in this way later generations of men are actually more susceptible to influences of the same morbid intensity.

We proceed now to consider Roman life in relation to the causes of mental disease. Many of the observations we have had occasion to make in reference to the Greeks apply to the Romans, not only because there are broad features common to any two nations in their course attaining to civilization, but because Roman culture and refinement were largely drawn from Greek sources. In the latter nation as in the former, our inference from manner of living as to the probability of the prevalence of insanity among the people must be affected by the period of her history which we have in view, namely, whether the early and not highly cultivated age, extending from the foundation of the city to the third century B.C., or the later and ever increasingly luxurious age comprising the two centuries before Christ and Imperial Rome. In the first period, an age of hardihood and simple manners, we should not look for the development of subtle nervous affections born of luxury. These were "the brave days of old," when the goodman mended his armour, and the goodwife's shuttle went merrily flashing through the loom; before the days of imperial extravagance, in which it may safely be inferred that the same psychological evils were fostered and grew as we deplore in modern forms of luxurious life.

Plautus abounds with illustrations of Roman luxury. In one of his comedies, "Aulularia," Megadorus complains of a wife saying that as she brought a dowry much greater than her husband's wealth, he must find her purple and gold, mules, lacqueys, pages to carry compliments, and carriages; but all this is light compared with what a wife asks for her allowance required for the embroiderer, goldsmith, dealers in figured skirts, dyers in flame-colour and violet, perfumers, sandal makers, boddice makers, &c. Three hundred duns make their appearance, and have to be paid. "You would think them got rid of by this," he says, "when dyers in saffron colours come sneaking along; or else there's always some horrid plague or other which is demanding something." The tax gatherer appears on the scene; her husband, however, by this time is in debt to the banker, and the tax cannot be paid.

Intoxication.—In the early days of Roman life drunkenness was no doubt much less common than in the days of her luxury. Wine was not easily procured and was costly. Its principal use was in pouring out libations to the gods and at sacrifices, on which occasions alone women were allowed to drink it, and young men under thirty years of age. Ovid refers to the relaxation of this rule in the reign of Tarquinius Superbus.

In later periods of Roman history drunkenness was a well-known vice. It is very difficult, however, to decide to what extent it really prevailed. In high life there was a time when men gloried in intoxication and endeavoured to heighten its effects by adding to their ordinary wine aromatic ingredients. If at feasts the proper and more usual course of having a director was not adopted, it was permitted to the guests to drink *ad libitum.* But even here it was not thought right to indulge in excess. In regard to low life, I do not know that there is any evidence to prove that drunkenness prevailed at the worst period of Roman history to the same extent as among the lower classes of England. There were public-houses—thermopolia—no doubt, where not only hot water but all kinds of liquor were vended. They appear to have been frequented in much the same way, according to Adam, as our modern coffee-houses, and there were a considerable number of them even during the Republic. Their abuse, in the way of intoxication, might be argued from the restrictions put upon them, but these partly arose from a dread of political clubbing.

Among other proofs that the Romans were by no means free from this vice, reference may be made to the facts that Seneca himself thought it allowable to get drunk to ease the mind of any great and tormenting care, and that Cato of Utica spent sometimes whole nights in drinking, that as regards the elder Cato, and Corvinus the Stoic, the former often enlivened and invigorated his virtue by wine, and that the latter, though tinged with Socratic principles, was by no means an enemy to the wine cask (*Vide* Potter's "Antiquities").

Among the Romans, as with the Greeks, the influence of Bacchanalian rites must have exerted a prejudicial effect upon the mind. A Greek of mean condition, a priest of secret and nocturnal rites, imparted a knowledge of them to great numbers, both men and women, according to Livy. "To their religious performances," he says, "were added the

pleasures of wine and feasting." Debaucheries of every kind were practised. The infection spread so far and so rapidly that Livy compares it to "the contagion of disease." To think everything lawful was the grand principle of their religion. One passage in the description given by an informer is particularly significant. "The men, as if bereft of reason, uttered predictions, with frantic contortions of their bodies; the women, in the habit of Bacchantes, with their hair dishevelled, and carrying blazing torches, ran down to the Tiber, where, dipping their torches in water, they drew them up again with the flame unextinguished, being composed of native sulphur and charcoal" (Bk. xxxix., c. 7 and c. 14). In the speech made by one of the Consuls to the people, he said that these orgies had existed for some time in every country in Italy, and at that time in many parts of Rome; in proof of which he refers to the nightly noises and horrid yells resounding through the whole city. He asserted that there were many thousands—a great part of them being women, the rest men—"night revellers driven frantic by wine; noise of instruments, and clamours. . . . . If you knew at what age the males are initiated, you would feel not only pity but also shame for them. Romans! Shall these, contaminated with their own foul debaucheries and those of others, be champions for the chastity of your wives and children? Each of you ought to pray that his kindred may have behaved with wisdom and prudence; and if lust, or if madness, has dragged any of them into that abyss, to consider such a person as the relation of those with whom he has conspired for every disgraceful and reckless act, and not as one of your own." The decree of the Senate that all places where the Bacchanalians held their meetings should be demolished throughout Italy, and that in future none of their rites should be celebrated (subject to certain overpowering religious scruples in regard to the omission of the worship of Bacchus!), shews the frightful excesses which were committed—excesses unquestionably calculated to cause madness. Many were put to death. Here we see, as in several parallel instances, that in antiquity, not only in savage life, but in the condition of society among the ancients we call civilized, the violent termination of existence continually prevented the development of those morbid psychological conditions which are constantly attaining a full growth among ourselves, because they are not cut short

by death. We can show that the causes of insanity were certainly present in considerable force at some periods of the history of the nations of antiquity, but still it does not follow that these causes always produced their legitimate fruit; on the contrary, as a matter of fact, they must have been often checked in their course by events certain to happen in certain conditions of society, and from which modern civilization is in great measure exempt. In close connection with this is the fact, capable of large amplification, that homicidal tendencies, which in modern societies frequently land their possessor in an asylum, would in ancient societies find an outlet in the constant opportunities afforded by war.

Defective Nourishment, Poverty, &c.—The sure coincidence of a certain amount of poverty and great wealth did not escape the notice of the Roman poets, and there can be no doubt that, during the most civilised period of the history of Rome, there existed in strong relief the two extremes of riches and poverty—perhaps as marked as between Belgravia and the Seven Dials in our own day—and that mal-nutrition, unwholesome dwellings, and the like, exerted a very appreciable influence in causing unstable brains, degeneration of nervous power, and actual idiocy. Merivale, when showing that the dignity of the Roman temples and palaces stood in marked contrast with their cabins, says, "The spacious avenues of Nero concealed, perhaps, more miserable habitations than might be seen in the narrow streets of Augustus." He observes that up to the time when symptoms of the decline of the Empire appeared (A. D. 180), "we have no distinct murmurs of poverty among the populace." The causes, according to him, were already at work, which in the second or third generation reduced the people of the towns to pauperism, and made the public service an intolerable burden, namely, the decline of agriculture and commerce, the isolation of the towns, and the disappearance of the precious metals. It appears that under the Flavian Emperors there was a sudden adoption of the policy of administering public aid to impoverished freemen. There is another point closely connected with poverty, and that is the heavy taxation to which the subjects of Rome were subjected—the system of farming out taxes leading to great abuse and extortion. The historian already cited asserts, indeed, that at no period

within the sphere of historic records was the Commonwealth of Rome anything but an oligarchy of warriors and slave owners, who indemnified themselves for the restraint imposed on them by their equals in the forum by aggression abroad and tyranny in their household. While Gaius Verres held authority over Sicily, 59 per cent. of the farmers in the most fertile parts—and these for the most part Roman burgesses—ceased to cultivate their fields, and suffered privation on account of the oppression to which they were subjected. Oppression is said to drive wise men mad, and no doubt oppression and impoverished homes did drive not a few mad among the Romans.

Causes chiefly Moral.—As regards these we find frequent complaints among the Roman writers that, with increased civilization and luxury, the habits and manners of the people changed from what they in the main were during the early period of Roman history to which we have referred. There is the well-known contrast drawn by Horace between the youth of his age and those of the days in which they repulsed Hannibal. How bad, how base, he considers his own generation, though he did not think it had reached the lowest depth of degradation, for the downward current was so strong that he contemplated the sons of that generation would be guilty of crimes unknown even to it. And half a century later his expectation seems to have been fulfilled, for Juvenal asserted that posterity could not possibly add anything to the immorality then rampant :—

> Nothing is left; nothing for future times
> To add to the full catalogue of crimes.
> Vice has attained its zenith, &c.

Of the "golden age," it may be emphatically said that all is not gold that glitters. It did not seem so, as Professor Seeley observes, except to the Court poets. "On the contrary, they said it was something worse than an iron age; there was no metal from which they could name it. Never did men live under such a crushing sense of degradation, never did they look back with more regret, never were the vices that spring out of despair so rife, never was sensuality cultivated more methodically;" and after remarking that if morality depended on laws, or real happiness on comfort, there never would have been a more glorious age; he adds, "It was, in fact, one of the meanest and foulest." It is scarcely necessary to seek for further evidence on this point,

so clear does it seem that there must have been a mode of life at this time unfavourable to healthy mental action, and that the "causes chiefly moral" of insanity must have been in operation in very considerable force; but we cannot avoid adding the dire picture drawn by Quintilian of the moral training of his day. "Would that we ourselves," he exclaims, "did not corrupt the morals of our children! We enervate their very infancy with luxuries. That delicacy of education which we call fondness weakens all the bodily and mental powers. What luxury will he not covet in his manhood who crawls about on purple! He cannot yet articulate his first words when he already distinguishes scarlet and wants his purple. We form the palate of children before we form their pronunciation. They grow up in sedan chairs; if they touch the ground they hang by the hands of attendants, supporting them on each side. We are delighted if they utter anything immodest. Expressions which would not be tolerated even from the effeminate youths of Alexandria we hear from them with a smile and a kiss." Quintilian says that all this is not wonderful, for they themselves had taught them; they had heard the language from their parents. From the shameless practices they witnessed at home their habits and very nature were formed. "The unfortunate children learn these vices before they know that they are vices; and hence, rendered effeminate and luxurious, they do not imbibe immorality from schools, but carry it themselves into schools." Such a training as this must have surely sapped the mental constitution, and where it did not act as a direct cause of insanity must have often indirectly led up to it in the enfeebled nervous system induced, little fitted to bear the shocks of life; and in the tendencies transmitted to posterity.

Take a later period of Roman history. A good illustration of the state of society, in its bearing on the causation and evolution of mental disorder, at the latter end of the fourth century, occurs in the poetical books of Claudian against Rufinus, an avaricious and ambitious man, who died A.D. 375. Ample proof is afforded of a condition of mental life which may reasonably be supposed to have not unfrequently caused insanity. The struggle between contending emotions must have often been great. The poet speaks of the discord which is the nurse of war, of imperious famine, of fretful disease, of pale envy, lamentation, fear, of spendthrift

luxury, and of the sad want which closely follows in its train, with shuffling pace :—

> And last of all, and dreariest of their race,
> Clasping their mother Greed's polluted breast,
> The endless swarm of cares that know no rest.*

This graphic description of their "cares" marks a state of society too much like that of modern life to allow us to doubt that the people of that day were suffering from some of the same brain-distracting elements of highly wrought civilized life as ourselves, and that many men and women became insane; far more than in the early age of Roman history. Well might Claudian assert that he whose life needs the least is in truth the best, and that—

> Natura beatis
> Omnibus esse dedit, si quis cognoverit uti.

Intellectual Strain.—An examination of the character of school learning among the Romans proves two things: first, that the area or range of learning was but limited, at best; and, secondly, that fears sometimes were expressed even then that ill effects might result from over study; nor were school boy sorrows altogether unknown.

It would seem that little more was taught than reading, writing, and arithmetic, Greek and Latin grammar, and the recitation of their own poets. School must have sometimes been, indeed, what one meaning of the word indicated among the Greeks—leisure, if not idleness. Juvenal criticised the schooling of his day as consisting of little more than teaching who nursed Anchises, how long Acestes flourished, and the like. Quintilian gives some questions asked at school, as—Why Venus among the Lacedemonians was represented armed? Or, why Cupid was thought to be a boy, and winged, and armed with arrows and a torch?

Meagre, however, as was the school lore of that age, Quintilian found it necessary to reply to some in his day who feared the pupils' minds were overstrained by too hard work. He derides the alleged danger of cramming youths with knowledge, observing that there are those who maintain that the mind must be confused and wearied by so many studies of different tendencies, "for which neither the understanding nor the body nor time itself can suffice;" and replies "that

* From a MS. translation by Thomas Hodgkin, Esq., kindly placed at my disposal.

such do not understand how great the power of the mind is; that mind which is so busy and active, and which directs its attention, so to speak, to every quarter, so that it cannot even confine itself to do only one thing, but bestows its force upon several, not merely in the same day, but at the same moment;" and he further makes the interesting remark, "It is by no means to be apprehended that boys will be unable to bear the fatigue of many studies, for no age suffers less from (mental) fatigue" (Bk. i., chap. xii.) It seems, however, that some ladies even in Juvenal's day, strove to cultivate their minds; not being content with the knowledge they could acquire at school. He was much scandalized at their doing so, calls such women intolerable, and trusts his wife may never stuff her head with the subtleties of logic.

> Enough for me, if common things she know,
> And boast the little learning schools bestow.

We have said that the Roman scholar had his sorrows; there was a cane then as now which had no sugar in it. At any rate, it was so at the period when the boy Augustine lived and schooled. He says he did not love study and hated to be forced to do it. He disliked Greek, and thought the three R's as great a punishment. "Homer was bitter to my boyish taste, and so I suppose Virgil would be to Grecian children, when forced to learn him, as I was Homer. I was urged vehemently with cruel threats and punishments." Much more might be cited from his "Confessions," which are full of interest, but we must restrict ourselves to the following passage, bearing directly on our enquiry:—"I was put to school to get learning, in which I (poor wretch) knew not what use there was; and yet if idle in learning, I was beaten. For this was judged right by our forefathers, and many passing the same course before us framed for us weary paths through which we were to pass; multiplying toil and grief upon the sons of Adam."

In spite, however, of Augustine's plaints, and the misgivings of those to whom Quintilian refers, I think we cannot set down an over-taxed brain from prolonged study, sleepless nights, dread of examination, and feverish emulation for prizes, or disappointment and chagrin at failure, as a probable serious cause of insanity among the Romans. Suicides were frequent from trivial causes and to escape the sufferings of incurable illness; but we should seek in vain for any

passage in the Latin writers similar to one which appears as we write, in a London paper commenting severely on the injury done by modern examinations, on the occasion of the suicide of a University College student from this cause. It is said to be the ninth in the Metropolis by students (some Orientals) during the present year.*

In conclusion, if—after the necessarily imperfect sketch we have drawn of the psychological bearings of ancient history, as to the prevalence of the main causes of insanity—we endeavour to draw a general conclusion, we appear to be warranted in saying that mental disease was not likely to be largely developed among the primitive races, that the causes of mental disorder must have exerted a very considerable influence upon the four important nations referred to, less in their earlier, much greater in their later and highly organised condition. Probably these causes were not so influential among the Egyptians and Jews as the Greeks and Romans, taking the period most unfavourable to mental health in each nation, and probably less so among the Greeks than the Romans.

In favour of the nations of antiquity as compared, let us say, with England, may be enumerated less dram and beer drinking, and fewer half-starved and diseased children *reared.* The class of paupers from our large towns and the agricultural districts which fill our county asylums were certainly not to be found either in the primitive races or the early stage of civilization in the above nations. Nor have we been able to detect an exactly corresponding class—in degree at any rate—in the subsequent complex social state of these nations, whether at the height or decline of their civilization. The patients from this class are those who would be regarded by Dr. Richardson as the victims of mental stagnation, perhaps it would be more correct to say of the unfavourable moral surroundings and the injurious habits of persons of this description—conditions undoubtedly far more deleterious, psychologically, than any amount of mere intel-

* The paper maintains that it behoves the authorities of the University of London to beware how they drive poor students to seek a place where examiners cease to trouble, and the weary student is at rest. "At present, what with the multiplicity of subjects, the constant alterations in books, and the unending changes in examiners, it is no wonder if the poor fellows are sometimes in distraction. It has sometimes been said that we shall never get rid of railway accidents till a bishop is killed; and it suggests the question, how many students must commit suicide before the authorities introduce a more humane and rational system of examination."

lectual strain. Again (and this bears upon the production of higher and middle class lunacy) there was less intense competition and fewer great commercial speculations and failures, less struggle between the natural and the religious feelings—a very important difference—less morbid self-consciousness and dissection—a less highly wrought nervous system, and less susceptibility, therefore, to impressions calculated to upset the mind. It is certain, however, there must have been a period when moral and physical influences were not only highly unfavourable to the healthy action of the emotions, but in some respects even more so than in England now, because not counterbalanced by the superior religious influences at work in our own country. A nation steeped in moral corruption, as, for instance, the Roman Empire was at its worst, must be regarded as very liable to the production of those mental diseases which have an immoral ætiology. On the other hand, the very humanity and consideration which a religious nation like England displays towards the poor, and to those of feeble mind or who are becoming insane, instead of allowing them to perish, favours alike the accumulation of insane persons and the propagation of the disease by such before they are placed in restraint or after their recovery. Feeble mental constitutions perished by the way in Egypt; sons probably affected with moral insanity, as evidenced by disobedience to parents, were stoned to death in Palestine; homicidal men killed and were killed in the wars of Greece and Rome, and defective children were thrown down the Tarpeian rock. There was not, therefore, so much feebleness, moral insanity, or homicidal impulse transmitted to the next generation in the old heathen or Jewish, as compared with modern Christian populations. Indeed, the more ancient history in all its psychological bearings is examined, the more will it appear that the explanation of the fact—which we have no doubt would be established could we have before us the actual census of insane persons in these ancient countries, on the one side, and that of modern Europe on the other, viz, that the number of the latter would far exceed that of the former—lies largely in the direction here indicated. In short, the rapid clearing off or stamping out of cases of mental deficiency or derangement, whether by neglect, capital punishment, or war, is a most important fact supplementing all we have said as to the primary question of the prevalence of the causes of insanity among the nations of antiquity.

Torquato Tasso.

"Peace to Torquato's injured shade."
CHILDE HAROLD. *Canto* IV, *Stanza* 39.

(Concluded from page 406.)

About this time an attack was made by the Academy della Crusca in Florence on his "Jerusalem." To violent abuse of himself, of his poem, and of his father and his father's poems, Tasso replied more for his father's sake than for his own, for his heart was filled with one desire, and his chief energies were constantly employed in appealing to everyone of influence or power, to obtain his release from confinement. He wrote to Bergamo a touching appeal, which it is said moved the Council to tears, and they despatched an embassy to Alfonso, petitioning for their compatriot's release and sending Alfonso a present of an inscription relating to the antiquity of the d'Este family, which he was very desirous of possessing. The Duke promised before long to comply with their request, and declared that he only kept Tasso in confinement to try to cure him of his disorder. Perhaps he was influenced too, in some degree, by a fear of Tasso's renewal of language against him at other Courts in the event of his release. At all events Serassi confesses "He would have granted the urgent prayers of so many noble patrons, and set him at liberty with pleasure, but reflecting that poets are naturally 'genus irritabile,' and fearing that Tasso once free would revenge himself for his long confinement and his ill-treatment in the Ferrarese Court with that formidable weapon, his pen, he could not bring himself to the resolution of suffering him to escape from his States, without being first assured that he would make no attempt on the honour and reverence due to so great a Prince." Two years more thus passed—Tasso in constant hopes of being free, able at times to write sonnets gracefully and with his old power; at times mixing more in the world, then apparently withdrawn again from it; weak and suffering in body, and his terrible apparitions and images increasing upon him, his cell appearing full of them. Flames wreathed and twined themselves in it; rats and other animals seemed to him to crawl across the vault of the room. His ears were filled with noises—ringings of bells, clocks striking; in his sleep and even when waking he thought himself engaged in strife with the

spectres around him, and asserted that when no person had been in his prison his closets were broken open, his clothes taken from him, his books pulled down and flung about his room, his gloves or letters drawn out from locked boxes at night and scattered over the floor in the morning. In the midst of this distress both of body and mind he believed that "there appeared in the air the form of the glorious Virgin with her Son in her arms, in the centre of bright and glittering clouds."

Pope Sixtus the Fifth, moved by Tasso's earnest appeals to him, made interest for him with Cesare d'Este, who, strengthened by the co-operation of the Grand Duke of Tuscany, assisted also by the Duke of Mantua and his son Vincenzo, interceded with Alfonso for his release. Alfonso consented that he should be liberated on condition that he would remain under the charge of the Duke of Mantua, and submit to what treatment should be necessary for him. But at this time Tasso became too seriously ill to move, and the physicians called to attend him began to despair of his life. He trusted himself to the Virgin's intercession, he says, and seems to have had a vision glorious and comforting to him. He recovered in a short time from this severe attack, and after much delayed hope and waiting, and after the condition of his release as to his remaining under strict surveillance at Mantua had been reiterated, the longed-for day did at length arrive. Costantini and a gentleman of Vincenzo's arrived with an order for his deliverance, and after more than seven years' confinement he departed with them. The conditions laid down, further than his surveillance, were that Vincenzo and his father were to be responsible for him; he was to engage not to write against the Ferrarese Court, and was never again to appear in Ferrara.

The stipulation that he should return no more to Ferrara does not support the supposition that the increased liberty given him soon after the death of the Princess Leonora was influenced by that event; otherwise on that ground reasons for desiring his absence from Ferrara would have ceased. It is more probable that his presence, when at large there, had become always exciting to himself, and a source of alarm and even danger to others.

When the time came that he was indeed to go forth, that his intense and protracted longing was about to be attained, Tasso, in a kind of reaction perhaps, seems to have suc-

cumbed more completely for a time to bodily weakness, and to have realised all the change wrought in himself in the long, suffering years through which he had passed. He had fondly dreamt that with liberation his own former feelings would return and that happiness and renown might again be his. Alas! instead of this he found himself worn and dejected, with a restlessness and melancholy upon him not to be shaken off. He was still only forty-two years of age, but he went forth broken in spirit and health to re-commence something of the same precarious life of dependence that had for so many years been his. But on his arrival in Mantua he was most kindly received by the Duke, lodged in his palace, and tended with every consideration and regard; and numerous friends of talent and distinction bestowed much attention upon him. Here he would seem to have attained to a respite and rest, feeling it so himself in the first instance. He devoted his care to the restoration of his health, earnestly requesting one of his medical friends to supply him with some remedy for the failure of memory he felt so strongly coming over him. The remedies they would have enforced, such as purging and bleeding, he persistently refused to adopt. He also composed new works and completed old ones, showing that much vigour still remained, if memory was failing; he even wrote a letter treating of the respective merits and advantages of different forms of government, which the Duke of Mantua is said highly to have valued. The Carnival came round, and he seems to have regained some of his former spirit, and his love of and susceptibility to female beauty. But when the season of Lent commenced he turned from such thoughts and gave himself up to theological studies.

His wishes had now been met thus far—he had obtained his release, was living in competence and ease, and was treated with kindness and distinction. But soon the spirit within him could no longer let him rest; the old desire for change came upon him. Milman attributes it to his feeling himself too near to Alfonso and to Ferrara, but does not give his ground for the conjecture, nor suggest that any interference with Tasso had been attempted. He speaks of his having been disappointed of paying a visit to Sassuolo, where he was to have met Ferrante Gonzaga and other friends and patrons, but a return of his illness prevented him from accomplishing this visit and increased his melancholy. It seems more probable

that after an interval of much greater calmness had followed for a time on his release from his long confinement, his restoration to society and all the beneficial influence and refreshment of this change, a return of the old and terrible malady came upon him, renewing his deep melancholy, his fears and restlessness. The surveillance under which, however necessarily, he was placed must at times have been galling to him, and on the slightest increase of his illness would chafe and fret him still more, and renew the old suspicions of danger. He was considerately and kindly treated, the Duke taking him to a villa called Marmirolo, where he met a pleasant society; he was also to have accompanied the Duke to Florence, but this project was frustrated, the Duke being himself obliged to forego his visit. He had a fresh cause of vexation in the publication by Licino of his "Discourses on the Art of Poetry," with a collection of his letters, without his permission, and indeed unknown to him, and which he would have desired to revise and correct himself before publication. He next fixed his thoughts upon Rome, desiring to try his fortunes there. When we read of this ever-recurring restlessness and desire of change of residence from city to city, we feel that blame can hardly be justly attributed to others on account of the want to which Tasso was subsequently at times reduced; for we see that when in safety and in ease of circumstances he could not long rest, and that no persuasions of his friends could induce him to tarry when once the fever of change had come upon him.

The wish to try his fortune at Rome had now become so predominant that although at this juncture an offer was made him of the Ethical and Poetical Chair of the Academy of the Addormentati, at Genoa, with a promise of at least four hundred crowns a year, he was unwilling to accept it; his friend Angelo Grillo had obtained him this offer, which was accompanied by a flattering letter from the President of the Academy. It is said that he was uncertain of being allowed to accept it, and feared to ask it, dreading that it might lead to further restriction of his liberty. He was permitted to visit Bergamo, where he was received with every possible honour by his fellow-citizens, but could not even then shake off his melancholy. His thoughts were still bent upon Rome. He apparently wrote to many patrons and friends regarding it, receiving only discouraging replies, excepting from Scipio Gonzaga,

who was now Patriarch of Jerusalem. Cardinal Albano entreated him to continue in the service of the Prince of Mantua; "Cataneo represented to him that he must first perfectly re-establish his reputation for wisdom and prudence before he could expect any profitable employment." All this did not turn Tasso from his purpose, though it delayed the carrying of it out. Angelo Grillo again wrote urging his acceptance of the offer from Genoa. Tasso sent this letter to the Duke of Mantua's Chancellor, requested permission to leave Mantua, and also asked for some pecuniary help. Just at this time, however, Duke William, the father of Vincenzo, died, and Tasso, putting aside Genoa, hasted back to Mantua on the succession of Vincenzo, who had been so great a friend to him; but he was doomed again to disappointment, Vincenzo being now so absorbed in affairs of State and other occupations that Tasso found himself almost excluded from his presence or thoughts. He had returned to Mantua with freshly raised hopes of attaining that glory and renown and distinction for which he had craved throughout his life, and ever thought himself entitled to claim. His pride deeply resented the neglect which he now met with in Mantua; all the more did he rebel against it as coming immediately on his return from his sojourn at Bergamo, where all these feelings had been fostered by his reception.

He then more determinedly still fixed upon Rome as the goal where his desires would attain their fulfilment, and finally declined going to Genoa. He implored permission to depart from Mantua, requesting to be completely set at liberty. The Duke rendered him no definite answer, and did not furnish him with money; but Tasso, who was not to be deterred, contrived to raise a small fund, chiefly among his relations at Bergamo, and started in the direction of Rome, taking with him only a few books, a desk containing writings, and his valise of clothes. His first intention was to perform a pilgrimage to Loreto, to which he had bound himself by vows. He would have failed both in means and strength, however, to carry this out had not Ferrante Gonzaga, travelling with a retinue in the same direction, overtaken him and carried him on with him. At Loreto Tasso confessed and communicated repeatedly, entering on these religious observances with the utmost devotion and penitence. Here he would have been reduced to the greatest destitution had not the Governor of the place

and Giulio Amici sought him out and succoured him. His devotion to the Virgin, who had, as he believed, appeared to him in prison in his time of despair, was so intense that he could scarcely tear himself from her shrine; and the exaggerated character of his devotion was evidently quite consistent with the tone and state of his mind. Amici befriended Tasso further by providing him with the means of pursuing his journey to Rome, where he arrived in safety four days after quitting Loreto. He entered Rome with high expectations, and was received with kindness and courtesy. Praises and promises were bestowed upon him by those high in name and power. Tasso thought that Rome must be his resting place, and was happy in his first reception, but was anxious to obtain some position of independence; and this was no easy matter to attain. He was received with kindness by Gonzaga, whose guest he was; but Cardinal Albano and his secretary Cataneo were displeased that Tasso had come to Rome against their advice. The Pope, to whom he was desirous of being presented, was too much taken up with other matters to be regardful of him; Gonzaga's affection, too, would seem to have cooled towards him, and his failing hopes weighed down his spirit anew. We may infer that his hopes had been raised too high, and that to do for him all he desired was impracticable, while the greatness of his expectations must have tried and disheartened those who most admired and were desirous of aiding him.

At this time the Duke of Ferrara, displeased that his stipulations had been disregarded, conveyed remonstrances to the Duke of Mantua on the subject. This alarmed Tasso afresh; he feared to lose his hardly gained liberty, and, added to the disappointments he had again met with in Rome, induced him to quit it and to go to Naples. He had obtained full permission to return to that city, and was advised to repair there and endeavour to recover his mother's dowry, to which he was entitled. Weak in health and almost destitute of means, we are told, he now again left Rome and started for Naples. He resorted to a Benedictine Convent, and amid the quiet around him and the great kindness he received found again some rest and refreshment, though little hope of the restoration of his health was given him by the physicians whom he consulted. He was unsuccessful in obtaining the recovery of his property, but passed four or five otherwise tranquil months at the monastery. Many flocked from Naples to see him, but his

abode enabled him to select his visitors, and to secure retirement when he desired it. He made and enjoyed the friendship and had the companionship of Manso, Marquis della Villa (the friend also of Milton in later times).

For a while Tasso was much benefitted by his sojourn here, gaining a calmer tone of mind, and, as ever at the commencement of his abode in a fresh place, felt more safe and happy, and believed he had now found his resting-place and home. He engaged himself in altering and partly re-composing his "Jerusalem;" but the old feelings would not let him long rest in peace and security. He began to entertain fears that his presence and melancholy were a burden to the monks, and his restlessness returned. He had likewise many pressing invitations from numerous friends, and was at length about to pay a visit to the young Count of Paleno, who earnestly desired it; but the Count's father refused his permission to the reception of Tasso. He then determined, actuated, it is thought, by a considerate feeling for the young Count's difficulty, to leave Naples for a season, and was persuaded by Manso to visit him at his castle at Bisaccio, in the Abruzzi mountains. Here, when the weather was fine, he spent whole days on the mountains hunting the roe and the wild boar. Manso's castle was filled with tenants and guests, including the improvisatore and improvisatrice for which the province was famous, and with them the evenings or days of wet weather were passed, or in the still greater enjoyment of the companionship of Manso alone. They would retire together, and hold discourse on literary, poetical, or more serious topics; and then would Tasso speak of the continual communings held by him with a spirit, affirming his conviction that it was not an evil spirit, as it conversed with him on religious subjects, and persuaded him to devotion and piety. Long discussions seem to have taken place between himself and Manso on this subject of the voices which Tasso heard, he affirming that they could not be fruits of his imagination only, as they declared to him things that he had never read or heard before. Tasso, finding that his arguments left Manso still unconvinced, declared to him that he would convince him by Manso himself beholding the apparition, but, as might have been anticipated, it remained invisible. Tasso called to him to behold it, while his own gaze was fixed in a wrapt manner upon the window. Manso, with all his efforts, could behold no unusual appearance, though Tasso was absorbed

in the apparent contemplation, and presently appeared to enter into earnest discourse and argument, as he supposed, with other voices, his words being heard, now in proposition, now in reply. Although of course no other voice rejoined, yet Manso could trace from Tasso's words the replies he must have supposed himself to be receiving. This continued for some time, and when Tasso implied that the spirit had departed, he appealed to Manso if he was not now convinced, and when the latter said that it was indeed far otherwise, saying that he had heard much that was marvellous, but seen nothing that Tasso had promised to show him to clear up his doubts, Tasso smiled and said, "You have heard and seen much more of what, perhaps——" and then stopped. Muratori supposes that Tasso may have been so deeply imbued with the remembrance of Socrates' familiar spirit as to have imagined himself to be companioned in like manner; his biographer faintly suggests the effects of dyspepsia—after partaking of wine and chestnuts, and after a siesta; but another explanation will probably be given to it by those who are perfectly familiar with such forms of hallucination.

Soon after his return to Naples, Tasso resolved on revisiting Rome, and wrote again to the Duke of Mantua, entreating him to let his books be sent to him. He was only able to prosecute his journey to Rome through the kindness of a kinsman at Bergamo, who supplied him with the necessary means; and even as it was, his portmanteau was detained at the Dogana, he not having the four crowns needful for obtaining its admission. Without it and in this poverty he arrived at the palace of Scipio Gonzaga, now a cardinal, but was so ill received that he sent in haste to the Paduan abbot of Mont Olivet, happily then in Rome. The kind abbot hastened to succour him, released his baggage from the Dogana, and carried Tasso at once with him to the Olivetan Monastery of Santa Maria Nuova at Rome. He seems to have been then oppressed with many fancies, and suffered from a return of fever, but anxiously occupied himself in endeavouring to collect his works, with the idea of himself bringing them out in a complete form. This he was, however, never able to do, though even in this state of discouragement and ill health he did succeed in bringing out a collection, in three volumes, of his minor poems; he likewise produced an oration in honour of the house of Medici, and also composed two beautiful canzoni; but in

order to publish them was obliged to solicit aid from those whom he considered unfriendly to him.

And now he was indeed in great suffering and poverty, wandering from one abode to another; for a time in Gonzaga's palace again, then, on Gonzaga quitting Rome, illtreated by the Cardinal's people, and driven from the palace. His friend Costantini had entered the service of the Duke of Mantua, and through him Tasso had presented to the Duke a canzone to celebrate the birth of the Duke's third son. He pours out to Costantini his troubles and destitution, saying that he fears he shall have to die in a hospital. The Duke sent to him clothes and money, but it is said they never reached him, being sent through the hands of Alario, Gonzaga's secretary. The abbot insisted on his returning to the monastery, where he remained only for a short time; for he quitted it soon, and before long was so reduced as to be received out of charity in the hospital of the Bergamaschi, of which his immediate relations had been the founders. His cousin Alexander here found him, and he was again removed to the monastery of Santa Maria Nuova. He was promised and afforded some pecuniary help, and informed of the Duke of Mantua being desirous of his return to his Court. Tasso excused himself from returning, pleading his ill health and the deep melancholy with which he was oppressed. Now also he received, more than once, presents in money from the Duke of Tuscany and invitations to Florence and Mantua. Comforted by these tokens of love and reconciliation, he needed, he said, for his perfect consolation but the favour of his ancient master, the Duke of Ferrara, but it does not appear that from him he ever again received any communication.

Being after a time a little recovered he did resort to Florence; he lodged at the Olivetan Monastery there, and all the literary and other world of Florence, including the Grand Duke himself and his family, flocked to behold him, to welcome him or simply to look upon him. Still he was suffering and conscious of his state, saying that his disorders will not let him rest in Mantua, in Rome, in Florence, in Naples. He wandered from one to another of these cities, and when in them restlessly removed from one abode to another. For a time he was again at Naples the guest of Manso, and one would have imagined, to a man sick and weary in mind and body, in a haven of grateful and perfect earthly rest. Everything in the situation of Manso's abode was calculated

to charm and soothe; he must have felt in perfect safety there; he had no anxieties as to the mere sustenance of life; and above all he had the friendship, companionship and sympathy of Manso. He here made great progress with his "Jerusalem Conquered," and commenced, at the request of the mother of Manso, an aged, learned and devout lady, a sacred poem, entitled, "The Seven Days," or "The Universe Created," a poem descriptive of the Scriptural History of Creation. Here he, however, only rested temporarily, for on receiving a command from the Pope he resorted to Rome for a season. It was on his journey at this time thither that detained with those who travelled with him by fear of the then powerful brigands, headed by Marco Sciarra, this brigand chief, in deference and out of honour to Tasso, sent to him offering him a free passage and escort, but as Tasso would not accept this for himself only, Marco Sciarra announced that he would, to allow them to proceed without conditions, withdraw himself altogether for a time, and did so.

On Tasso's safe arrival in Rome, he attached himself especially to the service of Cintio, the son of the Pope's sister, and subsequently a Cardinal. Tasso was assured that he should be exempt from all attendance and enjoy full leisure for philosophy and poetry: he occupied himself in bringing out his second "Jerusalem," which he himself preferred to the first, thinking it much superior to it. He was honoured and beloved by the two nephews of the Pope, distinguished with favour by the Pope himself, and dwelt in security and peace; scholars and authors, we are told, eagerly seeking the privilege of his society and conversation. When the summer months came round he returned to Naples, to avoid the unhealthy season at Rome. While at Naples the Prince of Venosa, who was friendly to him, and for whom he had composed some madrigals, was about to proceed to Ferrara to be married to the sister of Cesare d'Este. By Tasso's suggestion he wrote to Alfonso proposing or asking to bring Tasso in his company, who was sincerely desirous of kissing his hands and obtaining his forgiveness before he died; but Alfonso refused this request, and remained firm to the resolution he had made when Tasso last quitted Ferrara, of never beholding him or allowing him to re-visit Ferrara more. Tasso, calm in mind and spirit now, and knowing that death was surely approaching near to him, doubtless reverted

in thought to the days of his earlier career, and seems anxiously to have desired some token that Alfonso accorded him pardon for aught in which he had offended in the past. He writes to Alfonso for the last time:—

"If past events might be recalled, there is nothing which would so rejoice me as to have been always engaged in your Highness' service. But since it is impossible to amend the past, in that space of life yet left me, which is but a momentary interval, I will guard myself more carefully from offending your Highness than any other person. This has been my resolution for many years, though often interfered with, and but ill carried into effect. Once more I implore your Highness to have compassion upon me, and I pray God most devoutly to grant me His pardon, and that of your Highness."

Alfonso would appear to have made no response, and we cannot feel much surprise if he was unable to believe in the power of Tasso to keep effectually, in the future, resolutions that had so failed in the past; especially as he had never beheld him since the calmer spirit had come over him, and, health and life declining, the old feelings were dying out, and his mind becoming healed and restored.

As we draw near the close of Tasso's troubled career, it seems evident that in his decaying health and strength a much calmer state of mind did become his. Although at his death he was only fifty years of age, his strength and energies had failed, and the wild longing for undue exaltation had quite died out. It is almost sad to find him now, when he had resorted to Naples, only for a time, to avoid the unhealthy season at Rome, seeming quite to have forgotten Rome and all his ardent aspirations once connected with it, and all the hopes of preferment he had so earnestly entertained. He had when he left Rome, however, only quitted it temporarily, and Cardinal Cintio was not willing that Tasso should remain away permanently; to recal him and to ensure his return, it was decided to confer upon him the Laureate Crown which—though conferred afterwards on many less worthy—had once been conferred on Petrarch. His friends at Naples, even including Manso, wished him not to reject this offer. He himself was nowise elated by it, even shrunk from it, and though in compliance with the pressing entreaties sent from Rome, and the persuasions of those around him, he consented to repair to Rome, he declared to Manso that though he went by his advice he was convinced

the honour proposed for him would come too late, and took leave of Manso as never expecting to see him more. He was received at the gates of Rome by the household of the two Cardinals (nephews of the Pope), and by a great part of the Pope's suite, besides many other persons of distinction, conducted in state to the Vatican Palace, and the following day solemnly introduced to the Duke's presence, who formally apprised him of the honour intended to be conferred upon him. All produced in Tasso no pride or exultation; the longing for praise and exaltation seeming to be quite extinguished. Unfavourable weather and the winter season deferred the event taking place; meantime the city was full of preparations for it, and Rome was to be especially adorned for the occasion. Many were thronging there to be present at the ceremony—Poems were indited to celebrate it. Tasso alone remained unmoved, sad and calm. His kinsman Ercole Tasso having read to him a flattering sonnet, his reply was Seneca's line, "Magnifica verba mors prope admota excutit."

The prepared-for event was destined never to take place. Now, when honours were to be lavished upon him, he desired them no more; sick and weary, *rest* was the greatest earthly boon to be given. His weakness and illness increased, and he requested earnestly permission to retire to the Convent of St. Onofrio—his former place of shelter. In a farewell letter to Costantini, he expresses himself as fully aware that his end was approaching very near, and speaks of the ingratitude of the world in triumphing in bringing him a beggar to the grave. But had his life now been prolonged, the Pope had assigned him a regular pension and others had proposed to add to it. Peace however seem to have come to his spirit immediately after this, and from the time that his state was pronounced to him to be hopeless, "He spoke," Manso tells us, "no more of anything relating to this life;" his thoughts occupied only with preparations for the future, he lay engaged in prayer and spiritual communing. He partook of the last sacred rites of his church, and on the 25th of April he passed away chaunting the words, "In manus tuas, Domine." Then came the griefs and lamentations and regrets that the bestowal of the Laureate Crown had been procrastinated until too late to place it on his brow, while yet in life; but that it should still be borne by Tasso,

it was resolved that it should even in death be his. The body was gorgeously arrayed, the laurel placed around his head, and on a stately bier he was borne from St. Onofrio through the Borgo and the Piazza of St. Peter and back to the church of St. Onofrio, followed by a numerous procession. He had desired to be buried in the church of St. Onofrio, and there in the evening of the same day on which the procession had taken place he was quietly laid to rest. The Cardinal Cintio intended to have had a solemn and grand funeral celebration hereafter, but time passed on and nothing of this was done. Two years after, Manso visiting his burial place found no monument of any kind marking it, not even an inscription to commemorate his name; he appealed earnestly to Cintio, but Cintio seemed unwilling that any one else but himself should do anything, yet himself still deferred. Manso induced the brethren of the Monastery in the meantime to erect some simple memorial, and a small marble slab was placed over the grave, with the following short inscription upon it:—

D. O. M.
Torquato Tassi
ossa
Hic Jacent
Hoc ne nescius
Esses Hospes
Fres Hujus Eccl.
P. P.
M. D. C. L.
Obiit Anno MDXCV.

At the end of eight years Cardinal Cintio died, without anything more having been done. At length a monument was erected (on the left hand on entering the church) by Cardinal Bonifazio Bevilacqua, of Ferrara, his parents having been great friends of Tasso. So through Ferrara at last the honour paid to him was ordained to come. The monument had the portrait of Tasso in relief and bore also an inscription of some length. Many were the honours, however, subsequently paid to him; medals were struck, cameos cut, and a colossal statue was erected in the principal Piazza of Bergamo, the laurel crown upon his head. Another statue was erected in Padua by the students of the University. Portraits were painted of him by many painters, representing him at various periods of his life. A cast had been taken of

him as he lay dead in the Convent of St. Onofrio, and we are told that it is very striking in its aspect, seeming to depict both the genius and the suffering that had been his.

If his biographer has taken a mistaken view of the source of these sufferings, it was an error on the noble side, from such a point of view as his, strenuously to strive to rescue the memory of Tasso from an imputation of madness. It is but another instance of the still uneradicated feeling of a kind of disgrace attaching to it. A source of far keener suffering than the malice of the most ingenious enemies could have inflicted upon him would this malady be to him, but no disgrace. Sad as his sufferings were, we may trust that they were not in wrong and cruelty inflicted upon him, but that the inscrutable hand of disease was upon him. That the anguish of his soul was indeed great we may well believe; there was no need of earthly agents to aggravate the sufferings of such an imagination when afflicted by this dread malady. The names of those who would seem to have loved and pitied him, to have tended and befriended him as long as it remained possible to do so, and who tried to save him from himself, have been held up in powerful language to obloquy, execration, and scorn, as the authors of his misery and wrongs, but we have seen how, again and again, honours, distinction and prosperity might have been his; but again and again this was frustrated by the irresistible spirit that took possession of him, by his fears and restlessness, his terrible apprehensions. It is indeed a sad and troublous career to trace, and calls forth the deepest pity. We marvel not that when at length in his last illness his physician announced to him that there was no hope of his recovery, "Tasso embraced him with a tranquil countenance and thanked him with fervour for the announcement; and then immediately raising his eyes and keeping them fixed on Heaven, with yet greater earnestness and affection, he gave humble thanks to the merciful God who was pleased at last, after so many and violent tempests, to bring him thus to the desired harbour."

A. C. M.

Case of Homicide by an Insane Person. By Frederick Needham, M.D., Medical Superintendent, Barnwood House, Gloucester.

I venture to send to the Journal of Mental Science the following report of a recent trial for Murder, because by a multiplication of such reports not only are we supplied with psychological facts, which may be classified to form the bases of important principles bearing upon the relations of insanity and crime, but we are also furnished, in the rulings of the Judges, with materials for an oral law, which will probably ultimately find its way to the Statute Book, to the extinction of that unreasoning interpretation which is opposed alike to the teachings of science, to common sense, and to humanity.

Elizabeth Cole, about 30 years of age, the wife of a labourer, was charged, at the Gloucester Summer Assizes, with the wilful murder of her infant child. She had been married for six years, and had three children, of whom the deceased, aged three months, was the youngest.

Previously to her marriage she had suffered distinct attacks of melancholia, and, since her last confinement, had been gradually relapsing into a melancholic condition. So much was this the case that when her husband left home to go to his daily work, it was his custom to engage a little girl, the daughter of a neighbour, to stay in the house for the purpose of exercising supervision over her.

On the day of the murder, the husband being away, the prisoner, on some pretence, got rid of her juvenile attendant and two elder children, and in their absence nearly decapitated the infant by means of a chopper, its body and almost severed head being found on the top step of the stairs leading to the upper rooms. On being questioned she said, "I did it; I could not help it; I felt I must do it."

She gave the following account of herself and her crime at the interviews which I had with her for the purposes of her defence, but she was evidently intensely depressed, and could only be induced to speak at intervals, and under constant pressure.

She said, "My husband had recently taken a larger house, and I thought it was more than we could manage, for I was not feeling well or able to exert myself much, and I was sleeping badly. I had felt thus, and depressed in spirits, ever since the birth of my baby, and I feared I should be

unable to attend to it properly, and that it would be neglected and suffer. I loved it more than either of my other children, and I could not bear that it should feel the want of my care. Gloomy thoughts kept coming into my mind, and at last I was tempted to take my own life, and free myself from the trouble which I believed to be coming upon me. This temptation returned again and again, but I struggled against it, for I felt that I could not bear to leave my baby. Then the thought occurred to me—Kill the baby, and take it from the trouble to come. I dwelt upon this idea until I had decided that I would act upon it, and one morning I sent the two children and the little girl who looked after me into the garden, and killed my baby on the stairs with a chopper. I was not vexed with it for anything. I loved it very dearly, and only wished to save it from suffering."

Such was the account of the crime and the motives for its commission dragged from her little by little; evidently told at all most unwillingly.

It was interesting in several particulars. It shewed, as the histories of so many crimes committed by insane persons do show, that the direction of the homicidal act is often a mere accident, the result of love, fear, or other passing or more permanent emotion of the mind; suicide being frequently suggested, and abandoned for reasons which, in presence of the crime itself, seem feeble and absurd, but to the diseased mind are, doubtless, valid and all sufficient. The desire is to kill one or two or more, and the rest is often a matter of opportunity or chance. It shewed, moreover, as so many of these histories do shew, how difficult it may be *primâ facie* to assign motives for crimes committed under the influence of insane beliefs.

At the trial, the Judge (Mr. Justice Grove) drew an important distinction in his ruling. After stating the well-known unscientific legal definition of responsibility, he said—"a knowledge of right and wrong does not necessarily imply such a knowledge as is possessed by persons of ordinary sane mind. An insane person may know that he is taking away human life, and so committing a crime in the eye of the law, but to him it may seem a rightful, or, at least, not a wrongful act, and, in this view, he would not be responsible."

In this sense I could reconcile the dictum of the law and the teachings of science, and aid the prisoner by affirming that, while I could not have said that she did not recognise the abstract difference between right and wrong, or was not

aware when she committed murder that she was doing a wrongful act as against the law, I was satisfied that the law set up in her mind as the result of disease was to her a higher law than any mere external code, however perfect, could possibly be.

The prisoner was acquitted on the ground of insanity.

The Importance of Uniformity in Microscopical Observations of Brain Structure. By A. H. Newth, M.D.

The importance of microscopical observation as an adjunct to the study of disease is so very obvious that few can possibly deny its value. The great advancement that has been made in pathology, by the aid of the microscope, during the last few years, has almost completely changed most of the ideas that were formerly held as to the nature, prognosis, diagnosis, and treatment of many diseases. Diseases which were formerly shrouded in obscurity as to their real nature, are now clearly defined; we are enabled to trace the *fons et origo* of the causes which have been at work insidiously undermining the constitution, destroying gradually and surely important organs. We are enabled to employ a more certain means of diagnosis by discriminating structures from one another, which, to the unaided eye, seem alike—thus forming a more sure prognosis. Pathology has, in fact, become a new science by the aid of the microscope. And as microscopical observation becomes more complete, as better means of differentiating structures are discovered, while microscopic objectives are made of more perfect definition, so will the study of histology, and consequently pathology, rank higher and higher, till at last its place may almost, if not entirely, be raised to that of one of the exact sciences. The microscopist does not deal in hypothetical abstractions, but in demonstrable facts; truths which it is impossible to dispute, except from errors of observation. These errors are, however, in some cases formidable, for so many circumstances arise tending to obscure observation. Hence, there is a great necessity for co-operation in the work of histology and pathology, in order that these errors may be seen and understood, then grappled with and overcome. Observers must be willing to work more in unison, to compare results, to submit their work to the severest criticism possible: until they do so the science of histology will only slowly progress

towards exactitude. More labourers, too, are needed; the field is so vast, time is so short, that the few earnest ones at present at work are not sufficient.

No doubt the difficulties that lie in the path of the microscopist are great, and the encouragements so few that many do not care to pursue it, or give up the pursuit after a short time. This neglect of an important study, this turning back after having put the hand to the plough, is not entirely due to want of perseverance or pluck on the part of the intending observer. It is rather due to the want of co-operation amongst workers in histology. An organisation of workers in this branch of study is urgently needed, not only to promote and encourage work, not only for the purpose of comparing results, but also for determining what each observer should study. If each were to have some definite kind of work, some restricted portion of a pathological organ to confine his attention to, he would do more, and his results would be far more reliable than if he had no such restrictions. The general results of the total organised observations would also be of immense value, for each observer's work would fit into the whole with tolerable exactitude.

If there is, then, a necessity for histologists in general to co-operate together for work, there is a far greater necessity for those who are engaged in the study of the microscopic structure of the brain to do so. The brain, it is needless to observe, is the most complex of all the organs of the body; its functions are so multifarious, and its structure necessarily so intricate, that it may be regarded as the most difficult study histologists can pursue. In comparison, it is easy to show the minute anatomy of the kidneys, lungs, liver, etc., for these have each only a definite function to perform, and this function is the same almost throughout the structure: a small portion of one of these organs is typical of the whole. It is not so with the brain: though there is a general arrangement of nerve cells and nerve-fibres which are somewhat alike throughout, yet, as probably each convolution and nervous centre has a certain distinct series of functions to perform, the anatomy of each must necessarily vary from the other. Each individual nerve-cell represents some action or thought, and there is a necessity for co-operation in the work of endeavouring to trace the connection between the various cells and the motor centres, etc., which give expression to these thoughts. These cells are so numerous, and are distributed over so vast an area, that a few observers are quite

unequal to this task. As many as can possibly do so should be induced to join with others in preparing microscopic sections of brain substance, so as to obtain a large number of observations for comparison.

So many difficulties meet the microscopist in this special study, at the very commencement of his course, that many are prevented entering on the work by reason of the difficulties alone. These might, to a very great extent, be overcome by co-operation.

There is first of all the difficulty of making good sections, which, to those who have tried it, is very great, and which those who look back on their early unaided efforts remember painfully.*

The failure in this respect may be the result of unnoticed causes of so slight a nature as to be readily overcome when pointed out. Many a person has been deterred from following up this branch of histology from want of success through some simple cause, probably adulteration of his chemicals, believing himself incapacitated for the work from want of aptitude.

Microscopists can seldom be charged with wishing to keep secret any process they may have been successful with; as a rule, they are always most liberal in explaining matters to the enquirer, and in publishing the results of their observations. The beginner, however, is often very unwilling to confess his want of success in preparing brain substance for examination, even if he has the opportunity, which he frequently has not, of obtaining advice in this respect. He goes on trying and trying, with more or less success, but never satisfactorily, till at last he gives up the work from sheer weariness. He may even have not been able to get good specimens to copy; and thus fails for want of a model. Perhaps he buys "shop" preparations in hopes of working up to them, but they disappoint him; there is not the definiteness of structure he wants, and he cannot be quite sure of the appearances, whether they are natural or not. Had he seen a good specimen prepared by an experienced histologist, he might have been induced to persevere, and science might have been enriched by his labours.

There is a great need for microscopists to agree amongst

* That the difficulties are not insignificant is proved by the fact that some experienced microscopists of my acquaintance acknowledged their incapacity to get good sections of brain substance, while others, like the reviewer in last number, go so far as almost to doubt the possibility of getting them at all.

themselves as to the method of preparing sections. While one adopts one method, and another a different, and a third some other plan, no reliance can possibly be placed on a comparison of the results of these various methods. It is impossible to tell how far the appearances, which may have been considered normal or pathological, are due to the hardening process employed, or to the colouring agent. It may be said that the microscopist can compare his own specimens one with another, and with a healthy standard of his own preparing, but this is not entirely possible; he would have in that case to prepare more specimens than his time would allow, and a great number of preparations are required of the same class to be able to form a positive opinion as to the structure.

A standard hardening process and a standard staining process ought to be fixed, and all observers should work by these standards. Of course this would not prevent them employing their own method on other portions of brain. In fact it would be a vast assistance to them, as enabling them to compare their own preparations with the standard ones. Many interesting facts might be brought out thus.

Besides the fixing of a method for preparing the brain sections, it is most important that the brain be removed for the purpose of examination at such a period after death and in such a manner as may yield uniform results. There is all the difference in the world between a fresh and a partially decomposed brain, as to microscopical appearance. Nerve-structure, necessarily the most active during life, is consequently the most liable to decompose early; it is, therefore, quite useless to compare a specimen which has been obtained within twenty-four hours with one that has not been taken till thirty-six or even forty hours after death.

The state of the weather, the temperature of the room in which the body is kept, the warmth, moisture, and electrical state of the atmosphere, have an important bearing on the rapidity or slowness of decomposition; the mode and cause of death too influence post-mortem changes. These effects are beyond the power of the microscopist to modify, but they should be carefully recorded and noted, in order that comparisons may be of value. It would be an interesting subject for consideration how to obviate these post-mortem changes, or how to get the brain as soon as possible after death. One method has suggested itself to me, and that is to trephine the skull over certain parts, remove the small portion of

brain exposed, and place it at once in a preservative fluid. My friend, Mr. Ward, of the Surrey Asylum, has suggested injecting the cranial cavity with a weak solution of chromic acid or bichromate, immediately after death. If it is possible to get the solution to act over the whole cerebral surface, this would be a very valuable process. It would reduce to a minimum all difficulties from post-mortem changes, and by partially hardening the brain substance before removal, would prevent, to a great extent, injury of the structure. Thus we should be enabled to form a more conclusive estimate as to the actual state of the brain at or near the moment of death. But it is, of course, absolutely necessary that all the observers should use the same preservative fluid, and, to a certain extent, inject it in the same way.

When observers have been induced to work according to a uniform system, and their preparations have been proved to tally one with another pretty exactly, then there is another and a not less important uniformity to be enforced. This is, that each histologist should restrict himself to certain portions of the brain, which portions are to be settled at some meeting held for the purpose. In this manner, if there are a sufficient number of workers, the whole brain might be examined minutely in a comparatively short time, and the result would be a much more extended understanding of the brain as a whole. The result as to the knowledge of the physiological and pathological nature and connection of healthy and diseased nervous element that would thus be obtained, is beyond the power of the most sanguine person to predict. That it would advance the study is most certain, whilst it is as certain that it will not be so advanced, or, at least, only very slowly, when depending only on the desultory labours of a few unorganised workers.

It may be argued that there is no need for microscopists joining together in this way for the purpose of helping one another to determine uniformity of work and to compare results. The meetings of the Association are sufficient for the latter purpose, and the instruction in the various schools, and especially in such institutions as Bethlem and Wakefield Asylums, initiate the student into all that is necessary for a knowledge of how to prepare brain sections.

These are not sufficient, however: much more is needed. The hurried glancings at morbid specimens during an Association meeting, amidst the distracting elements of conversation, etc., are not conducive to a proper understand-

ing of the appearances of a delicate structure: whilst the clinical instruction of the various schools is, at best, but elementary, and microscope work, in order to be valuable, requires years of practice. There are men, too, earnest microscopists, who have not the least opportunity of attending the meetings of the Association; for instance, the Assistant Medical Officers, who largely engage in this work, cannot leave whilst the Superintendents are absent. Many, too, live so far away from where the meetings are held, that they cannot spare the time.

If, then, an association of microscopists could be formed for correspondence on matters appertaining to the histology of the brain, and other parts of the nervous system, the progress of science in this respect would no doubt be advanced. The association meetings would, of course, afford an opportunity for those who can be present to converse on the subject as well. But for work correspondence is best: the postal system affords every convenience for the safe, cheap, and rapid transmission of slides and preparations. The worker requires a certain slide under observation, for some time before he can grasp the details, and he should, therefore, have the opportunity of examining it at his leisure, and of carefully comparing it with those of his own preparing.

Histology may be compared with astronomy. This latter science would not be advanced very greatly if astronomers were only to meet together occasionally to have a peep through a telescope. They have need to unite together for the purpose of making observations. Astronomy has become an exact science: why should not histology? It will, no doubt, become more exact eventually, but this can only be when microscopists are more unanimous in their work, and are willing to make preparations that will bear comparison one with another.

It is to be hoped that the advantages of this co-operation will be seen by all microscopists, and that some one, with the power of organisation, will take the matter in hand.

A Short Account of the Transactions of the Mental Diseases Section at the International Medical Congress held at Philadelphia in 1876. By Fletcher Beach, M.B. Lond., Medical Superintendent of the Clapton Idiot Asylum.

Having had the opportunity of attending the International Medical Congress at Philadelphia in the capacity of a delegate, by the kind invitation of the Committee of the Congress, it has occurred to me that a short account of the proceedings in the Mental Diseases Section may perhaps be interesting to members of this Association.

The Congress was held in the University of Pennsylvania, the class rooms being devoted to the use of the various sections. Papers of much interest were read. The following were the officers of the Section:—Chairman: John P. Gray, M.D., of Utica, New York. Vice-Chairmen: E. Grisson, M.D., North Carolina, and I. Ray, M.D., Philadelphia. Secretary: Walter Kempster, M.D., Wisconsin.

The Section opened at three o'clock in the afternoon of Monday, September 4th, with a paper on "The Microscopical Study of the Brain," by Walter H. Kempster, M.D., Physician and Superintendent of the Northern Hospital for the Insane, Oshkosh, Wisconsin. He first gave a brief statement, outlining the progress made by recent investigators in studying the pathological histology of the brain in insanity, and the following subjects were introduced:—

The importance of microscopic observations of the several cerebral membranes, to determine their pathological condition, and the relations that the various pathological states hold to the forms of mental aberration:

The abnormalities in arterioles and capillaries, including the various deposits on the walls of the vessels; engorgement and its consequences; the several changes observed in the coats of the vessels; occlusion from minute thrombi and embolism; alterations in the course of the vessels, and the effect these conditions have upon the surrounding brain tissue:

Miliary aneurisms and miliary hæmorrhages; the effect they have in the production of brain disease:

The perivascular sheath and perivascular canal, as they are found in cases of insanity, considered in their relations to adjacent brain tissue:

The various alterations of structure and form noted in nerve cells and nerve fibres in the several forms of insanity. The abnormalities in the neuroglia, and the conditions called "miliary sclerosis" and "colloid degenerations" were described, and the influence each condition has in impairing normal cerebral action was discussed.

The various pathological conditions found in the microscopic examination of the brain in a number of cases of insanity were illustrated by means of photo-micrographs and lantern views made from fresh and prepared specimens. The pathological states observed were considered with reference to the mental symptoms noticed during the course of the various forms of insanity.

On Tuesday, September 5th, a paper on the "Responsibility of the Insane for Criminal Acts" was read by Isaac Ray, M.D., of Philadelphia, of which the following is a summary:—

Great differences of opinion still exist among physicians, lawyers, and men of the world on the question how far insanity shall be admitted as an excuse for crime. Lord Hale's doctrine that partial insanity—that in which the patient is reasonable and correct on many subjects—does not necessarily exempt one from the penal consequences of crime still shapes the decisions of English and American courts. Tests for determining what kind of partial insanity does and what does not excuse for crime are diverse, unsatisfactory, and none supported by correct scientific knowledge of insanity. Delusion has been decided to be a sufficient excuse only when the criminal act committed under its influence would have been legally justified had the delusion been true. Notwithstanding many of the insane think and act correctly to some extent, yet it is impossible to say, with any near approach to certainty in any given case, where sanity ends and insanity begins. Two mistakes are made by lawyers in estimating the responsibility of the insane, viz., they define the scope of the influence of the mental disorder in an arbitrary manner, unsupported by the facts of psychological science, and they regard the affective faculties as without any part in the play of disease. The latter mistake pervades the theories of the law and the judgments of those who pretend to no law. Wrong as our present mode of procedure is, no change for the better seems very practicable, unless it may

be that which takes the question of insanity entirely from the court and gives it to the jury as one exclusively of fact.

The Section adopted, by unanimous vote, the following conclusions :—1. There is at present a manifest tendency to hold the insane responsible for criminal acts. 2. That this tendency is unjust, unphilosophical, and contrary to the teachings of pathology, which clearly points out that insanity is but the expression of disease.

On Wednesday, September 6th, Dr. C. H. Hughes, of St. Louis, Missouri, read a paper on the "Simulation of Insanity by the Insane."

The following is a brief summary of his remarks :—

The feigning of insanity by the sane has been long recognised as a practical fact. The possibility of similar efforts on the part of men really insane has been ignored or forgotten. The fact that the proof of simulation possesses no real practical value in the case of a person already adjudged to be insane, is probably one cause of the rareness of recorded cases. Advanced general dementia is incompatible with simulation. Acute and general mania is also incapable of coexistence with feigning. In recovery from the latter condition, circumstances might easily give rise to simulation of a state recently passed through. Experience and observation might certainly help to an excellent imitation of a state so lately endured.

Simulation requires and implies some degree of rationality, and usually some motive. This is by no means incompatible with insanity. In the remissions of periodic mania, in certain cases of chronic general mania and certain forms of hysterical mania, and especially in affective or moral insanity, without distinct intellectual impairment, simulation is perfectly possible and practicable. The existence of susceptibility to ordinary motives is recognised in the management of every insane asylum. Striking instances of success in the simulated abandonment of delusions, so common in alienistic literature, suggest an equal facility at invention or pretence.

The criminal classes of our great cities are born and trained to deception. Simulation might very naturally be added to constitutional infirmity. Such cases probably occur oftener than is supposed. Many famous and historic cases might be most correctly characterised as compounds of simulation with active disease.

Rarely does insanity affect all the faculties alike. Among the rational acts done by the insane man simulation may happen to occur. Especially probable is it that a man recovering from mania might imitate the crazy acts recently prompted by disease, if adequate motive existed.

Simulation is peculiarly practicable in those forms of insanity which involve the affective faculties, leaving the intellect comparatively untouched.

The question of responsibility in cases where simulation is mingled with actual disease is a very difficult one. The ancient legal test, "knowledge of right and wrong," is here wholly inadequate.

The motive for simulation in the insane of hysterical tendencies is often the craving for sympathy and attention. Occasionally, however, it seems to be wholly motiveless—a mere freak of disease. We should beware of inferring, because of detected simulation, the non-existence of disease.

The following was adopted as the conclusion of the Section :—

It is not only not impossible for the insane to simulate insanity for a purpose in any but its greatest forms of profound general mental involvement, but they actually do simulate acts and forms of insanity for which there exists no pathological warrant that we can discover in the real disease affecting them.

On Thursday, September 7th, a paper on "The Best Provision for the Chronic Insane" was read by C. H. Nichols, M.D., Physician and Superintendent of the Government Hospital for the Insane, Washington.

The reader of the paper was strongly of opinion that it would be inadvisable to erect asylums for the chronic insane, partly because, to save expense, such an asylum ought to be placed where patients could be sent from two or three States, and they would thereby be removed long distances from their friends; and partly because the medical officers attached to such an Institution would, in his opinion, become depressed and likely to become apathetic in their duties in consequence of the little chance of improvement likely to take place in the patients confided to their care.

An animated discussion took place on the numbers which a hospital for the insane should contain, so that it might be efficiently superintended, and the cases resident therein might be properly studied and treated. The older members con-

tended that the limit should be placed at 250, but the majority held that, provided a sufficient number of Assistant Physicians were appointed, the number might be extended to 600 or more.

The Section adopted the following conclusions:—

1. That provision for the chronic insane should be made by constructing buildings in connection with the several hospitals for the insane.

2. That it is not desirable to construct institutions solely for the care of the chronic insane.

On the morning of Friday, September 8th, a masterly "Address on Mental Hygiene" was delivered by John P. Gray, M.D., Superintendent and Physician to the New York State Lunatic Asylum, Utica, Hunter McGuire, M.D., of Virginia, in the chair.

In the afternoon Dr. Edward C. Spityka, of New York, read a paper "On the Methods of Examination which will reveal a clear and decisive connection between the Symptoms of Insanity and the Pathological Lesions on which they depend."

This closed the proceedings of the Section.

CLINICAL NOTES AND CASES.

Case of Insanity with concomitant paronychia. Recovery. (under the care of R. H. B. Wickham, F.R.C.S.Ed.). By William J. Brown, M.B., Assistant Medical Officer Borough Lunatic Asylum, Newcastle-upon Tyne.

H. S. (No. 809) was admitted to this asylum 26th February, 1876. The statement contained the following particulars:—Æt 77 years. Widow. Poor. A nurse. First attack, and had lasted for ten weeks before her admission. Cause, unknown. Not subject to epilepsy nor suicidal. Said to have been violent, and used threats, but not considered dangerous to others. Medical certificate:—Refuses to speak; makes vague and unmeaning motions with her hands; has a vicious expression, and appears to watch an opportunity for doing violence. Her sister states that she is at times very violent, requiring constant watching and occasional restraint, as she bites those about her, and has threatened to cut her sister's throat. Mrs. G——, with whom she has resided for three years, states that for some weeks past she has been dangerous to others.

On admission she was placed in the Infirmary Ward, and slept in

the dormitory attached to it. Pulse 66, weak, and thready. Tongue readily protruded, covered with a white fur, and fissured. No headache, eruptions, bruises, nor fractures. First finger of right hand ulcerated in various places, swollen, and perforated by sinuses, from which a brick-red ichorous fluid exuded, apparently due to necrosis of the two distal phalanges. The nail was partially separated from the finger, which had a specific appearance. The tissues at the root of the finger had a dark red congested appearance, the adjoining skin being in a state of desquamation. There was a surgical incision over the second phalanx. Gait feeble. Greatly emaciated. Bodily health very weak. Unable to walk without assistance. Complained of pain over the sacral region. Trembled slightly. Partial loss of power in the lower extremities. Intelligence degenerated into mere childishness. Pupils equally contracted.—Gestures fantastic, and expressions incoherent. Unable to answer questions properly. Complained of pain when the diseased finger was handled. Threatened "to bite, scratch, and eat reporter's head off." In a very dirty and neglected state. Not appearing to be inclined to sleep, some hours after being put to bed, she was ordered the following draught:—℞Chloral Hydrat ℈ii. Aq ad ℥ii. m. ft. Haust.

27th February.—Slept until 6 a.m. Finger dressed with linseed meal poultices, and carbolic oil (1 to 30).

28th February.—Free incisions were made into the finger, laying open the sinuses. The finger was then bathed in warm water, and a poultice applied. There was very little hæmorrhage from the incisions.

29th February.—The sinuses having healed, the adhesions were broken down with a probe. No necrosed bone was detected on probing. Slept well last night. Has taken very little food since her admission. Was given two ounces of brandy after the examination and ordered 2oz. whisky and one pint beef-tea (as extras) per diem.

4th March.—The finger is improved, as also are her bodily condition and appetite. Local application of poultices still continued. The whisky has been increased to 4oz. per diem. Is taking the following mixture—℞Quin Sulph gr x. Tinct Ferri Mur ʒiii. Infus Calumbæ ad ℥viii. m. ft. mist. ℥ß ter. hor.

6th March.—Finger looking much better. Sinuses healing. Poultices continued. Appetite better. Mental state slightly improved.

7th March.—Finger strapped with diachylon. Talks more rationally. Appears to appreciate any little kindness which is shown to her.

10th March.—Strapping removed. Finger much reduced in size. Pus having formed in one of the sinuses, poultices were applied.

12th March.—Noisy during the night. Bodily health and mental state improved.

13th March.—Portions of necrosed bone removed from the finger. Lotio nigra, on lint, applied.

15th March.—Strapping re-applied. ℞Quin Sulph ℈ii. Tinct Ferri mur ʒii. Æther Chlor ʒß. Aq ad ℥viii. m. ft. mist. ℥ß ter die.

17th March.—Strapping removed. Swelling greatly reduced. A small poultice applied to the extremity of the finger.

22nd March.—Strapping renewed. Has sat up, part of each day, since the last entry was made. Seems to be much improved.

23rd March.—Continues to improve. Half-pint porter to be substituted for 2oz. of whisky.

24th March.—Finger improved. Bread poultice applied in lieu of plaster.

25th March.—Finger still improving. Dressed with resin ointment.

27th March.—Zinc ointment substituted for resin ointment. Quinine mixture continued.

31st March.—Finger still improving, and the nail growing again. Mental state worse. Childish manner.

8th April.—The finger has healed, and all medicines and extras have been discontinued. Mental state greatly improved.

25th April.—Finger much reduced in size. A small collection of matter formed under the inner side of the finger, and was treated by means of bread poultices, followed by weak mercurial ointment, to cause the induration, which remained, to disappear. Zinc ointment is now being applied. She appears to be, both physically and mentally improved, and does light fancy work, such as knitting, &c.

6th May.—Liberated on trial, for six months, from the 26th April. The finger is quite healed up, and a new nail has grown on it. It promises to be a very serviceable finger. Her mental state appears to have improved "pari passu" with the finger.

23rd October.—Discharged. Recovered.

23rd November.—It was stated by her relatives and friends that her mental faculties were in perfect order until her finger became diseased, but that soon afterwards the mental disorder became developed. They also stated that since she was discharged "she has been as well as ever she was in her life."

Notes of a Case of Tubercular Tumour of the Brain. By Dr. Howden, Montrose.

J. G., aged 28, unmarried, native of Lerwick, Shetland, was admitted to Montrose R. L. Asylum, on 7th May, 1873.

Cause of insanity unknown. Has monomania of suspicion. Has every appearance of having phthisis pulmonalis. Suffers from amennorrhœa.

During her stay in the asylum no change in her mental condition was observed. Since beginning of 1876, she suffered from severe cough and expectoration, and ultimately died of phthisis on 22nd September, 1876. A week before her death it was noticed that the right pupil was dilated.

Autopsy.—Body much emaciated.

Thorax.—Both lungs contain extensive tubercular deposit and small cavities. Heart normal.

Abdomen.—*Kidneys*—left, normal. Right contains tubercle.

Mesenteric glands much enlarged and cheesy.

Intestines contain tubercular ulcers.

Head.—*Calvarium* normal.

Dura mater at vertex seemed normal, as also *arachnoid* and *pia mater* at same place.

Brain.—Convolutions of brain flattened. On attempting to remove the brain a tumour was found attached to the dura mater in the left occipital fossa. The brain substance was in no way connected with the tumour, but seemed pushed aside, and in part absorbed. The grey matter of the convolutions over the tumour could scarcely be detected, and the white matter, into which the tumour projected, was soft and broken up. The membranes (visceral arachnoid and pia mater) could not be traced at the seat of the tumour, but seemed to have been absorbed.

Tumour.—The tumour, which had a fungoid appearance, was about 2 inches in diameter. It was firmly attached to the dura mater, the arachnoid covering of which it seemed to have pushed before it and ruptured at various points, giving the tumour a knotted fungoid appearance, like a bad finger-and-toe turnip.

The left temporal fossa was much more pronounced than the right, and crossed the mesial line, the ridge between the two fossæ being more on the right side.

The whole left side of the back part of the skull seemed larger than the right, but, owing to the state of the brain, the respective hemispheres could not be weighed. The tumour had no connection with the skull. Both sides of the body equal.

The tumour was found on section to be of the same consistence throughout, and did not contain any cavity. Consisted of a dense cheesy matter.

Microscopic Examination of Brain.—The white matter into which the tumour was pushed was completely broken up, and under the microscope exhibited great quantities of compound granular bodies. The grey matter seemed normal. The juice of a section of the tumour showed tubercle cells, blood corpuscles, &c.; few compound granular bodies.

Remarks.—Judging from the appearance of the tumour, the condition of the brain, and the altered shape of the skull, the growth must have been slow and of long duration; indeed, the distinct bulging of the skull over its seat points to the probability of its existence during adolescence.

With the single exception of the dilatation of the pupil, which may have existed for long, though it was only noticed

shortly before death, there was nothing observed during life to indicate any unusual condition of the encephalon. Neither the motor nor sensory systems were affected, and there is no reason to suppose that the mental symptoms were dependent on the presence of the tumour. During the time she was under observation she was suffering from phthisis. Mentally she was weak, melancholic and suspicious. She imagined she was under some supernatural influence, and often refused her food from the belief that it was poisoned. The special senses were not affected. As is the case with most encephalic tumours, it did not involve the brain substance proper.

OCCASIONAL NOTES OF THE QUARTER.

American Asylums.

We have received from Dr. Wilbur the copy of a paper on the "Governmental Supervision of the Insane," read by him at the Annual Meeting of the American Social Science Association. In this paper he strongly advocates a systematic governmental supervision of the asylums of the United States, similar to that which is carried out by the Commissioners in Lunacy in this country. It appears that desultory efforts have been made in some States to establish such a supervision, but not very successfully, for the Superintendents of Asylums have not yet seen the necessity of other inspection than self-inspection. This is what Dr. Wilbur says—

The only opposition that has been made to the project has come from parties directly connected with the management of insane asylums. For years they have placed themselves in opposition to a public need and a public want. Banded in an association, known as the American Association of Superintendents of Insane Asylums, a close corporation that excludes from fellowship any assistant medical officer of however large experience or faithful service, it not only assumes to dictate to legislative bodies what laws are necessary in the case of the insane, but claims for a small class of medical specialists the sole privilege of the intrepretation and application of those laws. In fact, it rules the judges out of the court, except to give authority and judicial voice to the opinions of the medical expert. It assumes the prerogative of framing "a code of principles of management to secure the individual good of the insane and the highest public interest." It claims authority in all questions "re-

lating to proper location, water supply, general character of hospital; number to be treated, material for construction, arrangement of building for classification, dormitories, service-rooms, lighting, drainage, heating and ventilation, and all other details necessary in such institutions," also "all questions relating to organization and government in all their details." They have brought the whole influence of this association to bear upon the legislatures of the different states to prevent any legislative action that should in any wise interfere with their exclusively individual control of the several asylums with which they are connected, or be at variance with what, in their estimation, is the proper mode of management for the insane.

We do not of course endorse this accusation, for we are not in a position to do so; but we may take this occasion to say that the exclusion of assistant medical officers from fellowship in the Association of Superintendents has always seemed to us to be as unwarrantable as we are sure it is unwise. There can be no question that the Association is seriously the sufferer by the absence of young and energetic workers who would bring into it enthusiasm of spirit and freshness of views; and no question, moreover, that such exclusion is contrary to the fundamental principle of a truly scientific association. Science knows no difference between principal and subordinate; all workers are equal in its courts; and it gladly welcomes light, from whatever quarter it comes. American Superintendents might do well to take a leaf out of our book. The *Medico-Psychological Association* began in the union of a few medical officers of asylums, but it now includes among its members not only most of the medical officers of asylums, superintendents and assistants, but some laymen, and a considerable number of medical men who are not connected with asylums; and it has grown in usefulness, prosperity and vigour, in proportion as it has extended its roots. Exclusiveness means the deliberate shutting out of instruction, and can have but one result—lack of knowledge.

But let us return to Dr. Wilbur's indictment—

A law is passed for the establishment of a new insane hospital. A local board of Trustees is appointed; or at all events, a board of Trustees, of which a local interest soon acquires a paramount control, and to these is entrusted the expenditure of the public money in the purchase of land and the erection of buildings. And this very fact of local selection makes men appointed to represent the state and its interests lose sight of the object of their appointment. From their proximity to the institution, they become, *de facto*, identified with its

interests and the champions of its policy and its existing administration; as of a party distinct from the state. * * * *

With what results, the customs that prevail in our insane asylums will show. At certain periods the trustees, or a small portion of them, make their visits; usually once in three months. In company with the medical officer, they stroll through the wards or a part of the wards. Their coming is known; the wards are scrubbed; the ventilating fans are set in motion on these occasions at least; the patients are in order and the attendants all on duty. It is a dress parade, in which the trustees are the inspecting officers.

The Superintendent, a man selected often through social or political considerations or some species of favoritism, and not by any form of competitive examination, as is the case abroad, is loaded down with an accumulation of duties and responsibilities, beyond the capacity of one man in a thousand.

Besides these home duties, he is, unfortunately, a frequent witness in the courts, and often has a large and lucrative consultation practice through a wide territory; both of which matters divert his time and his thoughts from the special work, where he is needed and for which he was chosen.

The evil consequences he traces in neglect and abuses on the part of subordinates, unkind treatment of patients, the hushing up of scandals, no prosecution of wrong-doers, and extravagant expenditure. The Superintendents become timid and over cautious.

They are afraid to run any risks, even small ones, and when the welfare and comfort of their patients might possibly be much promoted thereby. Thus, they feel safer when the patients are, most of the time, under lock and key in the wards or airing-courts. And so the patients are not allowed that degree of freedom that is found practicable in other lands. They are not trusted to labour in various occupations, which is the great feature and art of management of the insane in European countries. There are patients, physically strong and well, in our asylums who are scarcely trusted out of doors from one year's end to another; and, prevailingly, the patients of American asylums are very little in the open air. Dr. Bucknill, the English Commissioner of Lunacy, who visited this country a year ago, noticed this fact and comments upon it in an account of his visit to American asylums.*

* Note.—Dr. Gray, the Superintendent of the Asylum at Utica, and also editor of the "Journal of Insanity," has a note upon this criticism of Dr. Bucknill, which reads thus: "Dr. Bucknill visited Utica on the 22d, 23d and 24th of May. On Saturday, the 22d, the records of the asylum show that out of a population of 287 men patients, 233 were out of doors, and on Monday, the 24th, 252." This is hardly an ingenuous statement. The days referred to were exceptionally fine ones. They were in a sense parade days, for on the

The advantages of independent inspection of lunatic asylums by authorities who are not concerned in their management are so obvious, its necessity so palpable, that we cannot conceive any real argument against it; and we heartily concur with Dr. Wilbur in his wish to establish systematic government supervision, while leaving to him the entire responsibility for his indictment of the management of American asylums.

In the main hall of the asylum at Washington stands an electric clock, which Dr. Nichols is fond of showing to visitors. By ingenious devices of mechanism, it registers on a sheet of paper, for the information of the officers, the precise movements of the night watchman as he makes his periodical rounds through the wards, thus securing his fidelity.

On its face Dr. N. has placed the old Latin motto, "*Quis custodiet ipsos custodes?*"—who shall keep the very keepers? Would it not be well to emblazon this same motto on the door-posts of this and all other American asylums? Is it not wise for the state governments to act upon the principle thus quaintly stated, and establish a proper supervision of the very care-takers of all confined in such institutions?

A Priestly Exorcist.

The "Times" of November 2nd contains the following report from its Barcelona correspondent, who wrote under date October 21st:—

"I will briefly describe what has just happened in this wealthy city. About the 14th or 15th of this present month of October it was privately announced, chiefly to the faithful women of the congregation which regularly throngs the Church of the Holy Spirit in the street of San Francisco, that a young woman of 17 or 18 years of age of the lower class, having long been afflicted with 'a hatred of holy things'—the poor girl probably was subject to epileptic fits, and cried out became convulsed when she heard the noise of the organ in church—the senior priest of the church above mentioned would cure her of her disease, or, to use that gentleman's own language, 'Avaunt,

22nd the Association of Superintendents of Insane Asylums were making a visit to the Utica institution, and some of them, with Dr. Bucknill, remained over the 24th. Out of deference to the visitors, perhaps, an unusual effort was made to get the patients out. Nevertheless, in spite of this note, the fact is patent to all who have had the opportunity of comparing the customs of American with British institutions, that the former are much less in the open air than the latter. In Great Britain they not only get the patients out of doors, but keep them out.

physicians and mountebanks; see how the Church will cure this poor girl, who is at present possessed with 400 devils.'

"Those who are acquainted with Barcelona know well the Calle San Francisco, one of the well-to-do streets of the city, and its church, Espiritu Santo, not a poor man's, but a fashionable church. For eight days, the last day being the 17th inst., a little stream of persons of all ranks and of either sex might have been seen at the unusual hour (for church-going) of 12 a.m. threading its way towards the church. The principal door was kept closely shut, but the faithful or credulous, the open scoffer, and the lover of signs and wonders found admittance by a side door to the exhibition which I am about to describe. The church was dark, but a sickly light was shed by wax lights on the sable forms of some 80 or 100 persons who clustered round the *presbiterio*, or sanctuary, in front of the altar. Within the little enclosure or sanctuary, separated from the crowd by a light railing, lay on a common bench, with a little pillow for her head to recline upon, a poorly-clad girl, probably of the peasant or artisan class; her brother or husband stood at her feet to restrain her (at times) frantic kicking by holding her legs. The door of the vestry opened; the exhibitor—I mean the priest—came in. The poor girl, not without just reason, 'had an aversion to holy things,' or at least the 400 devils within her distorted body had such an aversion; and in the confusion of the moment, thinking that the father was 'a holy thing,' she doubled up her legs, screamed out with twitching mouth, her breast heaving, her whole body writhing, and threw herself nearly off the bench. The male attendant seized her legs, the women supported her head and swept out her dishevelled hair. The priest advanced, and mingling familiarly with the shuddering and horror-struck crowd, said, pointing at the suffering child, now sobbing and twitching on the bench, 'Promise me, my children, that you will be prudent (*prudentes*), and of a truth, sons and daughters mine, you shall see marvels.' The promise was given. The exhibitor went to procure stole and short surplice (*estola y roquete*), and returned in a moment, taking his stand at the side of the 'possessed with the devils,' with his face towards the group of students. The order of the day's proceedings was (1) a lecture to the bystanders, and (2) the operation of exorcising the devils. The priest commenced his running commentary on, or explanation of, the strange phenomenon lying panting, foaming at the mouth, to the gaze of the stupid and shuddering crowd of her fellow men and women. The priest began by lamenting with tears that 'It is, unhappily, the fashion of people in this day and age to seek the aid of doctors, sleepwalkers or spiritualists, and quacks of all description'—the words he used were *medicos, somnambulas, y curanderos*—'when they have hard at hand the aid of religion, and an aid and remedy secure and all-sufficient.' He continued his address by saying that the means of which he should make use in the present case were not the

strongest in his power, for to use the strongest was not now allowed. He then said, 'This *joven—i.e.*, young girl—enjoys a most perfect tranquility and calmness so long as she does not catch a sight of holy things, such as the holy water, the priest's dress, the altar, the church, or hear the sound of a bell, the roll of an organ's note resounding through the aisle. You know,' continued the priest, 'that so great is this girl's aversion to holy things, myself included, that she goes into convulsions, kicks, screams, and distorts her body the moment she arrives at the corner of the street, and her convulsive struggles reach their climax when she enters the sacred house of the Most High.' He ended with the following words :—'This girl has often had the same infirmity in bygone years, and the devils have been constantly expelled ; but, owing to the laxity of religion in these latter days, they return again to possess her body.' Act the first finished. Act the second, the exorcism, commenced. Turning to the prostrate, shuddering, most unhappy object of his attack, the priest commenced, 'In the name of God, of the saints, of the blessed Host, of every holy sacrament of our church, I adjure thee, Rusbel, come out of her.' (N.B.—'Rusbel' is the name of a devil, the devil having 257 names in Catalonia.) Thus adjured, the girl threw herself in an agony of convulsion, till her distorted face, foam-bespattered lips, and writhing limbs grew well-nigh stiff, at full length upon the floor, and, in language semi-obscene, semi-violent, screamed out, 'I don't choose to come out, you thieves, scamps, robbers.' 'Fulfil your promise, Rusbel,' said the priest. 'You said yesterday you would cast 100 more of your cursed spirits out of this most hapless girl's body. Can't you speak ?' 'Yes, I can,' came from the poor girl's foaming lips, 'I can.' 'Yes,' said the *cura*, 'you are a devil of honour ; you are a man of your word.' Out of the crowd stepped a plainly attired Spanish gentleman, and said, 'But, father, how can you pray to and praise the devil ? I have read somewhere he is a liar and the father of lies. Does he keep his word ?' 'Yes,' said the priest, 'he is *muy formal—i.e.*, a man of his word. 'Fulfil your promise, Rusbel.' 'Never,' shouted the devil, or the girl, now lashed into an agony of frenzy. 'You shall,' said the holy father ; and the suffering girl, like a bruised and wounded snake, her dress all disarranged, her bosom heaving, wormed and twisted into the arms of the silly women who knelt and cried by her bench of torture. At last from the quivering lips of the girl came the words, 'I will ;' but the devil added, with traditional perversity, 'I will cast the 100 out, but by the mouth of the girl.' The priest objected. The exit, he said, of 100 devils out of the small Spanish mouth of the woman would 'leave her suffocated.' Then the maddened girl said she must undress herself, for the devils to escape. This petition the holy father refused. 'Then I will come out through the right foot, but first'—the girl had on a hempen sandal, she was obviously of the poorest class—'you must take off her sandal.' The sandal

was untied; the foot gave a convulsive plunge; the devil and his myrmidons (so the *cura* said, looking round triumphantly) had gone to their own place. And, assured of this, the wretched dupe of a girl lay quite still. The exhibition was announced for 11 a.m. on the succeeding day, and it commenced again. Up came a band of blue-bloused artisans and claimed admittance to the church. The priest stoutly refused entrance to any but women. The men beat the church door; the police came; a scrimmage arose, and the priest retreated in haste; the sick girl was dragged to her lowly home; two mechanics now lie in Barcelona gaol for their share in a called-for, if illegal, demonstration; the street was cleared by the police, and the affair was over. Next day the civil authorities of the town, men of high feeling and great enlightenment, shocked at what they had heard and read (for the whole affair is now in print, and can be bought in Barcelona for a half penny), stopped, by civil decree, the whole affair. In conclusion, a few remarks are due in justice to the authorities. First of all the Bishop, a man of enlightenment and erudition, was not cognizant, I believe, of this freak on the part of the clergy of the church in question. Secondly, the moment it came to the ears of the civil authorities, the sharpest and promptest means were taken to admonish the priest and prevent a repetition of a scandal which had shamed and sickened the whole city of Barcelona."

The priest was only following in the footsteps of holy men of old. It is related that—

"St. Apre, bishop and confessor, being one day at Chalons-sur-Saone, saw a young man who was possessed and from whose mouth, as from a furnace, rushed sulphurous flames. As soon as he saw the saint afar off, he became furious, and tried to bite all who came near him. Everybody got out of his way, but the possessed ran towards the saint as if to seize him. But the holy man advanced without fear to the encounter with the cross in his hand, and ordered the possessed to stop. As the fiery vapour which escaped from his mouth touched the face of the saint, and as the possessed tried to bite him, the bishop made over the mouth of the afflicted man the sign of the cross, and the demon no longer being able to escape in that way went out from the body of the man in the form of a diarrhœa."

After all the good Barcelona priest granted the demon a more pleasant way of exit.

Mr. Serjeant Cox and his Prophet.

An acute and impudent American, named Slade, had for some time driven a good trade in humouring simpletons to the top of their bent by getting so-called spirit-messages written on slates in gratification of their gaping wonder, charging them a fee of one guinea each for the pleasure of

being gulled. His vulgar fraud proved, at any rate, that he had made one discovery—namely, the infinite capacity of stupidity. Having been detected by Professor Lankester in writing the messages which he professed to receive from the other world, he was prosecuted at the Police Court as a rogue and vagabond by that gentleman; and he was finally convicted and sentenced to three months' imprisonment, with hard labour. In aid of his defence before the magistrate, the following report from Mr. Serjeant Cox was read:—

"Having undertaken to examine without prejudice or prepossession, and to report faithfully, without favour, in a purely judicial spirit, any alleged psychological phenomena that might be submitted to me as President of the Psychological Society of Great Britain, I narrate, without comment, what I witnessed at a sitting with Dr. Slade this afternoon. I sat alone with him, at three o'clock, in a room at 3, Upper Bedford-place, Russell-square, into which the sun shone brightly, at a table about 5ft. by 4ft., having four legs, no ledge below, and no cloth upon it. Dr. Slade sat at one side of the table, sideways, so that his legs and feet were not under the table, but his whole body fully in my view as he faced me. I sat at the side, the corner of the table being between us. As I sat I could see half-way below the table, and, by moving my head slightly, I could see the whole space below, which was wholly exposed in full daylight. An ordinary drawing-room chair was about six inches from the table on the opposite side, six feet from Dr. Slade. A heavy armchair was in the corner of the room, about the same distance from him and from the table. A slate of the ordinary school size and a piece of slate pencil were upon the table. Instantly upon taking our seats very loud rapping came upon the floor. This was followed by a succession of furious blows upon the table, jarring my hands as they were lying upon it. These blows were repeated at any part of the table desired, by merely touching that spot with the finger, while the blows, as forcible as if given with a sledge hammer, were being made. Dr. Slade's hands were on the table on my hands, and his whole body to his feet was fully before my eyes. I am certain that not a muscle moved. Then he took the slate, after I had carefully inspected it to be assured that no writing was upon it, and placing there a piece of slate pencil, the size of a small grain of wheat, he pressed the slate slightly below but against the slab of the table. Presently I heard the sound as of writing on a slate. The slate was removed, and on it a zigzag line was drawn from end to end. At this moment the chair that I had described as standing by the table was lifted up to a level with the table, held in that position for several seconds, and then dropped to the floor. While the chair was so suspended in the air I carefully noted Dr. Slade. It was far beyond his reach. But his hands were under my hands, and his feet were full in view near my

own on the side of the table opposite to that on which the chair had risen. While I was taking note of his position at this moment, a hand rudely grasped my knee on the opposite side to where Dr. Slade was seated, and his hands were still in mine on the table. Blows of a more gentle kind upon the table, attended with a remarkable quivering of it, announced, as he said, that his wife was present, and desired the slate. After the slate had been carefully cleaned, it was laid on the top of the table, with a like piece of pencil under it. Upon the slate he placed his right hand, and I placed my left hand, and with my other hand I held his left hand as it lay upon the table. As my hand lay upon the slate I could feel, and did distinctly hear, something writing upon it. The communication was evidently a long one; but before I report the result I desire to note a remarkable phenomenon, to my mind the most suggestive that attended this experiment It is necessary clearly to understand the position of the parties; therefore I repeat it, Dr. Slade and myself sat face to face. One hand of each of us was laid upon the slate. The side of the slate that was being written upon was pressed by us against the table. Our second hands were linked together and lay upon the table. While this position was preserved the writing proceeded without pause. When Dr. Slade removed his hand from mine it ceased instantly, and as instantly was renewed when his hand and mine met. This experiment was repeated several times, and never failed. Here, then, was a chain or circle formed by my arms and body and Dr. Slade's arms and body, the slate being between us, my hand at one end of it, his hand at the other end, and between our hands and upon the slate that connected them the writing was. When the chain was broken, forthwith the writing ceased. When the chain was reformed, the writing was at once resumed. The effect was instantaneous. In this curious fact we must seek the clue to this psychological mystery. Some rapid rappings indicating that the writing was finished, the slate was lifted, and in a clear and perfectly distinct writing the following was read. It filled the whole side of the slate:—'Dear Serj.,—You are now investigating a subject that is worthy of all the time that you or any other man of mind can devote to its investigation. When man can believe in this truth, it will, in most cases, make him a better man. This is our object in coming to earth—to make man and woman better, wiser and purer.—I am, truly, A. W. SLADE.' While I was reading this a hand grasped my knee furthest from Dr. Slade, whose hands were at that moment holding the slate that I might copy the writing. As I wrote, a hand, which I saw distinctly, came from under the table, seized my waistcoat, and pulled it violently. Seeing this, I took the pencil with which I was copying the words and laid it at the edge of the table furthest from Dr. Slade, and far beyond his reach, the end of the pencil projecting about two inches over the ledge. I asked if the hand would take the pencil. Forthwith a

hand came from under the table, seized the pencil, and threw it upon the floor. I again asked that it would pick up the pencil and bring it to me. In a minute it was brought and put upon the table by my side. I saw the hand that brought it as distinctly as I could see my own. It was a small hand, seemingly that of a woman. Again the slate was cleaned and laid upon the table as before, my hand upon it. In a few seconds the following sentence was written. Considerable power was used in this writing, and I could distinctly feel the pressure of the pencil upon the slate, and its motion as every word was written :—' I am Dr. John Forbes. I was the Queen's physician. God bless you.—J. Forbes.' While I was reading this, the hand came again from under the table and seized the sleeve of my coat and tried to pull my arm down, but I resisted and it disappeared. Then it came up again, as if from my legs, and caught the eyeglass that was hanging from my neck and opened it. During all these phenomena Dr. Slade's hands were before me on the table, and his feet full in my view upon the floor. The hand on each occasion came from the side of the table opposite to where Dr. Slade was sitting. He was seated on my left, and the hand came and seized me on my right leg, in a position impossible to him. The hand I saw was not half the size of Dr. Slade's hand. It touched my hand three times, and I could feel that it was warm, soft, and moist, and as solid and fleshly as my own. Again the slate was cleaned and held under the table tight against the wood, one-half of it projecting against the edge, so that I might be assured that it was tightly pressed against the wood ; but the slate was seized and with great force drawn away and rapidly raised above me, and placed upon my head. In this position the sound of writing upon it was distinctly heard by me. On removing it I found written upon it the following words :—' Man must not doubt any more when we can come in this way.—J. F., M.D.' Then the large arm chair rushed forward from the corner of the room in which it had been placed to the table. Again, the slate was placed under the table and projecting from it. A hand twice seized and shook my leg, both of the hands of Dr. Slade being at the moment before me, and his whole person visible. Thus ended this experiment. All that I have reported was done, that is certain. How it was done and by what agency is a problem for psychology to solve. For my own part I can only say that I was in the full possession of my senses ; that I was wide awake ; that it was in broad daylight ; that Dr. Slade was under my observation the whole time, and could not have moved hand or foot without being detected by me. That it was not a self-delusion is shown by this—that any person who chooses to go may see almost the same phenomena. I offer no opinion upon their causes, for I have formed none. If they be genuine, it is impossible to exaggerate their interest and importance. If they be an imposture, it is eqally important that the trick should be exposed in the only way in which trickery can be explained, by doing the same thing and showing how it is done."

Dr. Forbes, when alive, could write English, and speak the truth. He seems to have deteriorated in intellect and morality since he became a spirit, for he writes now like a charity school-boy, and tells a lie in saying that he was Physician to the Queen. Mr. Serjeant Cox is the Deputy Chairman of the Court at the Middlesex Sessions, and describes himself as President of the Psychological Society of Great Britain. A doubt naturally suggests itself whether one who has such faculty of observation and such notions of evidence as Serjeant Cox has displayed in his above quoted letter is in his proper place when engaged in the trial of prisoners. And it may, perhaps, suggest itself to those members of the Psychological Society who have self-respect, that they could consult that best by relieving their President forthwith of his onerous duties in attending *séances*, or by their retirement from a Society which imposes such tasks on such a worthy man. Serjeant Cox may be an amiable and good man in all his private relations, but he is plainly, as Deputy Chairman at the Middlesex Sessions, giving to the services of a petty Court talents which were intended not for the correction of the criminal, but for the edification of the idiotic portion of mankind; and, as President of a Society which assumes to be scientific, he seems to be doing his best to make his Society ridiculous. At the meeting of this so-called Psychological Society, if we may trust a report in the papers, he spoke of the prosecution of Slade as evidence of a conspiracy of the materialists who wished to crush spiritualism. We hope that he has been mis-reported, for we should be loth to think that Mr. Serjeant Cox thinks it decent to imply that a brother magistrate, in sentencing a rogue and vagabond to imprisonment, has lent his authority and office to promote the purposes of a nefarious conspiracy.

Responsible Imbecility.

We extract from the *Scotsman* of October 31st the following paragraph :—

PECULIAR CASE OF THEFT.

The case of the Lord Advocate against John M'Lean having been called, the Lord Justice-Clerk said this case was tried at the recent Circuit Court at Aberdeen. The prisoner was accused of theft by means of housebreaking, committed on the 21st or 22nd July, and the jury found him guilty, but recommended him to the leniency of

the Court on the ground of his mental condition. In regard to that matter, the circumstances were peculiar. The prisoner had been an inmate of the Lunatic Asylum of Aberdeen for a considerable period, whither he had been transferred from the poor-house of his parish. He made his escape on the 1st of July, and three weeks afterwards he committed the offence of which he had been convicted. It appeared that for a considerable time previous to his being taken to the asylum, which was in 1874, he had been of weak mind, and had been two years in the asylum before he made his escape. The medical men who were examined, however, were of opinion that he was not of unsound mind at the time they examined him. He had been three times previously convicted—once sent to a reformatory, once imprisoned for six months, and once for 18 months. It occurred to his Lordship that this was a peculiar case, and required to be dealt with somewhat out of the ordinary course. Accordingly, he certified the case for sentence to the High Court of Justiciary, and directed that a report be obtained from Dr. Mitchell, one of the Commissioners of Lunacy, on the mental condition of the prisoner. Dr. Mitchell, it may be stated, reported that the accused "is not insane in the sense of being free from responsibility to the law, but he is of very weak mind." Lord Deas, taking the prisoner's state of mind into account, was of opinion that a much smaller sentence might satisfy the ends of justice than in ordinary circumstances it would have been right to pronounce. His Lordship suggested six months' imprisonment. The other judges concurred, and the Lord Justice-Clerk passed sentence accordingly, remarking that he thought the Court should add to it a direction to the effect that the previous history of the prisoner and the report of Dr. Mitchell should be brought under the notice of the prison authorities.—Prisoner: Thank you, my Lord.

The Court then rose.

It strikes us very forcibly that in any similar case of the kind Dr. Mitchell would do well to leave the question of legal responsibility to those whom it concerns. Otherwise, he may do his office as little credit as the English Commissioners in Lunacy did their office in the Townley case. If a person "of very weak mind," who has just escaped from an asylum, is to be punished as an ordinary criminal, though happily not to an extent not quite ordinary, it would be well that a Commissioner in Lunacy should have nothing to do with it. We hope that Dr. Mitchell has been misreported, and that he really did not give an opinion about legal responsibility; but if he only declared that the prisoner's weakness of mind did not incapacitate him from knowing that theft was wrong, he was bound to have added that it was a very weak-minded

knowledge. If he is correctly reported, it seems to us that he might feel himself called upon, as a Commissioner in Lunacy, to urge in season and out of season the instant discharge from asylums of all very insane or very weak-minded persons whom he may believe to be "not insane in the sense of being free from responsibility to the law." There will not then be many insane persons left in Scotch asylums.

PART II.—REVIEWS.

The Lunacy Blue Books.

1. *Thirtieth Report of the Commissioners in Lunacy*, 1876.
2. *Eighteenth Annual Report of the General Board of Commissioners in Lunacy for Scotland*, 1876.
3. *Twenty-fifth Report on the District, Criminal and Private Lunatic Asylums in Ireland.*

The past year was happy in leaving no eventful annals of lunacy behind it in Great Britain or Ireland. The lunatics, the doctors, and the Commissioners all seem to have enjoyed a period of comparative rest and calmness. No great questions in regard to the insane stirred the public mind, and no scandals or abuses roused the indignation or sympathy of the philanthropic world. One or two of the weekly medical journals did admit a paragraph or two directed against the Scotch Commissioners, but as these clearly emanated from some one who was paying off an old score, and only brought charges of doing too much statistical work, they fell very flat. The *Lancet*, ever burning to be the pioneer of progress, it is true, got up an inquiry of its own, dubbing a gentleman "Commissioner," and sending him on a tour round a few of the asylums near London. But when it was whispered that the real object of this proceeding was to educate one of our future masters, and to train his prentice hand to rule with dignity, it was impossible to do other than laugh, with the naughty, uncharitable people who get up such stories, at his "Reports," and to wish oneself a protegé of a journal with a taste for "Commissions."

The same journal taking its cue, as well as deriving its information, from Dr. Bucknill, made a serious attack on

American asylums, their management, and their medical superintendents, and, as usual in anonymous writing, went beyond the proved facts of the case. Dr. Bucknill was placed in a peculiar position. He had received even more than the usual American hospitality and personal kindness, and yet had in honesty to report many unfavourable things in many of their institutions. Especially he pleaded for non-restraint most earnestly but in the kindliest spirit. Then the *Lancet* stepped in with still more serious and sweeping charges, made in a spirit of great bitterness, and from the standpoint of those whose own asylums came up to all that combined philanthropy and science could make them. The *tu quoque* reply was only too readily found in the record of shocking accidents and cruelties by individual attendants recorded in our blue books, and was used at once by our exasperated cousins in their journals. Dr. Bucknill made a gallant fight, and the Medico-Psychological Association backed him up: but are not all these things written in the medical chronicles of the year? The last contribution to the question has been made by Dr. Wilbur, an abstract of whose paper will be found in another part of this journal. His chief objection to the present system in America is, that they have there no inspection of asylums by independent government officials corresponding to our Commissioners and Inspectors. On this point we believe Dr. Wilbur to be entirely sound in his opinion, however much we disagree with the captiousness and sourness of his tone. For the sake of the patients, and for the sake of the medical superintendents, such inspection by competent officials, of proved ability and high professional status, is an absolute *sine quâ non* to the success as a policy of any lunacy system in any country. We would most earnestly press our American brethren to re-consider their views on this question. Could they but know the weight of responsibility that would be taken off their shoulders, both as regards the public and the relatives of their patients, by the existence of an advising inspecting board, composed of such men, they would be the first to seek its formation in the United States. Some of them labour under most erroneous opinions as to the powers of our Commissioners. Are they aware that in Great Britain the Commissioners cannot in any way interfere with the ordinary management of any public asylum, but can merely make and publish a report? We can assure them that, so far from being able to interfere

with the proper independence and authority of a superintendent, there is not an asylum in the kingdom whose committee and physician have not neglected many of their recommendations, and gone in the teeth of their opinions. This, in fact, adds a zest to the carrying out of a man's independent views, and stimulates originality of conception in asylum management, in a way that nothing else could do. We confidently appeal to the facts, whether an able and competent asylum superintendent on this side of the water is not as independent in his position in all respects as in America. If such an official is not very able and not very competent, then, for the sake of humanity, let him be stimulated and guided.

The total number of the insane, so far as they are known to the Commissioners, was 64,916 in England, and 8,225 in Scotland; in all, 73,141.

The new cases for 1875, for both countries, were 14,715, excluding transfers from one establishment to another, but including re-admissions.

5,129 patients died during the year in Great Britain; and 5,869 recovered from their malady.

There was an increase of 1,123 in the total number in England, and 156 in Scotland. The rate of increase was therefore very much the same in each country for the year, and as compared with the past ten years was lower in England than the average increase, while in Scotland there was no decrease.

There was an increase of 196 in the new cases in England, and of 186 in the new cases in Scotland.

In England the rate of recovery in county and borough asylums was 34·11 per cent. on the admissions (including transfers), which was at the rate of 1·5 lower than the average since 1859. In Scotland the rate was 44·4 per cent. on the admissions (excluding transfers), being more than 4 per cent. above the average.

The death-rate in those institutions in England was 8·7 per cent. of the total number under treatment, and 11·3 on the average number resident. This was slightly over the average rates. In Scotland the death rate was 5·3 on the total number under treatment, and 6·6 on the average number resident.

Regarding the increase of insane patients at present resident in asylums the following extracts are taken from the report of the English Commissioners:—

It, however, seems probable that the pecuniary advantage to unions arising out of the Parliamentary allowance of 4s. per head per week

for every pauper patient maintained in an asylum, has in some counties contributed to increase the number in these institutions, by the removal thereto of many patients who, but for such inducements, would have been retained in Workhouses. It will be observed, by an examination of Table ix., in this Report, and by a comparison of Table xii. in the Reports of this and of last year, that the increasing ratio of the total number of pauper lunatics maintained in asylums has, during the last two years, been accompanied, as a rule, by a decreasing proportion kept in Workhouses, and the percentage of out-door paupers, who are boarded with their relatives or others, has continued to diminish.

From Table xi. it will be observed that there has been in 22 out of the 54 counties an actual diminution in the total number of insane paupers on the 1st of January last, as compared with the 1st of January, 1875; but owing to the fact that an increasing proportion of the total number appears to be located in asylums, there is no sensible diminution in the demand for increased asylum accommodation.

The value of the conclusions to be derived from the statistical information of the English Commissioners may be estimated from what is here quoted :—

The statistical information given in our Annual Reports has gradually increased in bulk and importance, and we have reason to believe that among those interested in the care and treatment of the insane, and the question of insanity in its various aspects, this portion of our Report is considered to possess much value. At no time, however, have we considered it our duty to draw any but the most plain and obvious deductions from the figures which the means at our disposal enable us to present; nor can we deem it advisable or justifiable to offer to your Lordship, or to the public, any speculations or theories of our own based on these statistics. At present we do not think that the recorded experience is sufficiently extensive to warrant many very certain conclusions to be drawn from it, and the official publication of conjectures founded on confessedly imperfect data, and therefore liable to be falsified by the event, would not, we submit, be attended by any public advantage.

The following quotation from the English Commissioners' Report gives the percentage of recoveries and deaths during the year :—

The reported recoveries of the year, as compared with the admissions, were on the proportion of 34·11 per cent.; the deaths, upon the average daily number resident throughout the year, were at the rate of 11·36 per cent., and, calculated upon the total number under treatment, the rate of mortality would be 8·70 per cent.

It will be seen on an examination of Tables v., vi. and vii., that the recoveries have been nearly 4 per cent. lower than those of the pre-

vious year, and 1·5 per cent. below the average of the last 17 years. The mortality has also been somewhat unfavourable, having been about ·5 per cent. higher than that of the previous year, and than the average mortality of the last 17 years.

The larger proportion of chronic cases included among the admissions of last year must be accepted as an explanation of the diminished ratio of the recoveries; whilst to the severe weather at the commencement of 1875, which carried off an unusual proportion of aged patients, must be attributed the higher rate of mortality shown by the figures of the year.

With reference to the weekly cost of insane patients, the English Commissioners make the following statement:—

The weekly cost, per head, of maintenance, medicine, clothing, and care of patients in county asylums, averaged 9s. 9⅞d., and in borough asylums, 11s. 6⅛d., and in both taken together, 10s. 0½d.

The details of the averages of weekly cost are as follows:—

	County Asylums. £	s.	d.	Borough Asylums. £	s.	d.
Provision (including malt liquor in ordinary diet)	0	4	7	0	4	10¼
Clothing	0	0	10	0	0	11⅛
Salaries and wages	0	2	1⅛	0	2	5⅞
Necessaries, *e.g.*, fuel, light, washing, &c.	0	1	1¼	0	1	5⅞
Surgery and dispensary	0	0	0⅞	0	0	0⅛
Wines, spirits, porter	0	0	1½	0	0	1⅞
Charged to Maintenance Account: Furniture and bedding	0	0	5¾	0	0	8⅜
Charged to Maintenance Account: Garden and farm	0	0	6¾	0	0	4⅝
Charged to Maintenance Account: Miscellaneous	0	0	3⅞	0	0	7¾
Less monies received for articles, goods, and produce sold (exclusive of those consumed in the asylum)	0	0	4¼	0	0	2¾
Total average weekly cost per head	0	9	9⅞	0	11	6⅞

With reference to the visitors' books we make the following extract:—

The whole of the entries made by us in the Visitors' Books of the lunatic hospitals will be found printed in Appendix (E). For several years back they have been thus published, and a perusal of them is sufficient to give a good idea of the general condition and progress of each institution.

They indicate, moreover, the nature of the inspection formed by us with regard to suitability of the buildings, their condition and repair, and the general arrangements for the care and treatment of the

patients. It should not, however, be supposed that these matters form the only subject of inquiry at our visits, though they alone appear recorded in the Visitors' Book. In fact, that portion of our work which involves most responsibility, and frequently occupies most time, is the examination into matters connected with individual cases. Special attention is always given to patients admitted since the previous visit, or who at that visit were reported as exhibiting any signs of improvement. Full inquiry is made into complaints either of undue detention, of rough usage, of insufficient diet, or of any other grievance, whether made orally by patients, or arising out of letters addressed to us, and referred to the Visiting Commissioners for examination.

In every case where there is any show of reason for it, a private interview, often of considerable length, is granted to the patient desiring it. This practice is, of course, universal, and irrespective of the legal character of the establishment visited. In County and Borough Asylums, from the nature of the case, the number of patients as to the propriety of whose detention there can be any serious question is extremely small, and the power of discharge is not vested in us, but in the Committee of Visitors. In Hospitals and Licensed Houses, however, the case is different, and the Legislature has here provided a book called the "Patients' Book," for the purpose of recording the result of any special inquiries, and the observations on particular cases which may occur to ourselves, or to the Visitors or Committee of Management.

Generally speaking, the reports will be found favourable to the management of the Registered Hospitals during the past year.

Of illegal detention of patients the English Commissioners say :—

Some few cases of the illegal detention of persons of unsound mind have been brought under our notice, and we have inquired fully into the particulars of each. When satisfied of the absence of neglect or ill-treatment by those having the charge of such persons, and of their having offended through ignorance of the law rather than with the wish of evading it, we have been satisfied by an expression of regret for the offence, and by having the charge of the patient authorised by the statutory order and certificates.

The English Commission advocate strongly, and we think justly, the change of residence for patients to the sea-side dwellings, and their remarks on this topic is well worthy of attention.

The system of removal of patients to the sea-side or elsewhere for a time, for the benefit of their health, as sanctioned by section 86 of the Act 8 and 9 Vict., c. 100, and as extended by 25 and 26 Vict., c. 3, s. 38, so as to authorise leave of absence on trial, for the purpose of

testing the power of self-control and management, continues in full operation.

In several ways it is a most valuable arrangement. To the convalescent the change thus afforded is often of great benefit in re-establishing the healthy tone of the mind, while the relief from the monotony of the asylum is keenly appreciated by a large proportion of the hopelessly insane. At present the law does not, as we are advised, permit us to grant any consent to removal, on leave or otherwise, to any place beyond England and Wales, the limit of our own jurisdiction; but we should be glad if, in any amendment of the law, power were given to extend the license, so as to admit of a trip to Scotland, or elsewhere in the United Kingdom, without involving the lapse of certificates.

We find that the medical proprietors of licensed houses, and others having charge of the insane, enter, as a rule, very readily into our views on this subject, though the arrangements for safely carrying out an annual excursion to the sea are attended with trouble, a certain amount of anxiety, and sometimes with expense to the proprietor.

During the past year we find that we have issued consents for the removal, for health or on trial, of 819 patients. In 1865 the corresponding number was 492. These figures apply solely to the Metropolitan licensed houses and the single private patients throughout England.

The distribution of pauper lunatics in Scotland is contained in the subjoined :—

It appears from this table that the proportion of pauper lunacy to population is far from being the same in all the counties of Scotland. Certain counties steadily maintain a high, and others as steadily a low proportion. The difference becomes very striking if we contrast such counties as Renfrew, Lanark, and Linlithgow with Argyll, Perth, and Inverness. Thus, at the first of January, 1875, the proportion of pauper lunatics per 100,000 of the population was —

In Lanark . .	148	In Argyll . .	337
In Renfew . .	126	In Perth . .	275
In Linlithgow . .	149	In Inverness . .	273

These figures may be regarded as exhibiting the measure of the persistent burden of pauper lunacy in the two sets of counties; but if, instead of dealing with the number of pauper lunatics chargeable on a particular day, we deal with the whole number relieved during the year, we find the position of the two groups reversed. Thus, when we calculate for each of the six counties, the proportion of the number relieved during the year 1875, to the number on the roll on the last day of the year, we have the following results :—

For Lanark . .	130 to 100	For Argyll . .	115 to 100
For Renfrew .	129 to 100	For Perth . .	115 to 100
For Linlithgow .	126 to 100	For Inverness .	112 to 100

In various former reports, but more particularly in our last (Seventeenth Report, pp. ix., and 260-269), we have endeavoured to explain the nature and origin of these important differences, which maintain themselves steadily from year to year.

We give the following extract from the Scotch Commissioners' Report :—

It is too apt to be forgotten that the statutory lunacy of a country is far from being a thing which "human power cannot multiply and modify." In our Fifteenth Report (p. 285) we pointed out that "the existence of lunacy, in so far as it is officially recognised or required to be dealt with by the State, is at present decided by the certificates of two medical men; and indeed must always be determined in that or some similar manner. If there be persons who imagine that a uniform standard of mental soundness is accepted by all medical men, or by any one medical man in all circumstances, they must have little experience to guide them. Such certificates are always signed after a consideration of the social as well as the medical circumstances of each case. And it is scarcely open to doubt that in actual practice the source from which the required expenditure is to be obtained, is, rightly or wrongly, a common element in this consideration.

Speaking of the discharges of the recovered, the Scotch Commissioners say :—

Of 100 patients discharged recovered during the ten years, 1866 to 1875, 22 were private, and 78 pauper. The ratio of recoveries, therefore, among private and pauper patients, is in tolerably close accordance with the ratio of admissions.

The average ratio of recovery is highest in parochial asylums. This is probably explained by the fact that the patients received into these institutions comprise a greater proportion of persons labouring under the ephemeral forms of insanity, than those received into public and private asylums.

The average annual mortality is highest in the parochial asylums, and this the Commissioners think is due to the proportion of admissions, as is shown from the following table and comment :—

Taking the average of the ten years, 1866-75, we find as follows :—

	Parochial Asylums.	Private Asylums.	Public and Dist. Asylums.	Lunatic Ward of Poorhouses.
Proportion of admissions per cent. on number resident.	50·5	50·1	37·8	21·8
Proportion of deaths per cent. on number resident.	10·2	9·5	8·5	7·9

Many things must influence the death-rate in particular asylums,

as well as that which is now under consideration; but it appears to be satisfactorily established that the differences depend, in some measure, on the varying proportions of old-standing to recent cases in the populations of the different asylums.

The Scotch Commissioners give us statistical information regarding general paralysis of a most elaborate and accurate description. Such a numerical account of general paralysis, as occurring in a county, must not only prove of great interest, but also of lasting value to all interested in this disease, and we consider the only way of doing justice to the completeness of their remarks is to quote fully from their Report.

One of the diseases, whose occurrence as a cause of death is least likely to be inaccurately recorded, is that known as general paralysis of the insane; it may, therefore, be useful to present some of the results of an inquiry into its statistics, as taken from the returns received by us from all the asylums of Scotland.

The character and course of this disease are so especially destructive that, before its almost invariably fatal termination, it can fail in few cases to be recognised. It is, therefore, probable that if the inquiry be limited to the cases in which the disease has run its fatal course, no error of great importance in the data will vitiate such general conclusions as might fairly be drawn from them.

But, even with this limitation, it is to be feared that we cannot regard the facts as supplying a basis which is in all respects perfectly reliable. There is evidence in the details which we possess, that some medical men still apply the term general paralysis to conditions in which the name is rather descriptive than nosological; and that others consider the process of cerebal disorganisation which frequently accompanies senile dementia, as entitled to be considered a form of this disease. Such differences as may be caused by those diverse opinions and practices cannot perhaps be entirely prevented in any medico-statistical inquiry; but it is probable that they will not be numerous in this particular instance, and that they will in most cases be somewhat counterbalanced, either by their own manner of distribution, or by the occurrence of other errors of opposite and consequently neutralising tendency.

During the ten years, 1865-74, 524 deaths from general paralysis were reported to us. Of these, 90 referred to private patients, and 434 to paupers.

It is doubtful whether the statistics of the private patients can yield any useful result. The number is too small to afford a valid basis of calculation, and the information which we possess regarding them is too imperfect to be of real value. According to the statements in the asylum documents, 65 of the private patients resided in some parts of Scotland previous to their admission; 14 were resident

in England; 10 in the Colonies and the United States of America; and in one case there is no information regarding the previous residence of the patient.

If we take both pauper and private patients labouring under this disease, we find that they present an annual number of deaths amounting to 1·6 per 100,000 of the population, one-fifth being private and four-fifths pauper. The numbers for each of the ten years is shown in the following statement. The series seems to show a tendency to an increased frequency of the disease; but the numbers are not large enough, and the progressive character of the increase is not sufficiently steady, to justify our regarding the existence of the tendency as demonstrated.

TABLE XI.

ANNUAL NUMBER OF DEATHS FROM GENERAL PARALYSIS IN ALL THE ASYLUMS OF SCOTLAND.

	1865.		1866.		1867.		1868.		1869		1870.		1871.		1872.		1873.		1874.		Total.	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Private Patients	7	0	4	0	11	0	8	3	10	3	5	1	9	1	6	4	9	2	4	3	73	17
Pauper Patients	23	8	36	5	30	6	38	7	33	8	45	7	34	13	31	8	42	11	39	9	351	83
TOTAL............	30	8	40	5	41	6	46	10	43	11	50	8	43	14	37	12	51	13	43	12	424	100

General paralysis of the insane is regarded as being of most frequent occurrence among town populations, though no definite facts have been hitherto brought forward to establish this opinion. We have classified the 434 pauper patients according to the parishes to which they were chargeable, and find the correctness of the opinion fully confirmed. The cases belonging to parishes connected with the localities called town-districts by the Registrar-General yield an annual death-rate of 1·9 per 100,000 of the population; while those belonging to the insular and mainland rural districts present only ·8 per 100,000, or less than half the town rate.

If we adopt the other classification sometimes used by the Registrar-General, and group the cases according as they belong to the Principal Towns, the Large Towns, or the Small Towns and Rural Districts, we find the relation to density of population presented in a more striking manner. For each 100,000 of population we find our annual death-rate from general paralysis in the Principal Towns, 2·1; in the Large Towns, 1·3; and in the Small Towns and Rural Districts, ·7.

It is necessary, in order to appreciate these differences at their proper value, that we look at them in connection with the differences

which are presented in the statistics of other diseases with the same classification of localities. The following Table gives an opportunity of doing this in regard to the statistics for the ten years 1862-71. The respective rates for general mortality, for death from diseases of the brain and nervous system, and from delirium tremens, have been selected as presenting the most instructive figures.

TABLE XII.

Localities.	Annual Rates of Mortality per 100,000 of General Population of Scotland for the Ten Years, 1862-71.			
	All Causes.	Diseases of Brain and Nervous System.	Delirium Tremens.	General Paralysis.
Insular and Mainland-Rural	1841	21·	1·2	·8
Towns	2565	35·6	2·6	1·9
All Scotland	2131	27·	1·8	1·6

From this it appears that the higher mortality characteristic of town populations manifests itself in a special manner when we look at the statistics of all nervous diseases, but still more remarkably in regard to delirium tremens and general paralysis.

This comes out still more distinctly if we consider the number of deaths in the towns from these several causes, proportionate to 100 deaths from each cause in the insular and mainland-rural districts. Calculated in this way, we find that for every 100 deaths from all causes in the rest of the country, there are in proportion to population 139 deaths in the town. For every such 100 deaths from nervous diseases there are 170 in the towns. For every 100 deaths from delirium tremens, there are 217 in the towns. And the corresponding proportion for general paralysis is 237. We have here a remarkable indication of the special prevalence in towns of diseases of the nervous system. This no doubt results partly from the greater strain which town life makes upon the nervous and mental energy, but probably in a still greater degree from the injurious influences of imperfect sanitary arrangements and hurtful social practices ; and it is interesting to find the opinion that delirium tremens and general paralysis are special products of the dissipation and feverish activity of town life so strikingly corroborated by the figures. We have thought it desirable to exhibit the relative proportions of delirium

tremens and general paralysis, because general paralysis is believed by some authorities to be due to excessive indulgence in alcoholic and cognate stimuli, and the parellelism in the geographical distribution affords some countenance to this view.

The Registrar-General adopts for some purposes a division of the country into Principal Towns, Large Towns, Small Towns, and Rural Districts; and if we classify the deaths from general paralysis according to these groups, we merely obtain an additional illustration of the close relation which their number bears to the density of population. The following Table gives the classification, with the general death-rate for the respective districts, and also the annual production of pauper lunacy. The tendencies of the three columns are in the same direction, though the increase corresponding to the density of population is, as before, most marked in the case of general paralysis. In other words, while the death-rate from general paralysis is three times as great in the Principal Towns as in the Small Towns and Rural Districts, the death-rate from all causes is considerably less than twice as great.

Table XIII.

	Per 100,000 of Population.		
	Annual Death-rate.		Annual Production of Pauper Lunacy.
	General Paralysis.	All Causes.	
Small Towns and Rural Districts	·7	1915	35
Large Towns	1·3	2524	41
Principal Towns......	2·1	2703	62
Scotland	1·3	2222	45

The recorded ages at death, and the numbers of each sex at each period, are given in the following statement. It corroborates broadly the opinions generally received in regard to the respective frequency of the disease according to age and sex. There is reason to believe, however, that a considerable number of the cases of death at the more advanced periods of life have been what most physicians would have considered more accurately named as senile dementia. Any attempt, however, that we could have made to eliminate this error would have deprived the Table of its value.

TABLE XIV.

Sex.		Age and Sex of those who Died of General Paralysis in Scotch Asylums during the Ten years 1865-74.						
		Ages.						Total.
		21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	Over 70	
Males	Absolute Numbers.	26	164	132	63	29	10	424
Females	Absolute Numbers.	8	26	31	15	15	5	100
Total		34	190	163	78	44	15	524
Males	Percentage for each Decade.	6	39	31	15	7	2	100
Females	Percentage for each Decade.	8	26	31	15	15	5	100
Total		6	36	31	15	8	3	100

TABLE XV.

	Duration of Residence of those who died of General Paralysis in Scotch Asylums during the Ten Years, 1865-74.													
	Under 1 year.		From 1 to 2 yrs.		From 2 to 3 yrs.		From 3 to 5 yrs.		From 5 to 10 yrs.		Over 10 years.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Private	36	10	22	3	9	1	6	1	...	1	...	1	73	17
Pauper.......	160	37	104	22	47	13	29	6	8	...	3	5	351	83
Total.........	196	47	126	25	56	14	35	7	8	1	3	6	424	100
	243		151		70		42		9		9		524	

Percentage for each Period.

	Under 1 year	From 1 to 2 yrs.	From 2 to 3 yrs.	From 3 to 5 yrs.	From 5 to 10 yrs.	Over 10 years.	Total.
Males..........	46	30	13	8	2	1	100
Females.......	47	25	14	7	1	6	100
Total	46	29	13	8	2	2	100

The remarks made in regard to Table XIV. are applicable also to Table XV., in which the duration of the residence of the patients in asylums is given. It has also to be observed here, that in those cases in which there may have been more than one period of asylum residence, it has only been possible to take account of the final period. In 75 per cent. of the cases, the death appears to have taken place within two years of the admission of the patient to the asylum.

The Report of the Inspectors of Irish Asylums for the year 1875, late as its issue undoubtedly was, we find to have this year appeared before the corresponding Blue Book of the Scotch Commissioners. In their abstract of the copious Tables of Statistics accompanying their report, the Inspectors notice the gratifying fact that while 2,132 patients were admitted to district asylums during the year, 939 were discharged cured, a proportion of over 44 per cent., a result which will compare favourably with that obtained in similar institutions in either England or Scotland. In addition to these, 236 were discharged improved, while 355 of the cases admitted were relapsed cases, so that the proportion of cures to new cases admitted reached over 52 per cent. It is well-known that a large number of these relapsed cases, indeed by far the greater proportion, consists of patients formerly discharged, or, rather, almost invariably removed by their friends, before their recovery was complete, and generally against the wishes and advice of the medical superintendent, the patients being usually brought back, after a short sojourn at home, in a more hopeless state than at first, often becoming a permanent burden on the asylum. We would suggest that a Table bringing out this fact in the full light of statistics might very advantageously be added to those at present given. The rapidly decreasing proportion of discharges among these relapsed cases is shewn in Table 14, where the numbers 242, 73, 27, 7, and 1, are given as those of relapsed cases admitted after previously sojourning in the asylum once, twice, three times, four times, and five times respectively. The figures might of course be held to imply that patients had a smaller tendency to relapse the more frequently they were discharged, but experience shows that this is not the case, and that our interpretation of the figures is the true one, viz., the patients were not re-admitted, because they had not been discharged, *i.e.*, they had become permanent inmates of the asylum. Of course, if a patient is removed he ought to be discharged, even though there may be reasonable grounds for apprehending a relapse, and

such cases there always are, though, we maintain, they are few in comparison with the numbers who relapse in consequence of too early removal by their friends. This is the point we should like to see brought out by a Statistical Table.

On the important question of relationship or hereditary tendency Table 17 shows that more than 10 per cent. of the inmates of the District Asylums have, or have had, relations insane.

Table 16 gives the deaths during the year as 742, out of a total under-treatment of 9,717, or less than 8 per cent., a favourable result, when it is remembered how many patients are brought in in a state of extreme exhaustion, whether from refusal of food or from a general break down of the system in old age, of which insanity is only a prominent symptom.

Table No. 4, giving the ages of patients admitted, is, we observe, classified in periods of ten years each from birth. This is, of course, the usual method, and for the mere numerical statistician is all that is wanted ; but we would suggest that for the purposes of the medical statistician a better arrangement would be to classify together all patients under the age of 15, than to give two periods of five years each, corresponding to the periods of the development of puberty in the female and male sexes respectively; after this two periods of 10 years each would afford material for general observations, and would include the periods of greatest activity of the sexual system in both sexes; and after this two periods of five years each would embrace the periods of comparative decline of these powers in the female and male sexes respectively, while two succeeding periods of 10 years each would bring up the observations to 75 years, and would afford material for examining the bearing of old age on the development of insanity. We think that to practical men the value of such a modification of the Tables relating to the age of patients will be at once manifest.

We observe in Table 11 that the number of unmarried insane is 5,303, viz., 3,038 males, and 2,245 females, against 1,674 married persons, viz., 813 males, and 861 females. To the former number may also be added 441 widowed persons, viz., 118 males, and 323 females, and probably the majority of the 323 returned as unknown, viz., 153 males and 170 females. When we remember that marriage is the almost universal condition among the peasantry of Ireland during the ages at which insanity is most prevalent, we cannot but

be struck with the great preponderance of insanity among the unmarried. To give full point to the disproportion brought out by this Table it would be necessary and highly desirable that the numbers of single, married, and widowed persons in the whole community for the ages during which insanity is prevalent, say from 15 years upwards in five year periods, should be correlated with the numbers of Table 11. Materials for this correlation could of course be readily obtained at the Registrar General's office.

On Table 15 we would observe that without abrogating the present classification, a valuable resumè of it might be given by classifying patients as out-door workers and indoor workers; also as labourers and artizans, meaning by the latter term those who employ their brains to a marked degree in the guidance of their manual labour; then the educated classes, or those who practically employ their brains only, might be grouped together. Any trades known to have a special tendency to produce insanity might be specially referred to, if such should be discovered; at present we are not sure that any such exist, the popular prejudice against hatters notwithstanding, for the insane population of Ireland is stated in this table to contain only four members of this maligned class, while there are no fewer than 112 shoemakers. The absence of any employment would appear to have a remarkably serious effect, for we find 161 mendicants, though mendicancy has very much disappeared in Ireland of late years.

We observe that the salaries and wages of officers and attendants alike still continue very much below those of English and Scotch Asylums, though the duties are no less onerous; indeed, the Medical Superintendent in Ireland has responsibility in many matters of which his brother in Great Britain knows nothing; while the requirement which obliges him to serve for 40 years for a 2s. 3d. pension, as against 15 years in England, still remains unamended, and the consequent injustice unredressed. Further, the absence of efficient medical assistance absolutely prevents his devoting that amount of attention to the purely medical consideration and study of insanity that his English and Scotch brethren can find time and strength for; a great reform would, in our opinion, be effected by appointing one or more assistant officers in every asylum, according to the number of its inmates. At present only five asylums in Ireland have an assistant medical officer, and one of these, the Richmond,

has over 1,000 inmates. The salary of the assistant would be saved by making him discharge the present duties of the apothecary, and dispensing with the obsolete office of visiting physician, which is unknown in England, and in Ireland was formerly introduced only because the Governor was a lay official.

Commenting on the slight increase in the mortality of 1875 as compared with 1874, about ·8 per cent., the Inspectors remark, that it may be in part attributed to the number of hopeless or indeed moribund cases transmitted under magisterial warrants as being dangerous or violent. This may no doubt be the case; but our experience goes to prove that this is the very class of cases on behalf of which every point ought to be strained, and every possible irregularity overlooked, in order to compass their immediate admission to an asylum. For, indeed, our experience is that these patients are almost invariably moribund, simply from want of food, their friends having been utterly unable to induce them to take anything, and indeed ignorant of the kind of food, beef-tea, &c., which ought to be administered, and unable to administer it. Many of these patients die, no doubt, after admission, but a larger proportion are saved by immediate artificial feeding; and more still would be saved were it not for the delays, sometimes of two or three days, imposed by the necessity for first obtaining and afterwards filling up the necessary forms imposed by the law. To obtain the form of application from the asylum involves in itself a delay of two days in country districts, and two days in such cases simply means all the difference between life and death. The magistrates' warrant can no doubt be obtained from the nearest petty sessions clerk, but there is every difficulty in the way of filling it, unless the patient has committed overt violence against others. That the patient's mania is dangerous to his own life ought to be, but is not, considered sufficient to bring him under the category of dangerous lunatics. The Act by which two governors can authorise immediate admission, in accordance with certain engagements, nevertheless involves the delay of obtaining the necessary forms.

The Medical Superintendent, though authorised to admit cases as urgent, can only do so on the production of these forms duly filled. The Scotch plan of a "medical certificate of emergency" might be advantageously adopted in Ireland, on which a patient could be detained for three days.

The Inspectors remark that practical arrangements have

not yet been effected for the removal of chronic and quiet patients to workhouses. We think that a great deal of discretion will be necessary regarding the removal of these patients. Chronic and quiet patients are just those who render most assistance in carrying on the daily routine of house-cleaning and other work in the asylum; and if they are removed it will be necessary in most cases to hire wardsmaids of a class much below that of the ordinary asylum attendant or nurse to replace them. These poor creatures may in general be considered fully to earn by their work the greater comforts of asylum life as compared with that of the workhouse. Of course, if they are very infirm this argument will no longer hold, but, as the Inspectors remark, workhouses have many drawbacks which make it a matter of doubt how far they may be suitable for the accommodation of these essentially sick inmates.

The Inspectors comment strongly on the disposition manifested by some Boards of Governors to endeavour to reduce asylum expenditure to a level with that of workhouses, and that notwithstanding the subsidy now granted by Government with the very reverse object. It is only to be regretted that the Inspectors have no further power than simply to embody such remarks in their report. We think that when Governors refuse to provide beds and bedsteads for their increasing numbers, and keep patients lying during a hard winter on straw placed on the floor, as we have known them to do, notwithstanding the urgent and repeated remonstrances of the Medical Superintendent, the Inspectors ought to possess a definite power of interference. But indeed we should be strongly inclined to suggest that these institutions should be removed altogether from local control, and constituted essentially a State service, their expenditure being entirely provided for out of the Consolidated Fund, at least until the surplus funds from the Church Disestablishment should be forthcoming. The relief from local taxation would probably compensate country gentlemen for the disuse of their services as Governors. The audit might be effected as hitherto, the control of expenditure being entrusted to the Medical Superintendent under the supervision of the inspectors. This system has been found satisfactory in Criminal or State Asylums, and has just been introduced into the Prison department of Ireland by Sir M. H. Beach's recent Act, these institutions having been thereby removed from local control, and placed entirely under that of a Central Board. We think

it would be highly desirable that a similar measure should be applied to Asylums, the medical element being strongly represented in the Central Controlling Body. This measure would, we venture to think, be preferable to swamping the Asylum's office altogether in the Local Government Board, as at present talked of. Asylums are hospitals, and a central body governing them ought to be essentially medical; the Local Government Board is essentially lay.

The Functions of the Brain. By DAVID FERRIER, M.D., F.R.S. Smith, Elder & Co., London, 1876.

This work may fairly be considered as representing the latest additions to our knowledge of cerebral physiology. The opening chapter is devoted to a brief sketch of the structure of the brain and spinal cord. Then follows a description of reflex action as observed in the lower animals and in man. A very ancient drawing of an ascidian, which here does duty, as it has done in other works for the past forty years, leads one to enquire whether it is not possible to make a more faithful illustration of this interesting creature. The function of the *Medulla oblongata* are fairly described, but in all these descriptions there is not much that strikes one as being fresh or worthy of special attention. Dr. Ferrier having led the way up from the lowest nervous function to the highest, proves not only by his own, but by the experiments of others, that the cerebrum is the sole seat of volition. For whilst an animal may exist, if fed, and even perform combined movements without any cerebrum, that is, with only the basal ganglia, it is incapable of originating active manifestations of any kind. Consciousness also has its seat, not in the mesencephale, but in the higher nerve centres. The nerve faculty of adaptation to circumstances, which an animal without any cerebrum may be capable of, is no proof of consciousness, and, therefore, though the lower nerve centres may have this faculty of adaptation, they do not necessarily possess consciousness, or even sensation. Under the impression that many erroneous ideas arise from confusion in respect to these terms, Dr. Ferrier suggests the term *æsthesis*, to signify a new physical impression on the centres of special sense, and the term *noesis* to signify a conscious impression, but he does not use these terms much himself.

Equilibration, the loss of which is so prominent a fea-

ture in many nervous diseases is a function of the mesencephalic and cerebellar centres. It may be overthrown by lesions of the afferent or efferent apparatus alone, or of the encephalic centres alone, or by conjoint lesions. The afferent apparatus consists of (1) Organs for the reception and transmission of tactile impressions: (2) The organ for the reception and transmission of visual impressions: (3) The semicircular canals and their afferent nerves. The incoordination of Locomotor Ataxy does not depend on the muscular sense in particular, nor on the loss of cutaneous sensibility in general. Hence it would appear that the efficient excitant of the co-ordinating centres of equilibration and locomotion is a special form of cutaneous impression generated by contact.

Visual impressions exert an important influence on equilibration, and may, in a measure, compensate for the loss of tactile impressions.

Recent researches on the functions of the semicircular canals of the inner ear have made it clear that these have a very important relation to the power of equilibrations. In Menierè's disease they are diseased, and cause sudden attacks of vertigo and sickness, which are generally preceded by, or are associated with, ringing or pain in the ears.

Functions of the Optic Lobes or Corpora Quadrigemina.—The destruction of these centres causes blindness; irritation produces dilatation of the pupils on the opposite side, and various other effects which tend to the belief that these ganglia are concerned, not only in visual sensation, but, also, that they are the centres specially connected with the reflex expression of feeling or emotion.

Functions of the Cerebellum.—This organ seems to be a complex arrangement of individually differentiated centres, which, in associated action, regulate the various muscular adjustments necessary to maintain equilibrium of the body: each tendency to the displacement of the equilibrium round a horizontal, vertical or intermediate axis acting as a stimulus to the special centre which calls into play the antagonistic or compensatory action. There seems to be a connection between the semicircular canals and the cerebellum, from the remarkable similarity between the effects of lesion of the former and injury or removal of certain parts of the latter.

The irritation or removal of the cerebellum has no effect on the sexual organs or instinct.

Functions of the Cerebrum.—Though the credit of having

first demonstrated the localisation of the cerebral functions belongs to Hitzig and Fritsch, yet their experiments have been elaborated and improved on by Dr. Ferrier. He has been successful, not only in eliciting more definite results, but also in obtaining results from parts which they consider to be inexcitable. This success he attributes to the use of the induced, in preference to the continuous electric current for excitation; and also to increasing the current up to a much higher state of intensity. He labours to prove, in answer to objections brought against his experiments, that the effects of the excitations are not due to conduction to the basal ganglia; and the errors which might arise from diffusion to neighbouring centres have been carefully allowed for and eliminated by repeated experiments. The results from excitation are, in nearly all cases, checked by destruction of the parts, and are supplemented by careful post mortem examinations as to the extent of the lesions, etc.

The fact that even after removal of the grey matter the same effect may be produced by stimulation in the denuded spaces, is no argument that the motor effects are dependent on the corpora striata, etc. For the cortical centres act downwards on the muscles necessarily through the basal ganglia and motor tracts, and the application of the electrodes to the medullary fibres is essentially equivalent to the stimulus caused by the functional activity of the centre itself.

It is difficult to summarise the results of Dr. Ferrier's experiments without reference to the illustrations with which his work abounds. The areas of electrical irritation are given in circles which not only point out the seat, but also limit the extent of the regions for certain definite movements.

The areas to which the electrodes were applied, and the effects of stimulation on them, are as follows:—

1. *On the postero-parietal lobule.* Advance of opposite hind leg as in walking.
2. *On the upper part of the ascending parietal, and adjoining part of the ascending frontal convolutions.* Complex movements of thigh, leg and foot, as the animal would employ in grasping, or in scratching itself.
3. *Close to the ascending frontal portion of above centre, and close to a slight sulcus or depression at the upper part of the ascending frontal.* Movements of the tail (pleasure) associated with some of the movements as in 2.

4. *Situated behind* (3), *and below* (2), *and occupying adjoining margins of the ascending frontal and ascending parietal convolutions.* Retraction with adduction of opposite arm. Like swimming movements. In cats like striking a ball with paw.
5. *On the ascending frontal convolution, at its junction with superior frontal.* Extention forwards of the opposite hand and arm, as in reaching. Prehensile movements. In cats movements as in raising the paw to step forwards.
6. *In the ascending frontal convolution, at the bend of the antero-parietal sulcus.* Supination and flexion of the fore arm, as in raising hand to mouth.
7. *On the ascending frontal convolution below* (6). Action of the zygomatics.
8. *On the same convolution below* (7). Elevation of ala of nose and upper lip.

9-10. *Areas situated at the inferior extremity of the ascending frontal lobe.* Opening of the mouth with protrusion and retraction of the tongue. In dogs, barking or growling. In cats, mewing, spitting, and lashing of tail as if in a rage.

11. *Extending from* (10) *to the lower extremity of ascending frontal convolution.* Retraction of opposite angle of mouth.
12. *On the posterior half of the superior and middle frontal convolutions.* The eyes open widely, the pupils dilate, and the head and eyes turn towards the opposite side. In jackals the conjoint action of both sides would cause the appearance of an animal pointing at game.
13. *On the anterior and posterior limbs of the angular gyrus.*—The eyes move towards the opposite side, pupils contract, eyelids close.
14. *On the superior temporo-sphenoidal convolution.*—Pricking of the opposite ear, head and eyes turn towards the opposite side, pupils dilate widely.
15. *Subiculum cornu ammonis.*—Torsion of the lip and nostril on *same* side.

No satisfactory effects resulted from stimulation of other parts of the brain.

The above results were obtained from the brains of monkeys, to a great extent the same spots produced corresponding effects in the brains of some other animals, but electrisation failed to excite any analogous movements in pigeons, frogs, or fish.

Electrical Stimulation of the Basal Ganglia.—The results were very uniform in various animals. Irritation of the *corpora striata* causes general muscular contraction on opposite sides of the body. Destructive lesions produce hemiplegia on opposite side, sensation remaining unimpaired. These ganglia are the centres of automatic or subvoluntary integration of the various voluntary-motor centres differentiated in the hemispheres.

Optic Thalami.—Excitation causes no motor manifestations. Destruction occasions blindness, and paralysis of cutaneous sensibility on the opposite side. These ganglia play the same subordinate rôle to the sensory centres as the corpora striata play to the motor centres of the hemispheres.

From the results of his experiments on the cerebrum Dr. Ferrier has deduced the following physiological facts:—

Sensory Centres.—*The Angular Gyrus*—seems to be the seat of visual sensation. Excitation occasions movements of the eyeballs; destruction of one causes blindness on the opposite side; of both, total blindness.

The Superior Temporo-Sphenoidal Convolution is the centre of auditory sensation. Irritation being followed by sudden retraction or pricking of the opposite ear, wide opening of the eyes, dilatation of the pupils, and turning of the head and eyes to the opposite side. Destruction causes deafness.

The Hippocampal Region (the Hip. Maj. and uncinate convol.).—Destruction abolishes tactile sensation on opposite side of body. Experimentation very difficult. Stimulation of course could give no reliable effects on dumb animals.

The Subiculum Cornu Ammonis, and its neighbourhood.—This region appears to contain the centres both of smell and taste. Irritation caused a peculiar torsion of lip, and partial closure of the nostril on the same side. Destruction caused loss of taste and smell. The cutaneous sensibility of the tongue was also abolished.

Occipital lobes.—Excitation has always been negative, and destruction also. There seems, however, from negative evidence to be a causal relation between the removal of the occipital lobes and the annihilation of the appetite for food.

Occipito-temporal Convolutions. Dr. Ferrier suggests, though he has been unable to experiment on them, that these

are the seat of the sensations forming the basis of the sexual appetite.

Motor Centres.—*The convolution bounding the fissure of Rolando.* Destruction causes hemiplegia on opposite side, dissociated from sensory paralysis in any form. The corpora striata may be capable of spontaneous action and co-ordinated locomotion, under the influence of present or past impressions, or of emotional states. Only such movements, however, will be excited as have been automatically organised in the corpora striata. Such forms of activity as are not habitual, and have not become automatic, would be rendered impossible. The seat of origination for motor activity is the cerebrum.

Electrisation of the anterior or motor part of the hemispheres is one of a special character. The head and eyes are directed to the opposite side, and at the same time the pupils dilate widely. The attitude is one of excited attention or surprise. This centre may, therefore, be considered as concerned in those movements expressive of attention and intelligent observation.

The Antero-frontal regions of the brain, including the island of Reil, gave only negative results both on irritation and destruction. After the latter, there seemed, however, to be apathy, dullness and sleepiness: in fact a loss of the faculty of attention and intelligence.

Thus far the book gives us valuable data for further investigations; it contains much that we have had to pass over unnoticed, which is no less important. The experiments are without doubt important, for though they do not furnish the complete data for a positive mental science, they serve to aid in overthrowing the data of a false psychology, and to form the foundation of a more perfect philosophy.

A. H. N.

System of Positive Polity. By Auguste Comte. Third Volume, containing Social Dynamics, or the General Theory of Human Progress. London: Longmans, Green, and Co., 1876.

The general reader will probably find this volume more interesting than the two volumes which appeared before it, but he will do well to read those volumes before he reads it, if he wishes to have a thorough understanding of what he is about. The spirit of it is indicated in these remarks—"In

fact, the anarchy of the West consists chiefly in the interruption of human continuity; first Catholicism cursing Antiquity; then Protestanism reprobating middle age; and lastly Deism denying filiation altogether. Nowhere is there more call for the intervention of Positivism, to furnish the one satisfactory solution of this revolutionary state of opinion, by overcoming doctrines, all more or less subversive, which stirred up the living to revolt against the whole mass of the dead." This great principle of human continuity, the filiation of doctrine, no one but Comte seems ever to have properly grasped. Here is another pregnant sentence, in the development of which a whole chapter might be written —" Man becomes more sympathetic in proportion as he is more synthetic and more synergetic."

The volume has seven chapters. The first establishes Comte's fundamental theory as based on the systematic demonstration of the three grand laws of sociology; in the second he gives an account of Fetichism, from which he passes naturally in the third chapter to the study of Theocracy; the fourth, fifth, and sixth chapters treat of the transition from theocracy to the modern revolutionary movements, under the headings of the Greek Elaboration, the Roman Incorporation, and the Catholic-Feudal Initiation respectively; and the seventh and last chapter is devoted to the enunciation of a sound theory of the five centuries during which the revolution has been going on.

In discussing the general laws of progress in the first chapter, Comte makes some interesting remarks touching the attack of mental derangement under which he laboured at one time. It is well-known that he was confined in a private asylum for some time, getting not the least good from the treatment, and began to improve only after being removed from the asylum as an almost hopeless case.

I will confine myself to recording here the valuable phenomena I was able to observe in the case of my own cerebral malady in 1826, mentioned in the preface to the last volume of my Positive Philosophy. I have already made use of them in my public lectures. My derangement having been protracted by empirical treatment through eight months, there was the better opportunity of observing my different states. The complete course of this exceptional oscillation enabled me to verify twice over my then recently discovered Law of the Three Stages; for while I passed through these stages, first *inversely*, then *directly*, the order of their succession never varied.

During the three months in which the medical treatment aggravated my malady, I descended gradually from positivism to fetichism, halting first at monotheism, and then longer at polytheism. In the following five months, in proportion as the efforts of nature, in spite of treatment, brought back the normal state, I re-ascended slowly from fetichism to polytheism, whence I speedily returned to my previous positivism. In thus furnishing me with a decisive confirmation of my fundamental law of the Three Stages, and causing me to feel more thoroughly the necessary relativity of all our conceptions, this terrible episode of my life enabled me thereafter to identify myself more completely with any one of the human phases in accordance with my own experience. The continual advantage I have derived from it in all my meditations on history allows me to hope that readers suitably prepared will also be able to utilise this brief account of a memorable anomaly. It only remains to say that the perfect continuity of my philosophical labours before my derangement with those succeeding it proves clearly that, relatively to the whole course of my intellectual progress, this serious disturbance was simply an oscillation, to which exceptional causes gave a more extended sweep than is reached in dreams, or in states of passion.

It is a pity that all persons who have the misfortune to suffer from an attack of mental derangement cannot make a similar philosophical use of the phenomena of their malady; but it may be doubted whether, if they did, the result would be to establish the three stages of the positive philosophy, or the stages of any other philosophy.

In discussing Fetichism, and pointing out its theoretical superiority to polytheism, in that while the former spontaneously confines itself to the degree of subjectivity which is indispensable, to us the latter becomes much more subjective than its theoretic purpose requires, indulging in excess of fiction, Comte says, carrying the general comparison into pathology, "I do not doubt that insanity, especially when chronic, is more frequent and more obstinate among theologists than among Fetichists, a surmise which I hope will be verified by judicious travellers." We dare say this is true, though the reason may not perhaps be the one assigned; but the question may fairly be raised whether, if the judicious traveller were to continue his enquiries among positivists, he would not also find insanity more frequent and more obstinate among them than among Fetichists.

Another service which he attributes to Fetichism will appear more unfounded at the present day.

We must refer to Fetichism a notion of capital importance, that of the permanence of natural species, which, though seriously

impaired under Theologism, and insufficiently respected by scientific empiricism, furnishes the last preliminary step necessary for the rise of Positivism. . . This immense service, without which we should have wandered into endless divagations, was in danger of being radically undone when Theologism transferred the superhuman influences to purely imaginary beings, under whose capricious power matter was supposed to be entirely passive. . . Its importance lies in this—that all notion of the real order would necessarily fall to pieces, if species, that is to say, substances could arbitrarily change. For since natural laws always relate to the constancy of the general arrangements between simultaneous or successive phenomena, they would become incompatible with an indefinite variation of the seat peculiar to each phenomenon.

It is strange that, while perceiving so clearly as he did the continuity of human development, he should have been so blind to the great law of evolution, of which human continuity is but an effect. That he could discover an immense service rendered by Fetichism in the upholding of the doctrine of permanence of species is an apt illustration of the weakness of his philosophy, which discovers always in facts a confirmation of its theories, and in which speculative imaginations often outrun all restraints of positive observation, and do duty for facts on which to base further speculations.

The translation of this volume has been the conjoint work of Mr. Beesly, Mr. Samuel Lobb, Fanny Hertz, Dr. Bridges, Mr. Vernon Lushington, and Mr. Godfrey Lushington, and seems to be satisfactorily done. That we find it hard to keep our attention fixed, when reading, and sometimes get very weary, is not the fault of the translators, but the effect of Comte's diffuse, prolix and tedious style. The author of a great system of philosophy had certainly no notion of system in composition; and the wearisome way in which he goes over the same ground continually, and tells us in the most elaborate way what he is going to tells us afterwards, frequently tempts the irreverent exclamation—"Leave thy damnable iteration and begin!"

Revue Philosophique de la France et de l'Etranger, paraissant tous les mois, Dirigée par TH. RIBOT. Paris: Baillière et Cie.

This philosophical Review, which is excellent of its kind, has appeared regularly once a month since the beginning of the year. It consists of original and critical articles, of reviews of philosophical works and foreign periodicals, and of instructive analyses of the development of philosophy

in all countries. It is well edited by M. Theodore Ribot, whose name is known in this country for his valuable work on *Heredity*, which has been translated into English. When we received the first number, and learned that the Review was to appear once a month, we were inclined to think that it could not go on long at that rate, but it has shown no signs of failing strength so far, and it is very evident that great pains and labour are bestowed upon it. M. Ribot's analyses of new books and his critical studies of the history of philosophy are admirable, being clear, concise, complete and carefully done; and he shows himself quite as much at home in German philosophy as he does in old and recent English philosophy. The object of the *Review*—namely to furnish a complete and exact picture of the actual philosophical movement, without excluding any school—has been well fulfilled. M. Ribot has been struck, as others have been, with the fact that, while a physiologist would not venture to undertake the determination of a problem until he had made himself familiar with the work of his predecessors; while the historian would be justly reproached if he did not first study the works of those who had been before him; in philosophy, on the contrary, nothing is more common than a complete ignorance of what has been done or is being done by others. Hence a good deal of supposed original thought, which is really useless repetition or perfectly sterile. M. Ribot's *Review* will "come to the aid of all those who think that it is not sufficient, in order to make a discovery, to shut themselves up within themselves, by furnishing them with that which, before all, it requires from its contributors—facts." We have no doubt that the reason why these philosophers do not know anything of their predecessors is their introspective method: they have really got no predecessors, for they are supremely happy to concern themselves with the infallible data of their own consciousness, whether they have put anything of value into their consciousness or not. Certainly no one else can have preceded them in exploring that source of knowledge.

Mind, a Quarterly Review of Psychology and Philosophy.—Edited by George Croom Robertson. London: Williams and Norgate.

We have been prevented, hitherto, from noticing and welcoming the issue of this new quarterly journal, four numbers of which have now appeared. It is intended to be

an organ for the publication of original researches, and a critical record of the progress made in psychology and philosophy. Though holding that psychology must draw its fundamental data from subjective consciousness, it will give due prominence to the physiological investigation of nerve-structure, and will embrace within its scope language and all other natural expressions of mind, insanity and all other abnormal mental states, and mind as exhibited in animals. It will take account of logic, asthetics, and ethics; be occupied with general philosophy; will not overlook the history of philosophy; and will give attention to the practical application of psychological theory to education. The editor does not think it surprising that no such English journal should hitherto have existed, for English enquiry concerning the things of the mind has, till quite lately, been unprofessional. Few British thinkers have been public teachers with philosophy for the business of their lives. Bacon, Hobbes, Locke, Berkeley, Hume, Hartley, the Mills, did their philosophical work at the beginning or at the end of their careers, or in the pauses of time otherwise active; if their work had been academic, it would probably have been much more sustained, more comprehensive, and better carried out.

Are we to regret then that these men lived active lives in the world, dealing with men and things, and getting the experience and practical sense which comes from such intercourse, instead of having been professors of moral philosophy, dogmatically expounding empty traditions and homebred theories of psychology to wondering students from a chair raised high above the tempering influence of converse with facts. So far from agreeing that their philosophy would have been bettered by such treatment, we are disposed to think that it was a great good fortune to them that they were not academic; and we believe that the reason why each one of the authors enumerated has a wholesome tone of reality, and is readable with profit now, is that his philosophical work is informed by a strong masculine spirit, nourished with the experience of good practical activity. Put on one side these names of men who are presumed to have fallen far short of what they might have been—and it is a presumption—and on the other side put the names of the academic professors who are supposed to have profited by their happier circumstances—the Dugald Stewarts, Hamiltons, and the like—and the contrast will certainly afford a curious illustration of the advantages of academic work.

If Dugald Stewart and Hamilton were dropped clean out of the history of philosophy, nothing, or next to nothing, would be lost; but there is not one of these who are mentioned as sufferers from their conditions of life, except perhaps the Mills, whose loss would not make a break in the evolution of philosophy. A comprehensive system of philosophy would have meant then, as it means now, and must mean for some time to come, a more or less ingenious fabrication of words and theories, which it would be a clever gymnastic intellectual achievement to construct, and a gymnastic exercise to study. Were we asked then to give advice as to the proper means to qualify an aspiring youth to become a profitable teacher of so-called moral philosophy, it is plain that we should not agree with the Editor of "Mind" in the counsel which we should be apt to give. For it would be something of this kind: Go and take up your abode in a prison for a year or two, and make yourself intimately acquainted with the constitution, feelings, and ways of the criminal nature; after which you may spend three months' holiday, or a longer period if you can afford it, in visiting some other country, taking good care to learn everything you can about all its sorts and conditions of people and their ways in a practical manner—we don't forbid occasional visits even to their Cremornes and other similar institutions of the country. Then you may come home and spend a year or two in a lunatic asylum, and gain a thorough knowledge of the various forms of mental derangement; after which, having earned another holiday, you may spend it, if you like, in attending a course of academic lectures on moral philosophy, in order to find out how much helpful theory concerning human conduct you will, or will not, get to guide you in your dealings with men. Lastly, you would do well to set to work to get a living in active competition with men, and having acquired a moderate competency—by which time we calculate you will be nearly forty years old—you may, if you have inherited a well-bred brain, think about your proposed lectures. We have not said anything about the desirability of spending a year or two in a dissecting room, and in the study of physiology, because that might defile your subjective insight into mind by objective knowledge of its material organ, and your scholastic business is to lecture on the abstract philosophy, not to make it available to men for any kind of use. Well, having gone through the course of training which we have roughly

sketched out, you may not perhaps turn out to be a great academic philosopher, but at any rate you will be a man with some knowledge of concrete *manity;* and when you begin to examine the data of your consciousness, you will have some real stores to draw from, and will not bring forth merely wind; and you may take this comfort to yourself, that you will not, on the whole, do very badly if you do as well as such philosophers *manqués* as Bacon, Hobbes, and Hume.

We are afraid that "Mind" will think these notions foolish, and that we are at irreconcilable antagonism with it with regard to method. For we notice in its last number a short article placed first in the post of honour, and presumably, therefore, thought by the Editor to be of weighty meaning, which is entitled—"Psychology: a Science or a Method?" and which reads to us very much like a meritorious student's exercise after attending a course of lectures on moral philosophy. The author defends the method of introduction and naively propounds as the "home-question" of philosophy, which objective psychologists have overlooked, the amusing but somewhat stale and puerile question: "After all, do I really desire nothing for myself but happiness?" He goes on to tell us gravely that "thoughtful reference to one's own experience is indeed a rare quality now; hence our books are not likely to live as classics. Mr. Sedgwick's *Method of Ethics* is an exception. Its attitude is eminently personal and reflective, and, for this reason, we venture to think that it will live and take classical rank beside Locke and Hume!" We would not willingly diminish reference, which is a lessening quality in these days, but we venture to think that if "Mind" runs upon this gentleman's level of philosophy, whom it has—we should hope in a moment of temporary aberration—exalted to its post of honour, it will not only not fulfil its excellent programme, but will run a great risk of falling into a decline from lack of substantial nourishment.

In the four numbers which have been published there are some interesting original articles, some of which appeared at the same time in the above noticed *Revue Philosophique*. Mr. Bain has, in successive articles furnished, with conscientious care and industry, materials for a biography of James Mill, and has certainly done it in a way to prove how possible it is to divest a human life of any human interest. The critical notes and reports, and the notices of books, which are a

great feature of each number, will be found very useful. We heartily wish the new Journal a career of vigour and usefulness.

Nouveau Traité Elémentaire et Pratique des Maladies Mentales suivi de Considerations pratiques sur l'Administration des Asiles d'Aliénés. Par H. DAGONET. Paris : Baillière et Fils.

M. Dagonet published, several years ago, a treatise on Mental Diseases. It was reviewed in this journal at the time, and in a manner which was, perhaps, more critical than necessary. However, M. Dagonet is himself quite sensible now of the imperfections of the book, and admits the justice of the strictures which his critics passed upon it. He has borne these criticisms in mind, he says, and has so remodelled his treatise that, as it appears now, it is almost a new work. No labour has been spared to make it a useful work; and many authors, French and foreign, are largely laid under contribution. There are eight plates, which contain thirty-three excellent photographs, representing the different types of insanity.

In the first part of the book M. Dagonet treats generally of the pathology, the symptomatology, the prognosis, and the morbid anatomy of insanity; in the second part, after glancing at the different classifications of mental diseases which have been proposed, he deals succinctly with the histories of the principal forms, and with the most commonly observed varieties; and the third part is devoted to a study of the general and particular causes of insanity, and of the relations of special forms to particular causes. There is a summary also of the principles of asylum administration.

We are afraid that we cannot give the book the praise we would gladly give it, or acquit M. Dagonet of hardly excusable omissions. We have looked at the short chapter on Classification, and what do we find? No mention whatever of Skae's practical system of classification, while the briefest possible summary, occupying less than half a page, disposes of Morel's important attempt at an etiological classification. Indeed, this summary, as it stands, is so meagre as to be quite valueless, and looks very much as if it had been taken, not directly from Morel, but at second-hand from some book or journal in which it had appeared. Then again, under the head of treatment, we learn nothing of the virtues or of the

bad qualities of chloral. Altogether, as we look through the pages of M. Dagonet's treatise, we feel a suspicion steal upon us, and become stronger and stronger, that he is running too much upon the old lines, taking too little account of the most recent developments of knowledge, and repeating the faults which we felt it our duty to point out in the first edition. As the first edition is not at hand, we are unable to compare it with this treatise, and to point out what alterations have been made, but if we might venture to trust to our memory of what we read ten years ago, we should be inclined to say that the changes are not so many and thorough as to justly entitle this edition to appear as a new work; that it is our old acquaintance with his appearance a little disguised.

Behind the Veil: An Outline of Bible Metaphysics compared with Ancient and Modern Thought. By THOMAS GRIFFITH, A.M., Prebendary of St. Paul's. London: Longmans & Co. 1876.

The second part of the title of this book very well expresses its character. It is a comparison of Bible metaphysics, or, at any rate, of what the author conceives as such, with the achievements and impotencies of ancient and modern thought in the metaphysical direction. One can't help thinking sometimes, perhaps, that the author has read into Biblical doctrine a good deal of modern thought, and has so discovered there what he himself introduced into it; but no fault whatever can be found with the calm, temperate, and direct manner in which he has done his work. The great object of his book "is to remind its readers of the old but never antiquated truth, that the world of sense, by the very nature of its presentiments as merely phenomenal, requires the admission of supersensuous Realities as the indispensable complement and base of these phenomena. And further, that since the action of such Realities is shown by their phenomena to be limited and conditioned, they must be regarded as subordinate to a Supreme Reality, from whom they spring, in whom they subsist, and by whom they are organised towards a preconceived end." He discovers in ancient and modern thought the unconscious echoes of the secret voice of God —"the variables of Truths for ever constant."

It is gratifying to see a prebendary of the Church place

himself in this wise attitude towards scientific opinion, and strive to get the most he can out of it, instead of taking up a position of hostility, and so learning nothing from it. After all, theologians and scientific men have to deal with the same great facts and experiences; they both find out in the end that what they are and know is but a very little part of what is and they cannot know; and there is no good reason therefore why they should quarrel furiously about what names they shall give to the impotencies of their understanding—the things which no mortal can understand—die allmächtige Zeit und das ewige Schicksal.

Slavery in England: An account of the manner in which Persons without Trial are condemned to Imprisonment for Life, with illustrative cases. By An Eye Witness. London: W. H. Guest. 1876.

The writer of this pamphlet says near the beginning that he is "not an author by profession." The warning was kindly intended, but it hardly prepared us for such a sentence as the following:—"Next, the doctor states that the certificates are sent to the Commissioners in Lunacy, but this is a mere form, and although they are often returned, it is simply trifling inaccuracies." *Slavery in England* is the title of a *brochure* against the Lunacy Laws of England and Wales; and though these are capable of amendment, it is certainly not by the hands of such beings as "An Eye Witness" that reforms may be carried out. It is, of course, impossible to frame an Act which shall not contain a single flaw, and, so long as human nature is what it is, there will be unscrupulous persons ready to take advantage of the flaw. The English lunacy system is on the whole an excellent one, and the very few isolated cases of injustice—if, indeed, there be any at all—only prove it to be so. Setting aside the very inferior style of the "Eye Witness," his—or shall we say her?—manner of reasoning and of illustration by cases is so feeble, one sided, incoherent, and takes so much for granted, that we must be pardoned if we say that the pamphlet is only an argument that the law is not nearly strict enough, and that certain persons are at large who ought not to be.

PART III.—PSYCHOLOGICAL RETROSPECT.

I. *French Retrospect.*

By T. W. McDowall, M.D.

Annales Médico-Psychologiques, 1875.

On the Inconveniences of Artificial Teeth in the Insane.—It can be easily understood how disagreeable symptoms will follow if false teeth be left in the mouth of a lunatic who has not the sense necessary to remove them at night, keep them clean, and so on. It does appear, however, rather startling to suggest that the employment of artificial teeth can stand in etiological relation to general paralysis. This Dr. Sizaret does, though in an apologetic manner. He says:—"Besides the inconveniences which may be justly attributed to the employment of false teeth in lunatics, it has occurred to me that there may be others less manifest but much more to be feared. This idea has been suggested to me by the cases of general paralysis which I have noticed, and in which I am inclined to see an etiological relation to their use. If this supposition appears far-fetched and without foundation, I think it will find its excuse in the gravity and frequence of the disease and in the necessity of not neglecting any information relating to it."

Reminiscences of 1871.—This short paper is introduced by interesting references to several great historical events which undoubtedly affected the type of insanity occurring among the people subjected to them. It cannot be doubted that the dreadful disasters of 1871 led to the occurrence of numerous cases of melancholia of a peculiar type. This was to be expected of a people "nerveux et impressionnable, qui naguère se regardait comme le premier du monde!"

The case related by Dr. Hospital is that of an officer who became insane after the war, having been disappointed in promotion, and having witnessed the suicide of one of his comrades. His symptoms were those of melancholia. After apparently recovering he resumed his military duties. An application for leave having been refused, he left for home. There he shot his brother without provocation, and without having previously excited any suspicions of danger. Having committed the murder, he surrendered himself to the military authorities and gave up his weapon.

Medico-Legal Case.—Racquin.—The report of this case, as given by Dr. Danby, does not appear to my mind to support his conclusions. A man drinks hard for twenty years, during most of that time is a curse to his family, who appear to have been far too kind to the scoundrel; at last he stabs his son, who had shown him nothing but kindness, and he escapes the scaffold because he was certified by the

expert appointed by the court as suffering from "dypsomania, a mental disease caused by alcoholic intoxication. In striking his son he obeyed a sudden impulse resulting from his disease. He consequently cannot be considered responsible for the act which he committed. A dypsomaniac having an irresistible tendency to drink, and every new excess being accompanied by the same dangers, we recommend that the accused be detained in a lunatic asylum."

Space does not permit us to reproduce the history of the case; that is unnecessary, for thousands such exist. Dr. Danby's remarks on it, however, do call for special attention. They contain opinions with which it is probable that few will agree. His statement that "dypsomania is a mental disease caused by alcoholic intoxication" is altogether incorrect and misleading. The description he gives of the man's condition when in the asylum shows that he was labouring under the dementia due to disease of the nerve centres induced by prolonged intoxication.

The manner in which occasional drunkenness, chronic drunkenness, and dypsomania, especially the two latter, are confounded is astonishing. In discussing the aspects of the case it is said, "A prominent fact consists in the change which, by the action of alcohol, occurs in the habits and character of the individual. In this case this transformation presents itself with the special characters of dypsomania. Whilst the confirmed drunkard leaves at each libation his moral sense at the bottom of the glass, and gains from it a certain intellectual excitement, and is merry or depressed as the case may be, and becomes himself again in the interval, the dypsomaniac exhibits a more radical change, which, although more marked during the attack, continues during the period of remission to such a degree as to cause him to be with difficulty recognised. Besides, the dypsomaniac obeys in his cravings a different impulse. It is not only a satisfaction which entices him, and the attraction of a pleasure which drags him along; he suffers from an irresistible tendency which is in him, which constitutes the very essence of his disease, and in which . . . . will, become powerless, no longer has a part. . . . . The drunkard could not equal these libations (Hacquin's) without rolling under the table and presenting the spectacle of the most abject inertia. The 'alcoholisé' alone possesses this tolerance, and amid so many disadvantages it is one of the privileges of intoxication. . . . . If, after the investigation of the manifestations of the alcoholic intoxication presented by the intellectual and moral state of the accused, there could still remain any doubt in our mind, it could not resist the examination of the organic lesions produced by the toxic agent. These lesions are so pronounced that we have the more pleasure in indicating them, because the physician, from the very nature of mental disease, too rarely has occasion to meet them in aiding him in his difficult task. These pathological disorders affect all the great functions of

animal life, and may extend from the most simple dynamic disturbance to the most profound organic lesions. . . . . But a last question, assuredly the most delicate, is the following:—What is the nature of the morbid impulses which the accused obeyed in striking his son, and how are they related to the mental affection from which he suffers? Let us say first of all that in a dypsomaniac the mental disorders may, according to the individual idiosyncrasy, and perhaps according to the nature of the liquids absorbed, assume various expressions. We cannot place the accused in the class of hallucinated dypsomaniacs, for in his case the form of the attacks, the nature of the delirium, and the manner in which he committed the crime, all show that he must be classed as an *alcoholisé* with maniacal attacks." And so on.

The report of this case is worth reading, whether we accept the opinions of Dr. Danby or not.

The Pedro II. Asylum and Lunatics in Brazil.—It would appear that this asylum, the first at Rio Janeiro, was opened in 1852, and that since that time others have been built, taking it more or less as a model, in Bahia and elsewhere. From an English point of view there is little worth imitation in the Brazilian asylums and their management. But we quite agree with M. Rey that some continental cities might greatly improve their asylums by adopting some of the good points of l'Hospice Pedro II. Still the following paragraph can be considered but very faint praise indeed:—"Brazil has done much for its lunatics. Its capital possesses an asylum which, in spite of its imperfections, might be envied by many of the great cities in Europe. Many of the asylums in Italy, notably those of Milan, Florence, and Rome, cannot be compared to the Asylum of Pedro II."

On Insanity among Criminals.—This contribution to this most important subject is summarised in the following paragraphs by the author, Dr. Hurch, physician to the large prison at Gaillon. It may be remarked that prisoners who became lunatics were not detained in the gaol, but were transferred to the asylum at Evreux:—

1. In the cases transferred during the last seven years the causes of insanity were chiefly inherent in the prisoners and independent of the imprisonment—at least, in ten of them.

2. Among the causes which induced mental derangement were—age; mental prostration after sentence and vexation thereat; embarrassments and alcoholic excesses anterior to sentence; a wretched and irregular life and the consequent privations; immorality and debauchery; finally, epilepsy.

3. Two prisoners were affected by general paralysis on their admission to the prison.

4. The proportion of undoubted lunatics transferred during a period of seven years was two per 1,000 prisoners.

5. Besides those transferred, there is in our prison—to use the expression of Dr. Baillarger—"a certain number of persons of peculiar organisation which almost constitutes in itself a commencement of disease, and which predisposes in the highest degree to all derangements of the intelligence."

6. We must separate epileptics from the prisoners.

7. As is usual, simulated insanity was rather frequent, and was observed generally in prisoners whose mental state left much to be desired, and who seemed predisposed to derangement.

On Alcoholic Epilepsy.—The consideration of this subject is divided by Dr. Drouet into the following heads:—Statistics. Rarity of epilepsy in acute alcoholism. What are the causes of convulsive attacks in acute alcoholism? Does the nature of the drinks consumed exercise a leading influence in the production of epilepsy? Epilepsy in chronic alcoholism. Pathological anatomy. Differential diagnosis, prognosis, treatment.

This paper is based on the observation of 529 'alcoholised" lunatics admitted to the Ville Evrard Asylum between February, 1868 and July, 1872. Of these, 442 were men and only 87 women. Fifty-four of these patients, or a little more than a tenth, had attacks at one time or another of their disease, and Dr. Drouet convinced himself that they were due only to acute or chronic intoxication. The proportion of epileptics was about the same in the two sexes. It is interesting to observe that the proportion of epileptics was only 1 in 50 among the patients under 30, but 1 in 8 in those between 30 and 50.

Epilepsy is exceedingly rare in acute alcoholism, but may occur in cases where unusually large doses of alcohol have been swallowed. Convulsions are rarer still in cases of occasional drunkenness. In the immense majority of instances they do not appear as an initial symptom, but rather as late symptoms of alcoholic poisoning. The patients are almost always habitual drunkards. Long before suffering from convulsions they have passed through the various phases symptomatic of chronic alcoholic intoxication. Their diseases have assumed either the gastro-hepatic or the nervous form. Almost all have had at one time or another difficulty in speech, muscular trembling, formication, cramps, partial hyperesthesia, or anesthesia.

Now, though convulsions are rare in acute alcoholism, it is not by any means easy to determine the special cause of their occurrence in each case. It seems probable that they are chiefly due to the original or acquired morbid predispositions which exist in the majority of men, if not in all, through which their organisms present different symptoms under the influence of the same modifying agent. However latent they may be, these varied morbid tendencies exist, and one must be blind to deny them. If an equal dose of any alcoholic fluid be given to ten persons, the effects will vary in each person: in one gastric symptoms will predominate, in another cerebral, and so on.

In spite of great research the question remains in great obscurity, whether or not the nature of the drinks swallowed exercises a primary influence in the production of epilepsy. Dr. Drouet agrees with Lancereaux, Moreau and others, in opposition to the well-known views of Dr. Magnan, that there is reason to think that the oils or essences contained in alcohols at most only increase the exciting properties of these agents and modify very little the symptoms and prognosis.

As already stated, alcoholic convulsions occur chiefly in chronic drunkards whose brains have undergone a special morbid change. The tendency to convulsions may exist in three degrees of intensity. In the first stage an epileptic attack may occur after an unusual excess in drinking. Later, seizures occur, although the patients drink comparatively moderately and without ever becoming drunk. In the third stage the tendency to convulsions is increased. There is a pretty numerous class of patients who, though confined in asylums and deprived of all stimulants, continue subject to epileptic attacks. When things have gone so far, we may say that the epilepsy is constitutional.

The most various lesions are observed in those who have died during the course of chronic alcoholism. The principal are—Hæmorrhagic pachymeningitis; adhesive inflammation of the pia mater and arachnoid, specially well marked on the superior surface of the hemispheres in the neighbourhood of the great fissure; dilatations of the meningeal vessels, the result of repeated congestions; excess of cerebro-spinal fluid; granulo-fatty degeneration of the cerebral vessels, frequently accompanied by hæmorrhages "en traînées" or "de petits foyers;" abnormal proliferation of the interstitial connective tissue; fatty degeneration and atrophy of the nerve cells or fibres; and circumscribed encephalitis.

Medico-Legal Case.—Manguen.—With the greater part of Dr. Debondt's report most readers will agree. An abandoned woman suffocates her child, and attempts to escape punishment by simulating insanity. However, her acting was so bad that she was easily detected in her imposition, and was sentenced to five years' hard labour, which she richly deserved. On two or three occasions she was observed to drink her urine, and in relation to this it is remarked that this trick is too well known for it to be tried, except by those who have no other resource, and is an act not rarely observed except in some dements, general paralytics, and certain idiots and imbeciles depraved in their most natural instincts. Perhaps Dr. Debondt's experience may be peculiar, but in England it is a fact that urine-drinking is frequently indulged in by acute and recurrent maniacs, and even by melancholics who labour under no excitement. It is also stated that "she complained frequently of indisposition, pains in the back, belly and stomach, of diarrhœa; which is again contrary to the habits of lunatics, who never make the least complaint, even when

they are affected by most serious diseases." Unquestionably such cases do occur, but they are not by any means the rule.

Hysteria in a Man.—This case has been recorded by Dr. Fabre, because it has appeared interesting to him in more than one respect. It is a disease rarely observed in the male sex, and the cases already recorded have been as a rule so imperfectly described that their authenticity is open to doubt. It is also very unusual to find a case of hysteria in a man passing into demoniacal possession, a combination almost entirely confined to women, and appearing in an epidemic form.

The facts of the case are as follows:—Colin, Joseph, æt. 30, a wood-turner, was born at Nancy of parents who both died of phthisis. He is the only survivor of four children; one died of hydrocephalus, the second from an accident, and the third, a girl, was the victim, according to the patient, of a spell which a woman of immoral life threw over her, so that she died bewitched. This allegation, which gives at once a measure of the intellectual development of Colin, appears to have some relation to the delusions which the patient manifested. His state of mental debility did not permit of him learning much; he can no longer write, and reads with difficulty, although he attended school for seven years. His physical development leaves much to be desired. Of a stature below the average, pale and feeble of aspect, he presents undoubted symptoms of phthisis and anæmia. His feet and ears are deformed, his legs thin, and the tibia strongly curved forward and very prominent, but the thighs are relatively large, the pelvis wide, the genital organs slightly developed, the chest enlarged at its base, and his breasts, overlaid with adipose tissue, appear more voluminous than usual. The whole appearance of the trunk and thighs recalls the female figure; even the quality of his soprano voice has something effeminate; the hair is scanty; his sexual appetite is but slightly developed; he admits having practised masturbation frequently, but he has had sexual intercourse only five or six times. He has pretty often indulged to excess in brandy, and had consequently frequent derangements of digestion, for which he was treated in various hospitals. During these attacks one of his symptoms was frequent spitting.

Having been arrested as a vagabond he was at last sent to Vaucluse, where he presented nothing abnormal in his condition for a few days. On 3rd September he had his first nervous attack which lasted about ten minutes. On the 5th, two attacks, one in the morning and the other at night, each of about forty-five minutes' duration. On the 9th an attack of twenty-five minutes. On the 10th four attacks of about ten minutes. On the 16th, at the time of visit, Colin suddenly lost consciousness, and was attacked by convulsive movements, which began in the lower limbs, soon attacked the whole body, and increased in intensity. The patient twisted about on his bed, his face was distorted, the pupils contracted. There was analgesia of the limbs.

But above the pubis the least contact provoked cries like those of a pig being killed. When the attack ended, the patient said he felt as if a ball had risen from the genitals to the throat. It was impossible not to recognise the hysterical character of the symptoms; bromide of potassium was given from the beginning, and the dose increased.

Numerous attacks, varying considerably in detail, occurred till the 3rd October, when the following note was made: Five attacks, of which one occurred at visit;—the face was distorted, the mouth open, the tongue was moved about with the point turned up; at the end of a minute the mouth was shut, then the patient clutched with his hands the sides of his bed, and his legs were convulsed for more than a minute; for about the same time he champed with his teeth, and spat often a small quantity of saliva at a time. Sensibility remained perfect. Convulsive movements reappeared after a short interval of repose, and began first in the legs, then in the arms, and lastly in the trunk; the patient continually held fast to his bed, knelt on his mattress, alternately shook each side of his bed; he uttered a few guttural sounds, complained of suffocation and pains in the neck, navel, &c.

During the next few days, the attacks continuing, he complained of pains in the abdomen, and refused to eat or drink. On the 15th October Dr. Fabre noted the following particulars:—Colin is half seated on his bed, his right hand as high as his face, the fingers in rapid movement; the first is his father, the second his mother, the third his father, the fourth is his sister, the fifth God. His fingers speak to him, he hears their voices; *the devil has come to put him all right*; *he has lengthened him, he wished to make a giant of him; there are the marks which he has left on him*, and the patient points to the skin of the scrotum where the cuticle is rubbed off in some places; *he has also reduced his hernia.* (Colin alluded to a remarkable induration of the abdominal muscles, which Dr. Fabre had observed more particularly above their pubic insertion during the majority of the attacks of hysteria at which he was present.) The devil speaks to him, threatens him, *he has* 18,000 *men in his belly*; *his limbs and feet are full of them; he has swallowed some and passes them in his urine*; *he should be taken to the university.*

By the 29th the attack had passed off, and he was able to give the following account of himself:—Until I was twenty years of age I had no serious disease, except smallpox. During the last war, at Toulon, where I was in garrison, I was seriously ill; my legs were swelled; I had water in the belly; two years ago, at Meaux, I had violent pains in the stomach, I spat much, I slept almost none, I dreamed much, I saw frightful things, beasts, devils, black clouds. At the beginning of my attacks I felt first a severe pain in the belly, and soon in the whole body, but especially in the throat; I felt as if choking, I could not eat, my head ached very much, I still saw black clouds. When my belly was touched I felt a frightful pain. After-

wards I thought the devil was in my head, then in my hands and feet. He spoke to me and I heard his voice, also that of God, and of my parents; I saw flashes, flames, I smelt the odour of sulphur, and I seemed to swallow it when I ate or drank.

In his remarks on this interesting case Dr. Fabre refers frequently to the opinions of Briquet, which may be summarised as follows:—

1. Increased impressionability of the affective element of the nervous system constitutes the basis of the predisposition to hysteria.

2. Hysteria is almost peculiar to the female sex, because in it there exists a predominance of this affective element.

3. Nevertheless, hysteria may exist in man, but conditionally to their existing in him the same predominance.

4. The reason of this special tendency in woman is not to be found in her sexual apparatus, but in the form of sensibility peculiar to her.

5. The passions and melancholic mental conditions are the only predisposing causes of hysteria.

As to the relations of insanity and hysteria the author concludes:—

1. During the convulsive attack the patients often suffer from a transient delirium.

2. Insanity may occur in a hysterical person, exhibiting the proteiform neurosis as the determining cause, and as occurring in the varieties of partial or general delirium.

3. In a great number of cases, the hysterical phenomena and the intellectual disorders which accompany them are spread from one person to another, and frequently by imitation, and constitute genuine epidemics of insanity characterised by predominance of religious or demoniacal ideas.

Alcoholism and the Delirium of Persecution.—It cannot be said that all patients labouring under delusions of suspicion have caused their illness by excessive drinking, but it is undoubtedly true that in a large proportion of cases there is this relation, and that they form a most dangerous class.

In this short paper the particulars of four cases are recorded, and Dr. Cullerre tries to show: that the delirium of persecution and alcoholism are sometimes united in the same patient; that their special characters are generally easily distinguished; that either may have the priority of development; and that their union in the same patient is peculiarly dangerous, so far as other persons are concerned.

One of the cases recorded is unusually interesting, as affording an example of the hemi-anesthesic form of chronic alcoholism described by Magnan.

On wandering Lunatics.—As the result of a very careful examination of the history, symptoms, &c., of fourteen patients, Dr. Foville, fils, concludes:

1. Certain lunatics undertake journeys more or less long from the character and development of their insanity. The wanderings of these lunatics are voluntary acts, well considered, and the logical

sequence of a systematized delirium. They should not be confounded therefore with those unconscious impulses to change of place to which imbeciles, "instinctifs," epileptics, and dements are subject.

2. All the wandering lunatics whom I have observed are hallucinated melancholics. They form two groups: in some there exist only ideas of persecution, and by expatriation they hope to escape their imaginary enemies; among others, to the delusions of persecution are added ideas of grandeur. The latter labour under megalomania, and travel in foreign countries, in the hope of there obtaining the realization of their dreams, and of obtaining that justice which is denied them at home.

3. Nothing could be less justifiable than considering these lunatics as affected by a special form of insanity, the monomania of travelling. Their delirium is not limited to a single point; it is always more or less complicated, and should be classified with lypemania.

Medico-Legal Case.—It may be well to give more details of this case, for it raises the very important question, Is it right to punish those who can be considered only partially responsible for their actions?

A commission was appointed to examine the mental state of C. C., accused of theft. The following is the substance of the report. The accused C. C. is 26 years of age, strongly built, of a stature above the average; he is fair, of a fresh complexion, and of a sanguineo-lymphatic temperament. There is a very marked disproportion between the dimensions of the face and cranium. Whilst the face is unusually developed through the lengthening of the jaws, the cranium is completely flattened behind, and is so reduced in volume as to present the characters of genuine microcephalism. This defect in conformation, which is necessarily accompanied by an arrest of development of the brain, is not merely accidental and peculiar to the defective organic evolution of the person; it is the result of morbid heredity, and is evidently associated with other signs of physical and intellectual degeneration in his family, notably in his mother, who was goitrous, and one of his sisters was a congenital idiot.

In 1866, at the age of 19, C. C. was for the first time prosecuted for theft, but was acquitted, a medico-legal report having been presented, certifying him to be irresponsible on account of his imbecility and monomania of theft. Since then he has been at liberty, and employed in various houses, where his conduct never attracted the notice of the judicial authorities. Lastly, he was employed at the brewery Robert, where the thefts occurred of which he is accused; the articles stolen were a wax ornament and a surplice from two churches.

As to his mental condition at the time of examination, it is certified:—We have examined and questioned C. C. on various occasions, and every time we have found him calm, reserved in his speech, polite and respectful towards us; our general impression was

at the same time that he could carefully weigh his answers, whose habitual slowness must not only be attributed to the laborious evolution of his thought. At our first visit, we at once questioned him as to the thefts of which he was accused; he immediately denied his guilt with the greatest vehemence. He said he did not know what we meant; he was indignant of being accused not of a simple theft, but of one a hundred times more wicked, of a theft from a church. We insisted upon this point, we varied our questions; we reminded the accused that in January, 1867, he was convicted of thefts, which he had fully confessed, and that his sentence had been remitted on account of his mental state; we even gave him to understand that the same might occur this time.

In spite of all our efforts we did not even get the shadow of a confession: "I am, said he, neither mad nor imbecile, I know what I am doing. If I had not known what I did, and had not been capable of behaving myself, I could not have served in the houses where I did serve; I never put my foot into the churches of Larangeot and Falletans, and those who accuse me are the real culprits." At none of the visits which were made to him did the accused vary in any point in his denials.

Not succeeding in obtaining any confession relative to the crimes of which he then stood accused, we returned to the thefts committed in 1866 by C.; we asked him if he remembered having stolen at that time various articles of clothing, which he afterwards hid in the woods. The prisoner seemed very much surprised at our question, and assured us that he had no recollection of the occurrences of which we spoke. We then showed him his signature at the foot of the examination containing his confessions; he was quite taken aback, got up hastily and appeared to be greatly agitated. This extreme astonishment and sudden agitation were evidently not the result of C.'s learning for the first time that he had been guilty of thefts in 1866. We rather attributed them to his ignorance of the existence of judicial records, and the surprise caused by our unexpected revelation. At any rate, he sat down, recovered his self-possession, and said, "I may easily have forgotten it, for I have no memory."

We continued our investigation, and questioned him as to his usual occupations and actions. His answers were comparatively satisfactory; they were clear, precise, without any manifestation of delirium or other intellectual disturbance. His answers were not those of a genuine imbecile, and he appeared to enjoy at least that common sense which nothing authorised us in denying to him. He gave us an almost exact account of his life during the last two years; if we noticed any inaccuracies, the reason was easy of discovery. Thus for example, C. stated that he had served with Dr. Rouby at 15fr. per month for 10 months. On interrogation he added that he left that house to gain more elsewhere. All that was perfectly correct,

and indicative of an excellent memory, with one exception—the reason of his leaving. We learned that Dr. Rouby had dismissed him for climbing the wall during the night, and stealing the melons from the garden where he worked. It results from the details which we have given that C. knew how to leave in the shade facts which were unfavourable to him, but that his memory appeared perfect at least in regard to recent events.

There still remains one point for examination. Was the accused under the influence of a moral perversion which, irresistible, impelled him to steal? Ought he, in a word, to be considered as affected by a genuine *monomania* of theft? Upon this point we must state that neither in the depositions, nor in our own investigations, did we find any sufficient ground for this opinion. It is true we know that he was differently judged in a previous report, but this was in January, 1867, the accused was only nineteen years old, he was backward, and presented at that time all the characters of imbecility with want of free will. The recent examination which we have made as to his mental condition obliges us to state that his intellectual and moral faculties have progressively developed since, and that his instincts have undergone a favourable modification at the same time. In an interval of seven years C. C. the accused was not the subject of any judicial prosecution; he appears to have conducted himself almost normally during all that time, and yet, in his capacity of servant, opportunities for stealing cannot have been wanting. If, then, we suppose that the tendencies to theft always existed in him, it did not present on all occasions the character of irresistibility or, consequently, of irresponsibility.

Conclusions.—1. The accused C. C. is affected by congenital and hereditary intellectual feebleness.

2. He knew the consequence of his acts, which were not due to any irresistible influence.

3. His responsibility was limited, as also his moral and intellectual capacity.

This report is signed by Dr. Lizaret, and a note is appended to the effect that C. C. was condemned to six days' imprisonment. One naturally asks, did he deserve it? It is impossible here to discuss adequately the question of *limited* moral responsibility, but it may be asked, what good results from punishing an imbecile? It does him no good, it makes the law ridiculous, and can have no effect in deterring other imbeciles from breaking the law. Very many would, on the strength of the above report, have saved the poor creature being degraded and punished, and have recommended that he should be better looked after. It is really amusing that the fact that his behaviour had been so good so long should have been one of the chief reasons for putting him in prison. He did not steal from his masters (except some fruit) because he was a good creature; he stole some things of no value to him because he was a fool; the nature of the

theft proved his folly. Why should we be astonished that he stedfastly denied his crimes? Many imbeciles are most amusing liars, who have not the sense to speak the truth even occasionally. If a will by a lunatic stands or falls by its internal evidences of reason, why not treat an imbecile in the same manner? If his acts in themselves (no matter how cunningly devised and dexterously executed) show the mental weakness of the accused, then means should be taken to keep him out of mischief. For medical experts to aid in punishing such miserable objects is not right; it is cruel of the law to be guided by such advice.

Medico-Legal Case.—Railway Accident.—The details of this case are most interesting and amusing; interesting because insanity so rarely immediately follows injuries received in a collision, and amusing on account of the ridiculous conflict of the medical evidence. Dr. Dubiau has arranged the facts of the case admirably, and clearly proved that the patient did not simulate convulsions and insanity. His conclusions, as given in the following paragraphs, indicate sufficiently the nature of the case:—

1. In consequence of the railway accident on the 16th April, 1868, M.D.'s health was seriously injured; his nervous system was shaken, his mental faculties disturbed, and his reason upset to such an extent that he attempted suicide.

2. Various witnesses proved: 1°. That M. D. was quite well, and attended as usual to his business up to the time of the collision. 2°. No mental disorder was observed in him during his residence at Nantes or Bordeaux until the accident.

3. No proof was produced against these assertions. It is, therefore, logical to impute the alteration in his health and mental faculties to the disturbance caused by the collision, the more so as there are on record cases of mental alienation produced by physical causes—such as shocks, blows, wounds.

4. As the result of the accident, M. D. has been incapacitated more or less for a year in his work. Besides he suffers from the social stigma of having suffered from an attack of insanity.

5. Really M. D. appears to enjoy sound mental and bodily health. But by the single fact of his having had one attack of insanity he is predisposed to a relapse, to prevent which he ought to be careful of himself, and avoid too much work and long and violent mental exercise.

Clinical observations on some cases of Locomotor Ataxy in Insanity.—That this is an interesting paper does not admit of doubt, and yet it does not help to solve the difficulties which surround the relations of locomotor ataxy and general paralysis. This, however, is not surprising, as the paper is almost entirely clinical in character, only one *post-mortem* examination being recorded in it. Seeing that authorities differ as to the clinical characteristics of general paralysis, and that locomotor ataxy is frequently complicated by symptoms

dependent upon lesions other than those of the posterior columns, we must look to pathological anatomy rather than to clinical observation for help to escape from difficulties we experience in differentiating the various symptoms, and to refer each to some nervous area. So confused are we at present in our ideas that some maintain that there is no essential difference, except in degree and locality, between the two diseases. Those holding an opposite opinion fail to convince their opponents of their error; and so the matter stands.

Dr. Rey's position is plain enough when he says: progressive locomotor ataxy, formerly known as tabes dorsalis, has rarely been studied in its relations with mental derangement; the association of the two diseases is not very frequent. His resumé of the literature is short but good, and shows (1) that in cases of simple locomotor ataxy writers have proved the integrity of the mental faculties; (2) that locomotor ataxy may be complicated by various disorders of this intelligence, from simple enfeeblement to complete delirium; (3) that this complication is often general paralysis. Whilst admitting that there are many symptoms common to the two affections, which may account for error in diagnosis, he states that there is a characteristic symptom of locomotor ataxy which he has employed in his observation as a test, the increase of inco-ordination of movements during closure of the eyes. It is scarcely to be doubted that this test will be rejected by many as inconsistent with their experience.

The details of nine cases are recorded by Dr. Rey, and in all of them the disorders of intelligence appeared consecutive to the locomotor ataxy, always after the incoordination of movement, and before the ataxic symptoms became well marked in the upper limbs. The disease was of the usual character, and marked by the common symptoms. All the patients presented a certain degree of muscular enfeeblement, always more marked on one side of the body, on that in which the ataxic symptoms, pains, incoordination were most decided. They suffered from cephalgia, vertigo, buzzing in the ears, for a longer or shorter time before the appearance of the mental symptoms. The inequality of the pupils observed in some of the cases is frequently met with, according to Charcot, in locomotor ataxy, free from all complication.

The drunken habits of case 4 necessitates some remarks upon the relations of ataxy and alcoholism. In alcoholic intoxication, we observe almost always disorder of the sensibility, pains, spasms, formication which give rise to false sensations and characteristic hallucinations. There is also cutaneous and tactile anesthesia, perversion of taste and smell, and disorders of sight, ambliopia, diplopia; besides occasionally disorders of locomotion and awkwardness of the hands. M. Charcot has pointed out the relations of the two diseases.

Intellectual disorders appeared in Dr. Rey's patients when the primary disease was in its acme, and presented nothing peculiar.

In the cases of ataxy with general paralysis, it was difficult to follow the progress of the two affections, because the muscular symptoms of the latter soon obscured those of the former. Besides, the intelligence and memory changed rapidly, and the patients were soon incapable of explaining their sensations. On the contrary, in the cases where a mental affection other than general paralysis complicated the disease of the cord, it was possible to observe the phenomena proper to each, and their relations. In these cases the ataxy and insanity, considered separately, followed their usual course. Further, where the two diseases presented exacerbations and periods of repose, a direct relation was often noted between the ataxic phenomena and the delirium. Thus two patients (4 and 5) had an attack of excitement on admission to the hospitals, that is to say at an acute period of the spinal affections. In the case of the woman P. (4), the pains diminished, the disorder of locomotion became less, and the mental state improved parallelly. Cases 6 and 7 were also remarkable in this respect. In the former, to the acute state of the spinal affection corresponds the greatest activity of the melancholic delirium; then, perhaps under the influence of the febrile state, the symptoms improved *pari passu*, and the patient was discharged decidedly improved.

In another patient (7) the explosion of the delirium coincided with the loss of vision and the aggravation of the pains. In him the disorders of sensibility had a remarkable influence upon the manifestations of delirium. He believed that they fired balls at his legs and eyes. He saw his feet mutilated with a hatchet; they made him inhale bad odours; eat fæces. These were evidently the delirious interpretations of various ataxic symptoms, lancinating or boring pains, alteration of the senses of taste and smell. In this patient the mind improved, as also the ataxic symptoms. Then the intelligence remaining unimpaired, the spinal disease resumed its progress.

Another patient (5) presented analogous disorders during his period of excitement; then the two diseases had a period of simultaneous calm; finally, the mental state remaining stationary, the ataxy became general.

In case 8 the two affections were stationary, and presented their respective symptoms.

The mental state improved in case 9, and the ataxic symptoms continued with a certain degree of intensity.

To sum up the whole: in nine patients affected by locomotor ataxy with insanity, three were general paralytics. Six suffered from various forms of delirium, independent of that disease.

In all, the mental derangement was developed subsequent to a longer or shorter period from the beginning of the ataxic symptoms, and always at the period of their greatest intensity.

In the general paralytics, the mental disease presented nothing peculiar. The ataxy was of the paraplegic form with its usual charac-

ters. The general paralysis considerably obscured the ataxic phenomena: it advanced whilst the spinal affection appeared to remain stationary.

In the other cases the ataxy presented its usual symptoms, as did also the mental diseases. The two affections followed at first a parallel course, they became better or worse together, or were stationary. Finally, the mental derangement having been cured or improved, the locomotor ataxy resumed its progress.

2.—*Italian Psychological Literature.*

By J. A. Gasquet, M.B. Lond.

The volumes of the *Archivio*, for 1875 and 1876, which we have received contain an unusually large amount of interesting original matter, which we are unfortunately only able to notice very inadequately.

The "Società Freniatrica Italiana" met for the first time at Imola on September 21, 1874. At this meeting, and also at the second, held at Milan, in July, 1875, the proceedings of the meeting and the class of subjects discussed closely resembled those of our own Society. But in November and December of the latter year, the Society had a series of five meetings, to consider certain proposed changes in the law relating to lunatics, which were subjected to a very minute and searching criticism. The result of their deliberations cannot fail to have considerable weight in guiding the legislature of Italy and public opinion in that country.

There has been much attention devoted to *transfusion of blood*, as a means of treatment, in several Italian asylums. Some physicians have employed defibrinized human blood, but others have preferred to use arterial blood from the lamb, which is allowed to flow directly from the artery through an elastic tube into the vein of the patient. This treatment has been particularly tried in cases of profound melancholia with refusal of food, and of pellagrous cachexia. No evil results have been noted, but occasionally a considerable amount of cyanosis has followed the operation: this has by some been ascribed to vaso-motor paresis, but Dr. Ponza is more probably right in supposing it due to increased pressure on the right side of the heart. The operation has generally been followed by improvement of the mental condition, and this is sometimes considerable and lasting. It does not seem usually to follow so immediately upon the transfusion as to suggest that it is merely a result of the shock of the operation; it seems rather to be generally considered in Italy to be due to the stimulant effect of arterial blood upon the brain. I may take a case of Prof. Livi's as a good example: the patient had been insane for five years, and in a state of complete stupor for ten months. No other treatment having been of any avail, transfusion was tried; after the

first operation, the patient began to speak and move; after a second there was a further improvement, and after a third he had days of complete lucidity, alternating with stupor. It will be interesting to watch the results of a more extended trial of this very novel, and so far promising, mode of treatment.

Dr. J. B. Verga has made some trials of the *nitrite of amyl* inhalation in various states of mental depression (melancholia and silent dementia). A temporary improvement was sometimes observed to follow the inhalation in even the worst cases (the patients smiling or answering a question), but, although the treatment was continued daily for periods varying from 15 to 73 days, no permanent good ever resulted.

Dr. Frigerio has been for some time engaged in treating epilepsy by the *hypodermic use of Bromide of Potassium.* The average dose injected is about 5 grains, and this has usually determined none beyond a very slight local irritation at the spot where the injection is performed. The urine is generally found to be considerably increased in quantity, and yields evidences of the presence of bromine to chemical tests. Dr. Frigerio claims for this method, that the number of fits is much more markedly and rapidly diminished than when the bromides are administered in the usual manner, and that there is also less disturbance of the general health, particularly of the digestive organs.

Drs. Albertoni and Michieli, of Padua, have been repeating Hitzig's and Ferrier's experiments on the *grey matter of the convolutions* of the brain; and have been led to the conclusion that these certainly contain centres of voluntary motion, which, however, only act mediately through the nervous ganglia at the base of the brain, which are the true motor centres. The pathological evidence they have been able to collect points to the same inference, since it would appear that disease of the cortical grey matter produces imperfect and transitory paralyses, accompanied by spasms and twitching of the muscles whose motor centres are affected, while disease of the other ganglia results in complete paralysis.

Lussana has published some further researches into the nature and functions of the *corpora striata.* He believes comparative anatomy and embryology both imply that these ganglia are only a part of the cerebral hemispheres, and he thinks the consequences of their destruction depend only upon the severance of connection between the convolutions and the lower portions of the nervous system.

Some experiments of considerable importance have been made in the course of the past year in the physiological laboratory of Sienna.

Dr. Albertoni has made a series of experiments to determine certain problems connected with the *production of epilepsy.* He finds, as others have done before him, that stimulation, by a very slight galvanic current, of the motor centres for the limbs in the cerebral convolutions of either side produces epileptiform attacks. In order to determine whether this effect was immediate, or reflexively produced by

influencing the lower motor centres, he removed the motor centres on one side of the cerebrum, and, after an interval, applied the stimulus to the other side; *bilateral* convolutions were produced as before. As he remarks, this seems to imply that the influence of the cerebrum in producing these convulsions is a mediate, and not a direct, one. These attacks are often accompanied by salivation; apparently due to a stimulation of the salivary glands transmitted through the corda tympani, since it no longer occurs after division of that nerve.

Drs. Bufalini and Rossi have been investigating the effect upon the nutrition of the spinal cord of section of the nerves connected with a portion of it. They find that, after two or three months, the white matter in the segment of the cord corresponding to the nerves divided is diminished in amount, but that the grey matter undergoes no change.

They have also observed the effect of irritating the roots of the spinal nerves upon the *heart's action.* The number of pulsations is considerably increased (40-80 beats per minute, in dogs) when the root of the 3rd dorsal nerve is irritated; when the root of the 4th is irritated, the increase is only 10 to 12 beats; when the root of the 5th is irritated, there is usually an increase of from 30 to 40 beats, but sometimes there is no effect. (Occasionally the 4th nerve seems to replace the 3rd in its special effect upon the cardiac pulsations.)

Dr. Bonfigli ascribes the *diarrhœa* often accompanying insanity and other chronic nervous disorders to paresis of the vaso-motor nerves in the intestinal mucous membrane. From this theoretical view, he was led to administer chlorate of potash, which, according to Sasse, acts by increasing vaso-motor contraction. He has found it very successful, provided it be given in larger doses than usual, and continued for some time after its good effects have been produced.

There is a very able paper by Dr. Vigna, of Venice, on *Delirium*. which I regret cannot be satisfactorily abstracted.

Dr. Bini gives an interesting account of the *clinical teaching of mental diseases* in the different countries of Europe: but he is mistaken in supposing that only two courses of lectures on insanity are delivered each year in the United Kingdom.

The "Rivista Sperimentale di Freniatria e di Medicina Mentale," of which I briefly noticed the prospectus in the last Retrospect, has now appeared for two years, and besides dealing with forensic medicine, contains many original articles on subjects connected with insanity. Most of the writers are connected with the asylum at Reggio; and a bulletin of the condition of that establishment is added to each number of the Review.

Drs. Morselli and Tamburini give a minute analysis of the shape and size of the cranium in twelve idiots, and of their bodily peculiarities, which they compare with those of the inferior human races (particularly the Akkas, Australians, and Bushmen), and with the various apes. They are led to the conclusion, though (as they justly

remark) from a very small number of cases, that most of the phenomena of idiocy are instances of "reversion" or "atavism," the minority only being due to arrested development.

Dr. Tebaldi has been experimenting with the *amyl-nitrite inhalations:* he has used it very carefully in six cases of stupor or of melancholia attonita: he selected those cases in which the general physical condition, and the pallor of the face, led him to believe there was cerebral anæmia. He found the amyl nitrite act almost invariably as a powerful excitant; the face became flushed, and patients who had previously been completely inert, were at once aroused, answered questions, took food, &c.: but these effects were always transitory, although the inhalations were continued once or twice a day for some time. He thinks, however, that this may be an important adjuvant to other treatment of a tonic and stimulant character.

Dr. Livi publishes a very minute account of the *pathology of General Paralysis.* He combats the views of Westphal on the one hand, and Poincaré and Bonnet on the other, looking to the encephalon itself as the primary source of the disease.

Dr. Tamburini gives a very interesting description of *salivation,* as it occurs in lunatics. Eckhardt pointed out some years since, that whereas the saliva produced by irritation of the corda tympani or of the auriculo-temporal or lingual branches of the 5th nerve is watery and thin, that caused by stimulating the sympathetic is thick and viscid. Stark applied this to the ptyalism of insane patients, and suggested that the character of their saliva, when in large quantity, might be an evidence whether their insanity was produced by some primary cerebral disease, or by reflex action from other organs. Dr. Tamburini adds two more cases to those already mentioned by Stark, which conform to this rule.

Professor Schiff, of Florence, publishes a very interesting critique upon *Hitzig's and Ferrier's discoveries.* The main point in it is this; that the centres which they have discovered are not centres of motion but centres of sensation. He points out that the movements produced by irritating these points in the convolutions resemble reflex rather than direct action in several particulars (the power of motion is lost during profound anæsthesia; the moment of closure of the galvanic circuit acts more notably than the moment of aperture; the time that elapses between the application of the stimulus and the production of movements is as long as in the case of ordinary reflex movements). Moreover, the movements are associated with secretory, cardiac, and vaso-motor phenomena, which are undoubtedly reflex in their origin.

Schiff believes that the effects of removal of these points in the convolutions prove that they are really centres of the sense of touch. Animals from which these have been removed (he states) suffer not from a true paralysis, but from phenomena of an ataxic character, which are absolutely indistinguishable from those produced by section

of the posterior columns of the spinal cord. The want of spontaneousness and co-ordination, which is very evident in such animals when they first begin to move, disappears if they are made to run fast. So far there is nothing inconsistent with Hitzig's view that these are centres of muscular sense; but Schiff denies the existence of this sense, and argues that all the phenomena may be accounted for by local anæsthesia, which may be otherwise proved to exist.

Dr. Tamburini publishes a careful analysis of the local disease existing in 331 cases of *aphasia*, being all that he has been able to collect, and he finds that—

1. When the condition is one of mere *amnesia*, or of *verbal ataxia* (misuse of words), the part affected is generally one of the frontal lobes.

2. When there is verbal paralysis (*logoplegia*) the part affected is, in 37 per cent. of the cases, the marginal convolutions of the Sylvian fissure; in 31 per cent. the insula; and in 47 per cent. the corpus striatum.

3. When there is *glosso-ataxia* the pons, or the medulla oblongata, is affected, and in the latter case most frequently the olivary bodies.

These pathological data agree with the author's inferences from the present state of physiology. I may add, that he agrees with Wernick in supposing that the receptive centre for the auditory "images" of sound is in the first temporal convolution which is connected by commissural fibres with the insula.

He calls particular attention to the varieties of disturbance of speech in general paralytics, which have been hitherto too little noticed, but have been lately pointed out by Voisin. I wish that I could dwell more fully upon this extremely learned and interesting paper.

Dr. Berti has described two cases of what seems to be now called "*Krishaber's disease*," and is really chronic vertigo, gradually increasing in intensity, and not connected with anæmia, epilepsy, or affection of the internal ear or stomach. Such cases appear to be always due to disease of the pons varolii.

Dr. Morselli has taken occasion from five cases of *broken ribs* occurring in the asylum at Reggio, to make a very elaborate study of the whole question. After a review of all the medical literature on the subject, he is led to the conclusions that there is a tendency in insanity to softening and atrophy of the cortical part of the bones, with hypertrophy of the medullary canals, and fatty degeneration of the medulla: that this condition is usually not recognizable during life; and that the cases of fractured ribs noted in asylums are to be ascribed to this pathological change, and not to violence or ill-treatment.

The drawing up of a new penal code for the kingdom of Italy has given rise to some discussion on the question of the *legal responsibility* of persons of unsound mind. The law, as recently laid down,

is that every one who has been deprived of the consciousness of his acts, or of the power of resistance, by reason of infirmity of mind or external violence, is nevertheless responsible, but the punishment shall be diminished accordingly. This is very ably combatted by Ziino and Tamassia, who argue that, if insanity be once admitted, all responsibility ceases, and there should equitably be no question whatever of punishment.

One of the most valuable features of this Review is a very careful analysis of the progress made (particularly in France and Germany) in the anatomy and physiology of the nervous system: this is more clearly and agreeably done than in any Retrospect with which I am acquainted.

Dr. Tamassia has forwarded a pamphlet, containing his account of the *post-mortem appearances* in 235 cases of insanity. His account confirms, on the whole, Dr. Howden's and Dr. Balfour's observations, and, as it deals wholly with figures, I am unable to give any analysis of it, and will only add that its carefulness and evident trustworthiness will make it indispensable in any future study of the subject.

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

(*Continued from page* 487.)

Thirty-eighth Annual Report of the Suffolk Lunatic Asylum.—This report, among other interesting remarks, contains some of which all superintendents will admit the truth, and which, though not now delivered for by any means the first time, are valuable as tending to remind the public at large of important facts which they are very apt to forget. Speaking of the objections to discharging patients who are insane, but quiet, orderly and industrious within the Asylum, Dr. Kirkman says:—"It is perplexing to keep within the letter of the law, and to resist importunate entreaties; when they are complied with, feeling too often prevails over judgment." It will be said that a certain man, he continues, "might as well be working at home, and earning his living, as spending such capabilities for the benefit of the Asylum, where he is detained as an insane man. But how often is half a truth proved to be the greatest falsehood; it is the secret of quiet protection and asylum security in the background, which renders such occasional or constant display possible; work is his happiness, his *physic*, and his *cure*; he could not do under different circumstances, without medical treatment, or without the latent *sense* of treatment, what he does in the asylum, and under its sheltering care. This is but a vivid instance of a very large class of patients who can and will work with advantage here, but with whom friends make the fatal error, that they could work just as well at home." Dr. Kirkman might have added that the *percentage* of those who do a really good day's work in asylums is very small indeed, while that of those who do a good year's is

almost fractional. Dr. Kirkman announces his determination to retire from the post which he has now held for forty-five years, and we only express the sentiment of all the members of our Association, when we say that we trust that the committee of visitors have sufficiently rewarded his long and valuable services, and that he may long enjoy their liberality. Neither the Committee of Visitors' nor the Commissioners' Report is printed, which we think is a mistake. The death rate is 10·5 per cent.

Sixth Annual Report of the Leicester Borough Asylum.—The murder of an attendant in this asylum was committed by an epileptic patient, who was in the ordinary course committed for trial. The case is instructive as showing the indisposition of judges and juries to admit the plea of insanity in cases where there can be no reasonable doubt of it. The counsel for the patient, or prisoner, as he is termed in the visitors' report, very naturally objected to his being called on to plead at all, but the judge and jury, on the opinion of the two surgeons of the County Gaol that he "appeared to be quite rational," and able to understand the witnesses, and instruct counsel, over-ruled the objection, and the trial proceeded. According to Mr. Finch, the medical superintendent, he seems to have been as troublesome, sullen, malicious, abusive and dangerous an epileptic as one could desire to meet with, but the judge, who will be gratified to hear that it is the opinion of the chairman, and several members of the committee of visitors, that he summed up the case with great legal ability, charged the jury that "there was no doubt the prisoner was suffering under a delusion, but they must not say that a man was insane because he was suffering from delusions, unless they were satisfied that he did not know what he was doing was wrong. If the jury came to the conclusion that the prisoner's mind was unsound at the time he committed the act, that he was suffering from defective reasoning powers, and insanity in his mind, that he was not able to understand he was committing murder, and only meant to wound the deceased in order to gain a hearing for his alleged grievances, it would be competent for them to say that the prisoner was not guilty, on the ground of insanity." The Verdict was nearly as lucid as the Charge, "guilty," therefore, not insane, but "strongly recommended to mercy on the ground that he occasionally suffered from delusions" of, we presume, an insane description. The patient was sentenced to death in the usual manner, and the sentence was afterwards commuted to penal servitude for life at *Pentonville,* thus marking an important stage in the history of the treatment of criminal lunacy. The death rate is 9·6 per cent.

The Fourth Annual Report of the Hereford City and County Lunatic Asylum.—Dr. Chapman and the Commissioners both draw attention to an outbreak of erysipelas within this asylum, and ascribe it to a defective drain. 14 patients suffered from the disorder, four of them succumbing. Dr. Chapman devotes a considerable portion of his

report to a discussion of the causes of the high rate of lunacy in Herefordshire; but he rather begs the question by assuming that Hereford *par excellence* supplies many emigrants to other countries, and has comparatively few immigrants. Dr. Chapman does not produce any evidence of this, and even if it were so, it might be used as an argument on the other side of the question, for if Hereford has so many emigrants, and so few immigrants, the former must acquire settlements in other counties sometimes, and the latter, being few, can only slowly swell the numbers within Dr. Chapman's district.

Eleventh Annual Report of the Joint Counties Asylum, Carmarthen.—In this asylum also, erysipelas has been epidemic, but fortunately it proved fatal in only one case. Neither the Commissioners nor Dr. Hearder assign any cause for the outbreak, and it has now disappeared. The commissioners make some very justifiably strong remarks on the custom which it appears prevails in Carmarthen of taking patients, male or female, to the asylum, under the charge of a policeman only; and in the case of a woman unaccompanied by one of her own sex. Such a state of matters is most objectionable, and should at once be put a stop to. The death rate is 12·6 per cent.

Annual Report of the Cumberland and Westmoreland Asylum.—Dr. Campbell enters into an elaborate enquiry into the increase of patients in this asylum, but refrains from drawing any conclusions as to whether it argues an increase of insanity in his district, until the next census, in 1881. The commissioners give a very favourable report of the asylum. They note an employment of seclusion and restraint considerably above the average, but do not take any exception to the custom. The restraint was used for surgical reasons, but the seclusion seems to have been resorted to as a method of dealing with excited patients. The commissioners do not say anything in favour of this, but as we have said, they make no remarks in censure of it, and by a curious coincidence their next paragraph is devoted to praising the increased quietness and order in the wards. It is every year becoming a graver and more important question whether the determined set against seclusion which has obtained for so long has not been in itself a mistake. It is certain that there is a disposition on the part of some to break down the hard and fast lines which have hitherto been followed, and to judge every case on its own merits. With the fierce light of public opinion which now, thanks to the strenuous efforts of the Boards of Lunacy, beats on lunatic asylums, there is no fear of any of the abuses of former days being revived, and at any rate the medical staff of asylums are now recruited from men of much higher standing in the profession than they used to be. The death rate in this asylum is 6·6 per cent.

Tenth Annual Report of the City of London Lunatic Asylum.—Dr. Jepson reports two cases of death during the night, while the patients were not under direct supervision, one from

accidental suffocation in an epileptic female, but not, Dr. Jepson thinks, during the occurrence of a seizure, and the other from disease of the heart. The commissioners, in their report, point out that in their opinion the former case indicates the necessity of establishing a ward for the special supervision of epileptic and suicidal patients during the night, but the smallness of the asylum will perhaps cause a considerable difficulty in carrying this out. The death rate is 7·23.

Twenty-seventh Annual Report of the North Wales Lunatic Asylum.—The occurrence of several cases of diarrhœa in this asylum created some suspicion as to the purity of the water in use, and an analysis was made by a qualified chemist with the result of showing that it was utterly unfit to be used for drinking or cooking purposes. And to this it may be added that the supply is scanty, which, though apparently advantageous, is not really so, because in hot or dry weather there is little or no flow through the reservoir, and the water becomes stagnant, thus adding to its impurity. The committee have utilized a spring at a little distance from the asylum, but it only yields about 5000 gallons a day, which is, of course, far too little for an average number of 391 patients, with an appropriate staff; and though they say it will only be used for drinking and cooking, while the contaminated fluid will not be employed except for washing and bathing purposes, there is always a practical difficulty in carrying out this, and we fear that it will be found impossible to prevent considerable consumption of the inferior water, especially as it is stated, when at its worst, to be free from taste and smell. The death rate in this asylum is 13 per cent.

Report of the Northumberland County Asylum.—In this report, which is still published in royal quarto, or something like it, Dr. McDowall's remarks are chiefly confined to reporting alterations either proposed or carried out. The death rate is 11·9 per cent.

The Eleventh Annual Report of the Staffordshire Asylum, at Burntwood.—This is chiefly remarkable for the fact that Dr. Davis inserts, in his own report, a letter from the Guardians of the Walsall Union, expressing their "entire satisfaction with all they saw" at a recent visit to the asylum. The Guardians of the Walsall Union are no doubt very worthy men, but they are hardly authorities on the manner in which asylums should be managed, and, indeed, if they are anything like some boards of guardians we know, what they call "their sense of the admirable manner in which the establishment is conducted," is hardly likely to be satisfactory testimony. The death rate is 17·37.

Twenty-fifth Annual Report of the Birmingham Borough Asylum.—In the end of 1874, and the beginning of 1875, there was an outbreak of small-pox in this asylum. One patient in whom the disease was attended with hemorrhage, and a nurse who had refused

to be vaccinated, died. There was also a violent epidemic of erysipelas, eight persons dying from this disease. To show the very unfavourable nature of the cases in this asylum, there were two broken legs, one broken thigh, two broken collar bones, one broken rib, and two fractures of the neck of the femur, a dislocation of the shoulder, an accidental amputation of a finger, a thigh badly gored by a hog, and two cases of accidental suffocation. Altogether we must sincerely congratulate Mr. Green on being rid of a very trying year. The report of the commissioners is not published. The death rate is 13·6.

Twenty-eighth Annual Report of the Somerset County Asylum.—In this asylum also there was an outbreak of erysipelas which, however, appears to have resulted in death in only one case. Dr. Medlicott complains of the custom of sending patients to the asylum at so advanced an age as 83, 88, and 94 years. Certainly, except under very special circumstances, it would seem that they might be as well cared for elsewhere. The report of the commissioners is not published. The death rate is 12·10.

Eleventh Annual Report of the Glamorgan County Asylum.—Dr. Pringle following up a subject to which his predecessor, Dr. Yellowlees, paid considerable attention, enters at some length into a discussion of the large percentage of his cases in which the insanity is alleged to be due to intemperance. 33 *per cent.* is a very large proportion, and even allowing an ample margin for false information, and for fallacies, there must still be a great number due *bonâ fide* to intemperance in the use of intoxicating liquors. Dr. Pringle is of the opinion that the love of drink has not been the origin of these bad habits in the majority of cases, but that it is believed that in beer alone the men will acquire and retain the strength necessary for the work they have to perform, which is frequently very arduous indeed, and entails exposure to a very heated temperature. Dr. Pringle seems to think that an improvement would take place if the simple elements of physiology and of hygiene were taught to boys at school, and we hope it may; but we fear that the flavour of a pint of stout will be to the toper a much more cogent reason why he should indulge, than all the physiology in the world why he should abstain. The death rate is 9·8.

Fifty-seventh Annual Report of the Stafford County Asylum, at Stafford.—There is nothing calling for special remark in this report. The death rate is 19·6, which is very high, but there seems to have been a very large number of feeble and aged persons. Of the 104 deaths, 28 are ascribed to general paralysis, of which number the large proportion of 5 were females, and 18 were cases of senile decay.

Annual Report of the Hants County Asylum.—This report, which is almost of the same inconvenient shape and size as the Northumberland one, relates the story of an assault on Dr. Manley,

the superintendent, by a male patient who had armed himself with a portion of an iron spoon. Fortunately, the attack was unsuccessful. The patient had recently been in the Colney Hatch Asylum, and had prepared to make a similar attack on the superintendent of that institution on the day that he was transferred to the Hants Asylum. He told Dr. Manley, "I will kill you; I will bathe my garments in your blood; I am not mad, but being in an asylum, I can do what I like and not be responsible for it;" and he quoted the instance of the melancholy death of Mr Lutwidge by a patient who, being demented, was held irresponsible. Dr. Manley remarks on this case, "this homicidal propensity has existed ever since, and still continues, and I may add that in my opinion the patient is quite as dangerous to others as to myself. To prevent his making such another attempt, his arms are confined to his sides by a waist-belt and armlets, so that his arms cannot be raised above his head to strike a heavy blow. Some persons would call this man's conduct 'uncontrollable,' I call it 'uncontrolled;' but, at all events, whilst he is so dangerous, I see no good reason why the lives of those about him should be risked from a sentimental objection to the use of restraint, and, until I see very good reason to the contrary, I shall continue to prefer the safety of others to the freedom of limb of a would-be assassin." Dr. Manley also calls attention to the advanced age at which patients are admitted, the ages of 14 averaging 73½ years. The death rate is 9·7.

Twenty-third Annual Report of the Killarney District Asylum.—The first thing that struck us on glancing through this report, was the commendable brevity of the Inspector's entries. The result of a two days' visit is chronicled in half a page of the report, and such sentences as the following occur: "The food I examined was very good;" "The visits of the external officers are regular;" "The body clothing of the patients is on the whole fair, save so far as shoes are in question; indeed, in most Irish Asylums, I find more or less neglect in this particular." The English Commissioners visit Asylums in couples, and so are entitled to the use of the pretentious "we;" but who ever heard of the Scottish, who visit singly like the Irish, using the "I?" With them it is always "it is recommended," "it is suggested," and so forth. In the report of this Asylum there is a singular remark in this same Inspector's entry. "The matron complains, and I think properly that there is little or no amusement for the females. I have requested her *to submit to the Board of Governors* any means for that object she may recommend." We cannot but regard it as fatal to the progress towards improvement of the Irish Asylums that the responsibility of management should be so divided. In a few English and Scottish Asylums the matron is still vested with exceptional and independent authority, but these are notably the most badly managed institutions. We wonder that Dr. Nugent does not make strenuous efforts to

have matters placed on the proper footing, and to make the Medical Superintendent responsible for everything, even the amusements of the females. The percentage of deaths is 11·25.

Twenty-fifth Annual Report of the Wilts County Asylum.—If we remember rightly, Dr. Burman wrote the longest report of all the reports that reached us last year, and this year he has a fair chance of again bearing off the palm in this respect. The Committee of Visitors, too, are not behind hand, but are almost as voluminous for a Committee as Dr. Burman is for a Superintendent. Much that is said in the Medical Report is of considerable interest. It seemed scarcely necessary however, to insert a copy of the correspondence between the Commissioners and the Asylum about special supervision at night of epileptic and suicidal patients, in which the Secretary asks if the Committee have taken any steps in the matter, and Dr. Burman replies that they haven't. A copy, too, of the Section of the Lunacy Act relating to the ill-treatment of patients is very properly handed to each attendant on his entering the service of most Asylums, but there is no occasion to embody it in the report. Erysipelas has been prevalent in this Asylum also, and one death resulted from it, and Dr. Burman's heavy responsibilities have been still further increased by outbreaks of measles, scarlatina, and typhoid fever. In their report the Committee draw attention to the fact that patients are sent to the Asylum as paupers, the whole cost of whose maintenance is borne by their friends, which they seem to think an abuse of a building erected by the ratepayers of the county for paupers only. This is an illiberal and not a philanthropic view of the matter, and one which, if its working were strictly enforced, would cause far more evil and misery than it would prevent. Every one who has had the charge of a pauper Asylum knows that there is a very large number of people whose circumstances are such that they have the greatest possible objection to going on the parish, but who could not afford to pay the lowest rate of charge in any private Asylum. To these the County Asylum is a great boon, and if its doors were shut against them, there would be nothing for them but to remain at home until the disease is almost past the chance of recovery, and their money all spent, when the whole family would be thrown on the parish. We speak from personal knowledge when we say that there are many instances in which the slender savings of years are proudly parted with week by week to the Guardians rather than allow an insane relation to go on the parish, and the habit is one so productive of good in every respect that it should rather be encouraged than checked. The death rate is 10·7.

Report of the Lancaster County Asylum at Whittingham.—This Asylum, which has been opened for three years, and which appears to have been built for 1,140 patients, already contains 891, or about five-sixths of what it can hold, a state of matters which cannot fail to make the county ratepayers of Lancashire feel uneasy.

The yearly increasing requirements for the accommodation of lunatics is one of the gravest social questions of the day, and to all appearance we are as far from its solution as ever. The death rate is 10·39.

Report of the Lancaster County Asylum at Prestwich.—The Commissioners commence their statutory report by saying that the inspection occupied them about a day and a half. Considering there were at the date of the visit 1,028 patients, and taking a working day and a half as 12 hours, this is at the rate of 42 seconds per patient, inclusive of inspection of wards, registers, &c. They make a very favourable report of the condition of the Asylum. Mr Ley's report is, as usual, thoughtful and pointed, and in many respects a model of what a report should be. The death rate is 8·83.

Report of the Norfolk County Asylum.—In this Asylum erysipelas has been prevalent, and two deaths are ascribed to it; but in addition to these we observe in the table of the causes of death other fatal cases from blood poisoning. We have, in this article, noticed already so many Asylums in which such epidemics have occurred, that we confess we feel some alarm on the subject. The continued cry for more accommodation is quite bad enough without that already in existence being unhealthy. The death rate is 13·11.

Forty-sixth Annual Report of the Belfast District Asylum.—During the year this Asylum had the misfortune to lose, by death, the venerable services of Dr. Stewart, who was for so many years the Irish Secretary of this Association. Every one who knew him knew the great interest he took in his work, and those who visited the Asylum when it was under his management had reason to testify to the intimate personal knowledge he had of those under his charge. Both the Inspector (whose reports are, as usual, of the shortest and pithiest description), and Dr. Merrick, his successor, make suitable allusion to the loss the Asylum has sustained by his death. The death rate is 4·2.

Eighteenth Annual Report of the Cambridge County Asylum.—An outbreak of erysipelas occurred in this Asylum of a very serious character, and carried off four cases. It seems to have broken out in February, and it did not disappear until the end of September. The Commissioners ascribed it to the serious over-crowding of the Asylum, which they say has been officially known to the Committee since 1870, and has at each statutory visit been the subject of comment by the Board of Commissioners. The Committee have at length bestirred themselves in the matter, apparently not before it was necessary. The death rate is 19·2.

Seventeenth Annual Report of the Sussex County Asylum.—In this Asylum there were two deaths from erysipelas, but as no remark is made by either the Commissioners or the Superintendent, we suppose the disease was not epidemic. Dr. Williams complains of the trouble he experiences in getting the relieving officers to have the papers for the admission of a patient properly filled up. It is

a very difficult thing to know what to do when a patient arrives from a distance in such cases, for it is practically impossible to refuse admission to, for instance, a desperate suicidal case, yet in even such a case the Superintendent makes himself liable to heavy penalties if he admits the patient. Dr. Williams writes with approval of his classes for teaching reading and writing as productive of excellent results. The death rate is 15·2, and of the 120 deaths no less than 54 are ascribed to epilepsy, general paralysis, and other diseases of the brain.

Thirty-sixth Annual Report of the Royal Crichton and Southern Counties Asylum.—The only topic of particular interest treated of in this report is in a paragraph on Voluntary Patients, which we should have been glad to see much longer. At the present day when there is so strong a desire on the part of some to legislate for habitual drunkards, and so much difference of opinion even amongst the parties themselves as to how it ought to be done, a more detailed account of Dr. Gilchrist's opinion of the working of the voluntary system among the insane would be very acceptable. We believe he has had more experience of the system than any other Asylum physician. Numbers of papers have been written on the subject, but there is no really satisfactory account of the results obtained. He had 16 "voluntaries" on the 31st of December, 1874, and 14 on the 31st of December, 1875, having admitted 12 during the year. We gather from what he says that he does not view the system with much favour, as he says they seldom remain until recovery is completed, and our own experience coincides with this view. When they begin to be a little better, they, like most other patients, feel the restraints of Asylum life irksome, and demand their discharge. This may be refused by procuring an order and certificates for their detention, but such a plan is seldom resorted to except in extreme cases, for it is considered by the patient as taking an unfair advantage, and, so to speak, setting a trap for him, thus increasing the irritation which he feels at being detained at all, and prejudicing his chances of recovery. The statistical tables given at the end of this report are very inadequate, and we would suggest that the tables of the Medico-psychological Association, now happily in force in nearly all other Asylum reports, should be adopted next year. The death rate is about 7.6.

Thirty-fourth Annual Report of the Surrey County Asylum at Wandsworth.—The Committee of visitors of this Asylum take very liberal and advanced views of the ultimate economy of providing ample accommodation for the pauper lunatics of the district. Their remarks may be read with advantage by many like bodies. Talking of a decrease in the numbers of lunatics within the county during the year they say, "It is not for us to say what effect this diminution in numbers may have upon the question of building a third Asylum, but whatever steps may be taken, we hope it will be remembered that there

is no surer way of keeping down the numbers than by taking care that the Asylum accommodation shall constantly be somewhat in excess of the demands upon it." This opinion may be true, but we fear there is no proof of it in the experience of the English counties. According to the report of the Commissioners restraint by means of "gloves" appears to be freely employed for destructive and for suicidal propensities. The death rate is 9·3.

Annual Report of the Gloucester County Asylum.—Mr Toller has apparently nothing to say, for there is no medical report. The death rate is 13.

Report of the Roxburgh, Berwick, and Selkirk District Asylum.—In the report of one of the Commissioners, it is said that at this Asylum "the removal of unrecovered patients appears to be judiciously encouraged." As all the information that Dr. Grierson gives of these cases is that of the 8 discharged "relieved," which we suppose answers to the "unrecovered" of the Commissioners, 5 were liberated at first on probation, and 2 removed to England and Ireland, we should be glad if he had enlarged a little on this subject. With so many Asylums in the United Kingdom, too small to supply the wants of their districts, the discharge of "unrecovered" patients is looked upon as almost a necessity by some; but it is obviously a system to be adopted with discretion, and some details from those who employ it would be extremely valuable. The death rate is 6·1.

Sixth Annual Report of the Stirling District Lunacy Board.—The first thing which strikes one in reading this report is the very large proportion of admissions to the average number resident, viz., upwards of 100 per annum of the former to about 215 of the latter. To speak in actual figures, the number of admissions in 6 years (we purposely omit the first year of the Asylum) is 630, or 105 per annum, and the average number resident in those 6 years was 220. The number of admissions to the English County Asylums in 1874 was 9,693, and the average number resident was 32,062, but if the percentage of the Stirling District obtained, the admissions would have been 15,302, or in other words they are in England at the rate of only three-fifths of the Stirling rate. Dr. Frederick Skae enters at considerable length into a discussion of this, and the kindred subject that the Asylum is over-crowded, and he by no means allows that such a state of matters is of itself an argument for additional building. He, on the contrary, seems to think that the more accommodation you provide the more you will be asked for, and he would try the plan of boarding the surplus in other Asylums. He says, "should the Asylum again become crowded it will be better, instead of building, to rent beds for the surplus patients in some other Asylum, and to meet the extra cost for the patients thus boarded by raising the general rate of maintenance." He thinks that by thus directly raising the cost of keeping pauper lunatics in the Asylum, instead of doing it indirectly by county rates for additional build-

ings, a wholesome check to the system of sending all and sundry to the Asylum would be given. The chief objection to the plan is that all the District Asylums are either full or with every prospect of speedily becoming so, and such a remedy could therefore only be of a very temporary nature. Besides, the system, where it has been tried, and it has prevailed to a very large extent from time to time in England, during the erection of County Asylums, operates with undue hardship on the patients, who are thus removed for an indefinite period from all chance of seeing their friends. This is not a trifling consideration, for the patients thus transferred are generally taken from the quiet and orderly class, the Superintendent to whom they are going naturally objecting to receive the worst cases. Dr. Skae states, that from information he procured, he knows he might have disposed of 50 patients in this way last year by paying from three to five pounds a year more than the Stirling rate of board. The Commissioners suggest in their report that the Asylum should be enlarged, but Dr. Skae "hoists them with their own petard" by quoting passages from their former reports strongly condemnatory of large Asylums. The death rate on the average number resident is nearly 9·1, which is not of itself particularly high, and Dr. Skae very fairly points out that the unusual number of admissions which he has every year should be considered, the death rate being always higher in the recent cases. A really correct mode of calculating the death rate in Asylums is still wanting. Dr. Skae has been appointed Inspector of Asylums for New Zealand since his report was written, an appointment on which we congratulate him and the New Zealand Government. He will there have a new field before him, and we shall mark with much interest the methods adopted in that colony under his guidance for the care and treatment of its insane.

Report of the County Lunatic Asylum at Rainhill.—Erysipelas has been epidemic in this Asylum, and carried off 2 patients. Dr. Rogers shows the importance of receiving with caution the "alleged" causes of insanity in cases admitted to Asylums, in the case of a sailor whose disease was charged to attendance at "revival" meetings, but who, on enquiry, was proved to have been living a dissipated life for some time before. The death rate is 11·77 per cent.

Thirtieth Annual Report of the Devon County Asylum.—From the medical report it would appear that the Superintendent of this Asylum is occupied, to a great extent, as a Clerk of Works; at least, we cannot see what bearing on the treatment of the insane the erection of new boilers, gasworks, and laundry cisterns has. These things belong rightly to the report of the Committee of Visitors, and if they do not think themselves competent to remark on them, they should employ somebody who is, and not throw the burden and responsibility on the Superintendent. That officer, to whom they allow only one assistant, has surely quite enough to do in looking after a daily average of 683 patients, without having in addition to

be directly answerable for the efficiency of gas, scrubbers, and retorts. The death rate is 7·9.

Sixteenth Report of the Three Counties Asylum.—Erysipelas has been prevalent in this Asylum, but it is not assigned as the cause of death in any case. There is a strikingly large number of deaths from "senile decay," viz., 23 out of a total of 81 deaths, or nearly 30 per cent. The Commissioners, in their statutory entry, state that Mr Swain, the new Superintendent, has entirely abolished the use of seclusion, and from what they say, and from what he says, we gather that he carried out his views immediately on his arrival by summarily dispensing with it in all cases whatsoever. Mr Swain evidently gratified the Commissioners very much by his alacrity in conforming to their views. The death rate is 11·34.

Ninth Annual Report of the Surrey County Asylum at Brookwood.—Dr. Brushfield calls attention to the increasing percentage of *registered* lunatics to the population within the county of Surrey, and he shows pretty plainly that it is rising in a higher proportion than the population itself. We need scarcely point out that this has no bearing on the question of the increase of insanity in the county. His remarks about the water supply are a little alarming, and are worthy of being quoted. "We have had no reason to complain as to the daily quantity. As to the quality, having some reason to doubt its purity, it was, at my request, analyzed by the county analyst, and his report was far less favourable than that of the analysis made in 1868. Since that time a considerable tract of land has been drained into the sources of our supply, and a number of houses erected in their vicinity, from which there is reason to fear sewage percolation may occasionally take place. As yet the *contamination is not very much*, but is likely to increase year by year. Much may be and is done by filtering the whole of the supply through a thick bed of sand, gravel, and animal charcoal, before being furnished to the Asylum, and through filters placed in each ward." Dr. Brushfield proposes, as a remedy, the sinking of an Artesian well, and certainly something of the kind should be tried. Want of water in Surrey, and contamination when you get it, are not a satisfactory state of matters. The Commissioners' entry is not published, as it was printed with last year's report. This is, in our opinion, a mistaken plan; each year's report should be complete in itself. The death rate is 10·61.

Report of the Chester County Lunatic Asylum at Chester.—From a remark in the report of the Committee we infer that they themselves engage and dismiss the attendants of this Asylum. Speaking of the conduct of the servants of that class they say it was, "on the whole, satisfactory, with the exception of a want of sobriety on the part of a few of the male attendants, but the *Committee having exercised* the necessary discipline in their cases trust that," &c. Such powers would be much more appropriately exercised by their Superin-

tendent. If a Superintendent is fit for his place he is fit to be entrusted with arbitrary powers in regard to the engagement and dismissal of all the servants, the Committee holding him responsible for their conduct, and it is a notable fact that by far the best managed Asylums are those in which the Superintendent's authority is paramount. By leaving everything connected with the administration of the Asylum in his hands, the Committee are only making a practical acknowledgement of a fact which they would never attempt to deny if it were placed plainly before them—that he knows much more about it than they ; and if he is the proper man for the place there is no fear of his exceeding his duty, while, if he is not, they ought to get some one who is. We think the Committee of Visitors of this Asylum do grave injustice to Dr. Davidson, and seriously peril the discipline of the institution by their plan of administration. The death rate is 15·2, but there has not been any epidemic.

Report of the Royal Edinburgh Asylum for the Insane.—Dr. Clouston goes into the question of the connexion of intemperance and insanity. It is of importance that this should be rigorously and scientifically enquired into by those who have such ample means at their disposal as Asylum Superintendents, for the subject is of vast consequence to the true solution of a question which relates to one of the gravest social evils we have ; and if the answer should happen to cut away a good deal of the ground from under the feet of the complacent platform orator, we are not sure that much harm would be done, for when philanthropy runs counter to truth, though some good may be done at first, evil is sure to ensue in the long run. There were 320 admissions of all classes. The death rate is 9 per cent.

Annual Report of the Warwick County Asylum.—There has not been any epidemic here, but there were one or two accidents of a serious character, one being loss of the sight of an eye by a patient who was pushed against a table by another. An attendant committed suicide. Dr. Parsey gives an interesting account of the inmates of the new idiot wards of this Asylum, but it is too long for quotation, and does not admit of being curtailed. The death rate is about 9·8.

We have now reviewed every report which reached us in time, and, in conclusion, one remark appears to be called for with reference to the English Asylums. We have read the entries by the Commissioners in Lunacy, when they have been published, most carefully from beginning to end, and while we have no hesitation on the whole in calling them sensible and practical, there is an omission which strikes us as being not a little peculiar, and that is, there is not in a single instance, so far as we can remember, any allusion made to the "Deaths, Injuries, and Violence" column of the *Medical Journal*. Superintendents are bound by the Act to be as careful and punctilious in registering every black-eye, as they are in the case of instances of restraint. Every one knows how particular the Commissioners are about the entering of seclusion, but the section under

which they proceed is just as peremptory about injuries and violence. A Superintendent once candidly said to us that he never entered such injuries as bloody noses, black eyes, ordinary scalp wounds, and such like, because he did not think them of sufficient importance, and also because if he once began he would have little else to do. The Act, however, is plain enough, and does not permit any discretionary powers whatsoever, any more than it does about restraint and seclusion. We trust, therefore, that the English Commissioners will next year institute careful enquiries into the practice in vogue in the various Asylums, and we shall be much surprised if they do not find that the greatest possible difference prevails. Apart from the necessity, to which we have before alluded, of the Commissioners being strict in requiring a rigid and unvarying compliance with the requirements of the Lunacy Acts, it is certain that a comparison on a large scale of the restraint and seclusion, the medical treatment, and the deaths, injuries, and violence columns, if they were kept as scrupulously in all Asylums as we know they are in some, would be of the utmost value with regard to the results of treatment, if nothing else. It would be an improvement if the Journal had to be signed by the Medical Officer, as is the case with similar records in the Scottish and Irish Asylums; but, at any rate, it is almost impossible to overrate its value as a ground work for statistics. With this suggestion, which we urge on the Commissioners, we beg to take leave of the subject of the Asylum reports.

PART IV—NOTES AND NEWS.

QUARTERLY MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION, HELD IN EDINBURGH.

A meeting of the Medico-Psychological Association was held on the 1st November, in the hall of the Royal Society of Edinburgh. Present,—Dr. Jamieson (who presided), Drs. Tuke, Howden (Montrose), Grierson, Cameron, Anderson, J. A. Campbell, Rutherford, Fraser, Smith, Howden (Haddington), Sanderson, Brown, W. C. McIntosh, and Ireland.

Dr. Howden (Montrose) exhibited a tubercular tumour from the brain of a young woman, and read the notes of the case. (See *Clinical Cases.*)

ARTIFICIAL FEEDING.

Dr. Anderson read a paper on "The Mechanism of Artificial Feeding," at the same time showing the apparatus which he used for the purpose.

The Chairman said that he thought they should be greatly obliged to Dr. Anderson for explaining his mode, which was exceedingly ingenious. The improvement on the old method was very distinct, and he would be glad to hear observations from some of his brethren on the subject. He was not fond of feeding artificially by instruments if he could avoid it; and he thought that of late years an advance had been made by kinder treatment of patients, and by the exercise of more patience. He did not think that they had fed a patient

artificially in his hospital for a year, and they had an average of 470 or 480 people in it. He recollected that when he began to be a superintendent, and when there were about 150 patients, he used to feed once every two or three months. He thought that they must feed, but that the cases were rare. When they had to do it, it was of importance that they should have it well done, without injury to the patient, who should be fed, not only once a day, but two or three times, to keep the *physique* in good order.

Dr. Campbell said he thought they ought to be now well-up in the subject of stomach-pump feeding, as they had discussed it twice in Edinburgh, and twice in Glasgow. He was of opinion that the old-fashioned pump was altogether as good and as safe as any other mode. Whenever they had an acute case of a patient being starved for a day, or at most two days, they ought to feed, as in such a case, if the patient was allowed to starve too long, the recovery was retarded. In cases that had come under his care he had fed twice a day, as a rule, with the stomach-pump. The quantity was a pint of milk a day, and sometimes two glasses of whiskey in it. He thought they were much obliged to Dr. Anderson for his paper, but he must say that he did not at all agree with him as to feeding. He was of opinion that nothing was better than a simple acting pump, without fine points about it.

Dr. McIntosh said he never used anything else but a spoon.

Dr. Tuke said he was of opinion that when they could not get a patient to take food in the course of 24 or 48 hours, artificial feeding was necessary. The older he grew the less he was in the habit of feeding patients; but there were cases in which it was absolutely necessary, and he saw no difficulty in the use of the old stomach-pump. In regard to the position of patients, he laid them on the floor, opened the mouth gently, although it sometimes took a little time, then put down the stomach-pump, and fed in the ordinary way. He had had considerable experience of different kinds of instruments; but for the sake of convenience and utility he had come back to the old stomach-pump, and having used it many hundreds of times he had had no occasion to regret it.

Dr. Howden said he agreed with Dr. Jamieson in his remarks that the seldomer they fed the patients the better, and also with Dr. Tuke that the older he got the seldomer he did it. He had tried the funnel many years ago. The first person he saw use it was Dr. Scott, Musselburgh, consulting Physician of Inveresk, and he thought it was more convenient than the stomach-pump. With the stomach-pump they required the food to be more finely broken down than when they used the other instrument. They could use mince meat more readily with the funnel or the bottle than with the stomach-pump. Sometimes they found that the stomach-pump got clogged, and the contents squirted out on the operator. He did not think that anything could be simpler than the funnel, as it could not go wrong unless they broke it. He thought that the soft tube was more easy of application than the ordinary stomach-pump. There was another point to which he had referred once before, but he did not think that he got many sympathisers—namely, the question about the possibility of accident from food getting into the larynx. He thought that possibly in some cases the presence of a foreign body might be the cause of producing disease in the lungs.

Dr. Rutherford said that here they had also shown them an apparently new instrument, the pipette, by which small quantities of food in process of digestion could be drawn out of the stomach. He thought it might prove a very useful instrument, in showing how the process of digestion was going on.

Dr. Ireland said it struck him that it might be very useful in diseases of the stomach.

The Chairman said he had no doubt that food occasionally entered the larynx, and led to disease.

Dr. Anderson said he was very much obliged to the members of the association for their remarks. It had struck him that they had not specially referred

to the paper which dealt more with the mechanism of artificial feeding, or to the two instruments on the table. In referring to Dr. Campbell's remarks about a soft pipe, he said that the pipe he used presented great advantages, as it allowed gas easily to escape. He had seen patients with stomachs very much distended by gases and the soft tube did not allow these to escape so readily. If in certain cases of indigestion they wished to make the patient comfortable, by getting rid of gas, and to ascertain the state of the digestion, they would find this instrument, the pipette, a very practical one.

The CHAIRMAN said that the subject was so important that he did not think that they could have it two much discussed, and he was sure they were all much obliged to Dr. Anderson for his paper.

The Association then dissolved, and a meeting of Superintendents was held for the consideration of the subjoined petition, Dr. Jamieson being in the chair.

Unto the RIGHT HONOURABLE THE LORD ADVOCATE FOR SCOTLAND.

The Petition of Superintendents *and other Officers of* The Scottish District and Parochial Asylums for the Insane, *adopted at a Meeting held in Edinburgh, on the 1st November,* 1876.

HUMBLY SHEWETH,

That provision has been made by the Legislature for granting Superannuation Allowances to the Superintendents and other Officers of the County and Burgh Asylums in England, the District Asylums in Ireland, and the Royal or Chartered Asylums in Scotland.

That this provision has been withheld from the same classes of Officers in the District and Parochial Asylums in Scotland.

That your Petitioners feel that, under this exclusion, they are placed at a disadvantage in comparison with their English and Irish brethren; that this has been so far acknowledged by the Government of the day that in the Bill which passed into the Lunacy Amendment Act, 1866, a clause was inserted to have your Petitioners placed on the same footing as similiar officers in England and Ireland, by authorizing District Boards to grant pensions to Asylum Officers who had served for at least fifteen years, of any amount not exceeding two-thirds of their yearly salaries; but that, from some cause unknown to your Petitioners, this part of the Bill did not pass into law.

That this distinction, unfair in itself, has a prejudicial effect in the management and conduct of the District and Parochial Asylums in Scotland; that the duties, particularly of the subordinate officers, are not such as naturally to attract them to the work; and that the inducement of salary to cease with employment is found to be insufficient to induce a superior class of men and women to give their permanent services to Asylum work; that the constantly recurring changes in the subordinate staff prevent that training and education in their duties which, especially in the treatment of the Insane, are very necessary.

That your Petitioners are of opinion that were District Boards of Lunacy and Committees of Management of Parochial Asylums empowered to grant a superannuation allowance of any amount not exceeding two-thirds of their salary, out of the rates of their respective Districts, to any officer or servant who shall have served at least fifteen years in the District or Parochial Asylum of said Board or Committee, it would materially conduce to the efficiency of the service, and, consequently, to the welfare and comfort of the Insane.

Dr. McINTOSH said he thought that they were all as one on the importance of this subject. There was nothing in the request made in the petition that their brethren in England and Ireland did not now possess. Moreover, he had the authority of the General Board of Lunacy in pressing the matter, for in the 9th Report the Commissioners had expressed a hope that before long the authorization to grant superannuation allowances would be extended to the District Asylums. That publication was in 1867, and now, after nearly ten years, nothing had been done in the matter. He thought that they were all the more justified on that ground in proceeding with it now. Further, he had very important documentary evidence from the General Prison of Perth on the subject, where the pensions had been long in action. The Governor wrote to him as follows:—

GENERAL PRISON FOR SCOTLAND, PERTH.
October 10th, 1876.

DEAR SIR,—I have much pleasure in answering your query "as to the effect of the pension clause on the efficiency and permanency of our staff."

In the first place it weeds the candidates, excluding that unsatisfactory class of beings who

are perpetually trying to better themselves by change of employment, for to such the Labour Market offers better terms elsewhere.

It does much to prevent men from throwing up there situations in a moment of irritation, or under the inducement of temporary high wages; for, as soon as they have been a few years in the service, they feel that a portion of their remuneration has been laid by for them, and will continue to increase so long as they perform their duties with vigilance and fidelity, but is liable to forfeiture if they fail in these points.

Nor are they the losers in surrendering somewhat of their freedom; for they are guarded against the possible caprice of a governor, by the fact that any charge against them would have to be thoroughly sifted before an able and impartial body of men (H. M. Prison Managers), and established to the satisfaction of the Home Secretary before the permancy of their employment could be effected, and they have, by an almost unfelt exercise of self-denial, made provision for declining years or failing health.

Again, new hands, on entering an establishment where the majority of the officers are men of long service, find themselves in an atmosphere of discipline, and either, as in rare cases, feel it so irksome as to resign before much time has been wasted in the attempt to train them, or are gradually absorbed into the system, acquiring value year by year as their individual capacity is developed by experience, and the routine becomes instinctive.

The most important point in introducing a system of pensions appears to me to satisfy those employed that they cannot be subject to arbitrary dismissal or forfeiture, and to admit no one who does not physically and mentally give fair promise of long service.

Changes with us are comparatively rare, our Pension List very small, most of our old officers remaining in harness until the last and I cannot speak too highly of the whole staff at my disposal, the coherence of which, I believe, to be owing to the Pension Clause,

I am, my dear Sir,
Yours faithfully,
HENRY MAY.

W. McIntosh, Esq., M.D.

He also went to the office of the department of prisons and judicial statistics, where Mr. Danaldson, the gentleman in charge, showed him every courtesy, and where he had an opportunity of examining the various salaries and allowances for the ordinary warders in the general prison, so that he had statistics which would be valuable in detail by and by, as showing the respective rates they gave. There no pension was granted till after ten years' service. He did not think that it was so much in regard to pay that asylum attendants were so unsettled. His opinion was that it was more the monotony and the trials of temper experienced, notwithstanding all the available means of amusement they could bring to bear for their behoof, and he was strongly of opinion that the pension system would not only keep the nurses male and female, at their posts, but it would give them a better class.

Dr. TUKE said it appeared to him in the first place that the petition, as it stood now, and the remarks made by Dr. McIntosh, pointed to two very different things. The one was a very right and proper thing, the passing of a permissive clause by which District Boards might give pensions to their officers of any class; but he gathered from Dr. McIntosh's remarks that he pointed more to an organised system of pensioning than to the mere purpose of this petition. To his mind an organised pensioning of attendants and servants of an asylum would be most prejudicial to those establishments. And he thought that nothing pointed more vividly and distinctly to the injury that would be done to the discipline of asylums, than the letter which Dr. McIntosh had read. From that they would see that the first thing that was done was, as soon as an officer or servant had a vested interest in his position, a withdrawal from the superintendent, the centre of the institution, of the right of engaging and dismissing. In the case of an inquiry into the conduct of an attendant arising, it would come before a tribunal, and he would ask:—Where would be the position of a medical superintendent of an asylum, if, in every case in which the conduct of an attendant was being taken into consideration, it were to go and be argued before the District Board? That was his strongest objection to it. They would lose that power which made their position in asylums—that of engaging and dismissing their servants. Another thing was that even though they had the power of dismissing the servants, their hands would be tied very closely indeed, when they had to take into consideration that the dismissal of a servant involved the loss of so much money. Again, he was by no means con-

vinced that it was of so great importance as some thought, to retain a large number of very old servants in an asylum. If they were to have such a large number as twenty out of thirty-seven, who had been from ten to twenty years in the asylum, they knew that they gradually had a very extensive power over which the superintendents had practically no control whatever. For these reasons he was convinced that any such system as a systematic arrangement of pensions for asylum services would be highly objectionable. The thing to induce servants to go to an asylum was to give good present pay.

Dr. Howden said that his mind was by no means decided on the question. He thought there was a good deal of truth in what Dr. Tuke had said. There was a difference between the case of warders in a prison and attendants in an asylum. He held that the superintendents ought to have complete control over attendants in engaging and dismissing them. There was a great risk, if they made the plan on the same footing as that of prison warders, that they would be saddled with inefficient servants. He thought a great deal of the difficulty might be got over by giving the attendants high wages, and let them pension themselves, as most men and women did who were saving. At the same time, if it would have the effect of getting a better class of people, and getting them to remain, it would be a great advantage to have pensions both for officers and attendants. He thought that they should know something of the experience of their English brethren on the subject before deciding the matter. Was it a fact or not that they got better attendants in England than in Scotland? He thought that the changes in the English asylums were very frequent if he could judge from the advertisements in the *Scotsman.*

Dr. Rutherford said that the question was whether the privilege ought to be withheld from the district asylums. The object was to place the district asylums on the same footing as the chartered asylums, and to give the district boards the power of granting pensions.

The Chairman said it seemed reasonable that their district asylum brethren should be placed on the same footing as those belonging to the chartered asylums. He agreed with that, but as to getting up a petition for the pensioning of officers and other servants, he was not prepared to approve of such a proceeding. Dr. Tuke had expressed his (the chairman's) own view of the matter. He did not think that they should have anything to do with the getting of retiring allowances for the servants. It was important that they should engage the servants, and be able to dismiss them. If the proposed alteration was made it would come to this that a committee would hire their servants, whom they would not be at liberty to dismiss without the consent of the General Lunacy Board. He thought it was important that they should have their servants under their own authority; and it would introduce a disturbing element if they were to lead these people to suppose that they had other masters. He did not believe that he could get very much better servants than he had at present. He gave the wages of the district, and more when he found it was necessary. He thought that a committee should be appointed to deal with the matter, and report to a future meeting of superintendents of asylums.

This was agreed to, and after votes of thanks to the Chairman, and to the Royal Society for the use of their rooms, the meeting separated.

THE LATE THOMAS LAYCOCK, M.D.

By the death of Professor Laycock, the Association—of which this Journal is the literary organ—has lost one of its most distinguished members and brightest ornaments. In electing him to the office of President in 1869, and enrolling his name in the list of its Honorary Members, the Association gave expression to the high estimation in which it held him. And no one upon whom these honours have been conferred, took a deeper interest and contributed

more zealously in promoting the highest aims of the Association. He will always be remembered as among the most eminent of those who have helped to raise the study of medicine to the dignity of a science; and his work in demonstrating the interdependence of physiology, pathology, and psychology, will constitute his chief claim to this honourable position. The following extract from the "British Medical Journal" of September 30th is an appreciative notice of his life and work :—

"On September 21st, there passed away in Edinburgh one of the most voluminous writers, ingenious thinkers, and hardest workers in our profession. Dr. Laycock, the erudite Professor of the Practice of Medicine in the University, died of pulmonary consumption at his house in Walker Street, Edinburgh, on that day. He had been unable to attend to his professional duties for about five months, his disease being a fresh outbreak of phthisis, with which he had been threatened twenty years previously. At that time his life was pronounced to be a most precarious one by several of the best men in London, but he seemed to have quite recovered. In 1866, he had his left leg amputated by Mr. Spence for disease of the knee joint, and, for a time, his life was in the utmost danger, while his sufferings were most intense. Ever since then he has been somewhat of an invalid, but active and hard-working as ever. In April last he caught cold on a railway journey; the old mischief in his right lung seemed to have been roused into fresh action; he began to cough, and to suffer from dyspnœa and vomiting after meals, and those symptoms steadily increased in spite of treatment. His strength was utterly prostrated at the last, but mentally he was quite clear, and as fond as ever of speculating about his own symptoms and sensations and his favourite medical questions. The *post mortem* examination showed old disease of both lungs, with a considerable amount of recent tubercular degeneration all through the right. The brain showed some atrophy, the convolutions were exceedingly numerous, and it weighed forty-eight ounces. He was sixty-four years of age.

"Dr. Laycock was the son of a Wesleyan minister, and was born on August 10th, 1812, at Witherby in Yorkshire. At fifteen, he was apprenticed to Mr. Spence, surgeon, of Bedale. He afterwards studied at University College, London, and then, in 1833, went to study in Paris under Louis, Velpeau, and Lisfranc at La Pitié. After his return, he was appointed Resident Medical Officer of the York County Hospital; and, in 1839, he took his M.D., *summâ cum laude*, at Göttingen. He was appointed Physician to the York Dispensary in 1841, Statistical Secretary to the British Association in 1844, Lecturer on the Theory and Practice of Medicine at the York School of Medicine in 1846, and, in 1855, he attained the crowning point of his professional life, by being elected Professor of the Practice of Medicine and Clinical Medicine in the University of Edinburgh, succeeding Dr. Alison in the Chair of Cullen. He taught there and practised as a consulting physician up to his death, with the exception of the session 1866-67, while he was suffering from the knee-joint disease and the effects of the amputation, when the late Dr. Warburton Begbie lectured for him in the Practice of Physic Course, and Dr. W. A. F. Browne in Medical Psychology; and the summer session of 1876, when Dr. Clouston, who had, since 1873, been associated with him in the latter course, and in the cliniques at the Royal Edinburgh Asylum, took his place with the assistance of Dr. Murdoch Brown. He was an F.R.C.P.E. and F.R.S.E., and Physician to Her Majesty for Scotland. He was chiefly consulted for nervous diseases, but his practice was never extensive in Edinburgh.

"Dr. Laycock began to contribute to medical literature at a very early period of his professional life, and continued to do so unceasingly ever since. Anything like the list of all the papers and works he wrote could not possibly come in time. It is sufficient to say that they numbered over three hundred; and are to be found in almost every medical journal and periodical published in this country. His first paper was On the Acid and Alkaline Reaction of the Saliva,

published in the *London Medical Gazette*, in 1837; and his last was On Reflex Automatic and Unconscious Cerebration, in the *Journal of Mental Science* for January and April, 1876. He translated Prochaska's *Nervous System*, and Unzer's *Principles of Physiology*. He published his *Nervous Diseases of Women* in 1840; his *Principles and Methods of Medical Observation and Research* in 1856; and his *Mind and Brain* in 1860. Many of these went through more than one edition, and each new edition always contained much new matter—in fact, was generally re-written throughout.

"On considering this work of a man who has contributed so much to medical literature, the questions that naturally arise are: What has he done for medical science? What discoveries will be associated with his name? What generalisations has he made? We think that those questions can be answered in Laycock's case very satisfactorily now; and that, a hundred years hence, they will still be capable of being answered to his lasting fame. We shall place his work in what we think the order of its importance. The doctrine of the reflex functions of the brain, which he was the first to formulate in 1844 (*British and Foreign Medical Review*, January, 1845), has slowly but steadily acquired a strength of belief that now places it among the accepted laws of brain-physiology. It threw a flood of light on many obscure points—and all points were then obscure—in brain and mind function and disease. It has been extended by Carpenter, and admits of still further extension. His next most important work, we think, may be reckoned to be the series of facts, generalisations, and speculations, contained in his work on *Mind and Brain*, in regard to the connection of mental power and deficiency, evolution and decay, peculiarity and disease, with the molecular changes in the encephalon and with states of brain. No one can say that his attempt to correlate consciousness and organisation, in all their myriad phases, was a completely successful one, but few physicians will now deny that Laycock's point of view is the true one; that his whole governing idea is that of the genuine medical philosopher; and that the very attempt was a noble and masterly one. The mere labour of collecting and arranging the facts was gigantic; and we believe that, if his lucidity had been equal to his depths, and his power of exposition equal to his thinking, his book would have marked an epoch alike in physiology and in psychology. It will ever remain a landmark in the region of the contact of mind with organised living matter. His work on *Hysteria and Obscure Nervous Diseases* will, we think, stand the test of time. It brought some order out of absolute chaos. His observations and hypotheses as to the effect of the brain and nerve-centres in the causation and regulation of animal temperature in health and disease, of nutrition, of anasarcas, of rheumatic and gouty inflammations, and in diseases generally, were both highly original and practical. He did much to make trophic centres in the brain real to medical men. His theories of diathesis and their applications to disease were most original, and brought into notice facts of importance to the practitioner. His theory of limited 'vascular areas' in the brain corresponding to certain functional areas, and of the general correspondence between this development *in embryo* of the great nerve-centres and the great vascular tracts in the brain, have received much confirmation from the investigations of Heubner and Duret. His theory as to the division of the brain into the three systems of the basilar corresponding to animal life, the middle to sensorial-animal, and the higher to the intellectual and inhibitory functions of man, no doubt, contains much truth. His theory of the functions of the cerebellum being that of storing up and giving out, in a regulated way, supplies of *vis nervosa*, is highly ingenious. He was one of the first to apply the doctrine of evolution to the development of the nervous centres in the animal kingdom and in man; and, indeed, in one of his early papers he foreshadowed the evolution theory. His speculations as to 'organic memory,' and its hereditary transmission, are well worthy of study. And the last, but not least, of his achievements which the space at our disposal will allow us to mention, are his labours and writings in regard to public

health. His papers on the Development of a General Law of Vital Periodicity and of the Return of Epidemics, on the Vital Statistics of England, and the Public Hygiene of Great Britain, and his Report of the Sanitary Condition of York, were of the greatest importance to the science of hygiene at a time when it was struggling and unheeded. They clearly showed that Laycock was no mere theorist. Looking at Dr. Laycock from a psychological point of view, he was a man of immense and unceasing industry, both in reading and thinking, of wide grasp, and of great mental ingenuity. His was a speculative and philosophical mind, with a strong tendency to look into the reasons of things, to think about everything, and to generalise in regard to everything he thought about. This was, in other respects, his weak point, for he could not help coming to general laws in regard to his facts, whether they admitted them or not. In his lectures on fever, he had every pyrexia to which a name had ever been given all marshalled in genera, and species, and groups, just like a botanist with his plants. He was systematic and orderly in his work, in his reading, and in his storing up of facts, of which he was a close observer and collector. The daily newspapers contained for him many facts illustrating medical psychology, which were duly cut out and put in their proper places. The medical press always contained cases illustrating his theories or suggesting others. His cases in hospital were always suggesting new ideas, and, above all, his reading of medical books—and we believe he was the best read man in English, German, and French medical literature in his profession—was ever bringing new ideas, and adding to his facts.

"As a teacher, we must admit that Laycock did not always reach or interest the average medical student. He was, however, highly suggestive to the more thoughtful in his classes, and his teaching influenced them permanently throughout their lives, often giving a direction to their studies. He did very much for the teaching of mental diseases in the University of Edinburgh. He originated a summer course of lectures on 'Medical Psychology and Mental Diseases,' and had often as many as forty students. Many men took to asylum life in this way. His class was the nest from which many of the Northern Asylum superintendents took their fledgling assistants.

"Personally, he was a man rather under the middle size, with a beautifully shaped head and very well cut features, of the 'Neuro-arthritic diathesis,' as he described himself, with rather a cold manner, giving the impression of being somewhat egotistical, and not sufficiently alive to the feelings and *amour propre* of others. But, to those who knew him better, he was a genial companion and friend. He was a widower since 1869, and leaves a son and daughter; the former, Mr. G. L. Laycock, took his M.B. degree in the University of Edinburgh in August last."

THE RELATION OF DRINK AND INSANITY.—LETTER BY DR. PEDDIE.

To the Editors of The Journal of Mental Science.

Sirs.—When I put my letter of 21st July into your hands for publication in the October Number of the Journal, I gave you in writing a most cordial permission to send a proof of it to Dr. Bucknill in ample time for a reply in the same Number if he chose to make it. If, therefore, there was any blundering of the printer afterwards, the responsibility did not rest with me; but even supposing it had been otherwise, I think there can be but one feeling with your readers, that the whole strain of Dr. Bucknill's letter in reply displays an animus and intemperate zeal unaccountable considering the nature of the question under discussion, and uncalled for by any remarks made by myself on his Rugby speech and letter to one of yourselves. Indeed, this remarkable production is written in a tone which to me at least is unexpected, as coming

from a man of science and supposed seeker of the truth, and from one having a literary and professional character to maintain, and with whom, also, I had some previous acquaintance. In any remarks, therefore, which I now feel it necessary to make, I may be excused in throwing courtesy and professional consideration aside, and speaking in unpleasantly plain terms.

Dr. Bucknill in opening his assault attempts to secure me in a quasi-logical trap. He says, in substance—"You accuse me, first, of misstating and misrepresenting your opinions; secondly, of ignoring them; and thirdly, of not reading *them*." And then he fancies to raise a laugh at the inconsistency of such an indictment "which no man can understand."

This is a good example of the complexion which may be given to a case by the way of putting it, namely, by keeping some important facts out of view, and by ingeniously shuffling and rendering words; and it is, indeed, quite in the spirit of "the old pleadings—now happily abolished—even in the casuistry of the law."

First. The misstatement or misrepresentation of my views consisted in Dr. Bucknill averring that I considered "drunkenness as a disease in itself;" and, again, that I held the "*unqualified* opinion that drunkenness is a disease in itself." Then, secondly, the ignoring of my opinions consisted in Dr. Bucknill *setting aside* or *wilfully disregarding* them—as any dictionary will inform my learned censor to be the meaning of the word ignoring—and *that because*, in his estimation, my views possessed no value as coming merely from a Physician and not a lunacy specialist like yourselves, and not possessing sufficient "quantitative and qualitative" capacity to bear on the relations of vice and mental disease. Now, as these two counts against Dr. Bucknill are literally true, and quite consistent with each other, the third accusation, that I could not believe he had read my British Medical Association paper, or any of my other publications on Dipsomania, was a most natural inference. It was but reasonable to suppose that having in them, and in the evidence given before Mr. Dalrymple's Committee, drawn very full and explicit distinctions between drunkenness the vice and drunkenness the disease—not so much, certainly, but sufficiently so—in the Association paper when limited in time, and addressing an audience the most of whom must have had ample opportunities of seeing and distinguishing the various phases of intemperance,—it was most reasonable, I say, to doubt that Dr. Bucknill had read either that paper, or the others, and to suppose that he had taken for granted my opinions to be such as he desired them so as to give point to his remarks, otherwise he could never have so completely misrepresented them. This was a most charitable inference, which I regret, for his own sake, is not correct, since he confesses that he read the association address several times through!

I sincerely trust that there may be few of the readers of the quotations given at pages 423, 4, and 5, so deficient in "quantitative" capacity as not to comprehend statements so plain, and distinctions so explicit. The length of those quotations has irritated Dr. Bucknill not a little, doubtless because they brought under his own eyes what he seems unwilling to look at, and furnish to your readers a ready reference to, and an explanation of the points under discussion, and consequently a refutation of his assertions. On these quotations I am quite content to rest the soundness of my position regarding the general relations of drink the *vice* and the *disease*. What is said in them expresses in a condensed form what I have elsewhere more fully distinguished and explained; and so far as I can see accord entirely with the evidence tendered to the Dalrymple Committee by those eminent Lunacy Specialists, Drs. Crichton Browne, Skae, Mitchell, Nugent, Boyd, and Mould, to which Dr. Bucknill in a curiously contradictory manner seems to adhibit his approval. I have carefully read over their evidence, and my general inferences from it are that they as well as myself consider *vicious* drinkers to be those who casually go in for a debauch, or are facilely led into one on a Saturday night or on a holiday excursion, or at a convivial party; or those who drink more or less

to excess systematically for the purpose of mental exhilaration or supposed physical support, or the love of drink, or to experience its intoxicating effects, but who all do so voluntarily, with some ability remaining to control themselves when they choose to do so, and are, in fact, to some extent, fit to manage their own affairs; but, on the other hand, consider that the *vice* of drunkenness in a large proportion of cases passes into or produces a *disease*, which in turn occasions more frequent and excessive drinking; and that thus the habit which in the first stage was unquestionably a vice enters—through alcoholic influence affecting the brain and nervous system—the domain of disease, in which ere long, aided doubtless by constitutional and other causes, the moral nature is weakened and perverted, and, as Dr. Crichton Browne felicitously expresses it, "the will is paralysed." Dr. Browne also (Evidence, 2: 458) describes the one condition of drunkenness as brought about by a *vis à fronte*, and the other by an inevitable *vis à tergo*. With this mode of distinguishing ordinary drunkenness from dipsomania, Dr. Skae (610) expresses his entire agreement. Dr. Arthur Mitchell, in his admirable evidence, says (1246) "an habitual drunkard"—using the term synonymously* with dipsomania—"is a man with an ungovernable and remitting craving for drink, which has no reference to anything external; it comes from something within him." And, again (1189), "the very root of the mental unsoundness of the habitual drunkard is an ungovernable craving for alcohol." Then Dr. Mould says (642), "intemperance as a vice is the result of a vicious and immoral habit; intemperance as a disease is attributable to an impulse which the patient cannot control; in the other stage he can control it, he can be made to control it."

Thus it appears that while the ordinary drunkard voluntarily seeks the intoxicating effects of alcohol, the dipsomaniac drinks in consequence of an involuntary and irresistible impulse which no reasoning can control.

If, therefore, this form of intemperance is not virtually an insanity, it is clearly allied, or analogous to it, or "a special form of it"—as the British Medical Association has put it—ranking as a monomania,—the attainment of drink being the one fixed idea in the mind of the individual, although, as in other insanities, there may at times be more or less of a lucid interval. As in this morbid condition, therefore, there is real mental disorder and moral obliquity, without the controlling power of the brain-centres to guide the conduct, it seems an act of humanity and social expediency to be expected in a civilised and christianised country, that the wretched—we must not say "unfortunate"—victims of it should be treated under control, as other insane persons are, without regard to the causes—vicious or otherwise—from which the mental unsoundness may have originally sprung; with this difference, that as drink craving continues to be the chief manifestation of it, reformation as well as cure must be aimed at.

Alas! that anyone in our noble profession should ever appear to scout or jeer at such wrecks of humanity as confirmed drink cravers are, and not lend a hand kindly, yet firmly and forcibly, to rescue them from utter helplessness and misery, and from sinking lower and lower in the social scale; or that he should shut his own eyes, and attempt to withdraw the eyes of others from the distress and ruin which happen to friends and families in consequence of the downward progress of confirmed drunkards; or that he should try to keep out of view even the economical aspect of the question which has to do with warding off the heavy local and general burdens entailed on a community from the poverty and crime inseparably following in the train of such a complication of evils.

The asserted inability of myself and others to discriminate between ordinary drunkenness and insane drink craving, and the attempt to impute

* Synonymously also with these are employed the terms "Confirmed drunkard," "Drink craver," and "Insane drinker;" and although there may be a difference of opinion as to the best term to adopt, all popularly are meant to describe the condition of the individual destitute of self-control in connection with the gratification of a propensity to indulge in alcoholic drinks.

ignorance of or indifference to the amount of the former in our large cities, and which, indeed, everywhere disgraces our country, is singularly noteworthy. Dr. Bucknill's sympathetic lament in the contemplation of a bestially drunken and debased populace; then his rage in fancying that we wish to "fondle the subject of the casual rich man's drunkenness, with dainty considerations of how he is to be placed in a golden cage," "his palate pleased," and furnished with other "new and relishable enjoyments;" next, his derisive sneers at the idea of "a highly philanthropic movement," and "humane ends in view," for the reformation and cure of such individuals which he chucklingly attributes to the sordid desire of earning "gold dust" by making "the rich man's captivity profitable;" and, lastly, winding up all this with a hilarious exclamation of desire to be himself an inebriate, and under my care, is highly farcical, and fitted to produce on all rightly constituted minds a profound and lasting impression.

Thus the whole scope and spirit of this letter is unworthy of its author, and incomprehensible; for while he affects concern for the ordinary drunkards of society—the tens of thousands of the lower orders who occasionally or frequently give themselves up to drunkenness, and taunts us with beginning at the wrong end in our efforts to do good, or, as he elegantly expresses it, "taking hold of the stick by the wrong end," he overlooks—nay, even seems to jest with the unutterable sorrows of the thousands in the better classes, including, besides the confirmed drink cravers themselves, those closely connected with them. Dr. Bucknill keeps out of view the important fact that such confirmed drunkards are so, in spite of the advantages which he seeks for the general mass of vicious drinkers; nay, that in many instances, in spite of high mental culture, wealth, and rank, they are unable to help themselves in contending against the drink craving impulse, and at last sink to the lowest depths in social life, dragging along with them those they should rather have elevated in it. Such considerations, however, are of no importance in his estimation, for to desire the rescue of such disreputables—to attempt to reform them, and to avert the grief and misery to others from their course of life, is to "dally with the tarnished fringe of drunken society," for whom, probably, he considers a stick taken by the right end would be the best mode of treatment!

Who amongst us in the medical profession has not had occasion to mourn over the sad extent of drunkenness among the poor and labouring classes; the festering mass in the wynds and closes of the large city; the clustering crowd of tattered, miserable wretches around our whisky, gin, and beershops; the number of incapables in police and prison cells; and the broken down and degraded residents in poorhouses and Houses of Refuge? All this, too, appears to be on the increase in the lower strata of society, notwithstanding the strictness of our criminal laws, the educational, moral, and religous advantages now brought to bear on the people; the increase of wages and leisure to the working man, and the institutions of reading rooms, libraries and popular lectures, and the encouragement of public amusements—all of which have been thought the best means for arresting intemperance and counteracting its manifold evils. But while this increased drunkenness is deplorably true, and whilst it is evident that we must with redoubled energy persevere in combating the demon enemy among the masses through the Schoolmaster, the City Missionary, the Clergyman, and by every other agency capable of bearing on this vast and disgraceful evil, who in his senses, would ever contemplate, or even dream, of placing all these drunkards in reformatory sanataria? A number of confirmed drunkards—veritable dipsomaniacs—among the poor, and criminal, and labouring classes, might be picked out of this seething mass of drunkenness and sent into public reformatory asylums—not "golden cages"—but suited to their condition in life. This could be done were the Legislature to confer the powers which are at present solicited; and if so, I am convinced that ere long the wisdom of the policy would be apparent and acknowledged by all from the amount of good done

to the individuals themselves, the amount of social evil averted, and the saving in public money. We are taunted with beginning at the wrong end; but let it be remembered that educating and reforming at the right end has been begun long ago, and is still in active operation. Why, therefore, should we not try it now at the other also? It is one thing to attempt to repress and mitigate the general amount of drinking, and another to endeavour to cure and reform those who appear to be the subjects of a drink craving which presents so much of the features of a mental and moral insanity, requiring peculiar remedial treatment.

But even supposing we cannot do much more for the larger heap of miserable inebriates than punish them, preach to them, and pray for them, that is surely no reason why we should neglect any means practicable to reform confirmed drunkards of the more intelligent and well-to-do class of working people and those of the various strata of society overlying it?

Now, does it not strike everyone that when this sad condition occurs in those who possess educational, religious, or social advantages, or those who have every thing within reach to favour an enjoyment of the comforts and luxuries of life, and every inducement to maintain their status in society, that there must be something peculiar in this drink craving propensity? Besides, is it not a curious fact, that there is a comparatively small—very small—amount of ordinary drunkenness in the middle and upper classes, and yet in them the excessive morbid craving for stimulants is found most frequently to exist, and assuming the worst phases? This, doubtless, arises from the varied and associated effects of overworked brain and body, high mental culture, refinement, luxury, losses and crosses in business, and other causes—all inducing excitement of the nervous system which leads to a course of solitary indulgence; and this takes place all the more readily if there is any hereditary proclivity in that direction, or to insanity in another form, or if the nervous system has been damaged by a sunstroke, severe accident, or sudden mental shock. But in whatever way the habit originates and becomes confirmed, or whether the course to it may be a long or a short one, that impulsive and uncontrollable desire for stimulants which is not amenable to human persuasion or divine precept, must be viewed as a form of mental unsoundness in which the function, if not the nutrition of the brain, is implicated, and must be treated under control as such; for self-esteem and self-control being entirely lost under the tyranny of the disease, it is obvious that this is the only hope of ultimately delivering its victims from the bondage in which they are held; and as such is the case, it is equally obvious that the Legislature, as in the cases of the general insane who are assumed to be unable to manage themselves or affairs, and to require remedial treatment, should dictate the kind and amount of control necessary both for the protection and chance of cure of the individuals chiefly concerned, and for the comfort and well being of others.

But no, says Dr. Bucknill, this must not be. It is vice and not disease; leave these drunkards to their own sweet wills; punish them if their conduct in any way affects the interest of others, or is an offence to the community, and all the more severely if they are educated, know the Truth, and are possessed of wealth; but rather let them drink, drink, drink on uncontrolled, injuring their health, dissipating their means, beggaring their families, entailing disease, mental and physical, on their offspring, endangering the lives as well as the property of others, and let them, as they deserve, go down lower and lower to degradation and ruin. They are British subjects, freemen, and never shall be slaves (except to drink), and they have a right to go from bad to worse in drinking if they please. It is disgraceful, brute-like conduct, but it is their own choice, and they should know what it will lead to. No doubt it is a pity to see families and friends agonised, perhaps even apprehensive of their lives, and suffering in many ways besides the bitterness of shame from exposure to the world of living sorrows, and the dissipation of means, with the prospect of complete ruin in the end; but let the poor wretches go, they are but threads in

the "tarnished fringe of drunken society." That they have money remaining, and available by their families to place them under safe control, or that friends are desirous and able to secure for them firm but kind treatment in the hope of ultimate cure and reformation, does not alter the case. The law, continues Dr. Bucknill, in stern and harsh tones, must not be permitted to interfere with the liberty of the subject in the amount of his libations, nor can it ever be allowed to license institutions for the reception of confirmed drink cravers, even although such institutions—except those for the lower classes—should be self-supporting and cost the State nothing; some are said to spend almost a lifetime in short confinements at the public expense in prisons for crimes committed under drink, or to obtain it; some among the working classes might probably support themselves and families for years if cured of the drinking propensity, but go speedily to the Poorshouse and leave their families destitute and a burden on the rates, or become vagrants or thieves. But such events, such sad results, cannot be helped; the principles of liberty must be respected, and we must still go on punishing for crimes committed under drink, and being ourselves at the same time punished as the unavoidable result of this social evil. Institutions, continues Dr. Bucknill, even for confirmed drunkards in a higher grade of society than those just referred to which might be made self supporting, and establishments or homes for the upper classes which might even be made profitable to their proprietors, cannot be tolerated. They are "drunkards' gaols," "sponging houses," or "golden cages"—all alike condemnable. They may be strictly temperance establishments, and have their apartments, cookery, occupations, within-door amusements and out-of-door recreations, and many other well-devised arrangements for the station in life, means, former habits, and innocent fancies of the inmates, but yet the whole thing is bad. To attempt by any such means to displace the craving for stimulants, to restore the health of the body, to encourage industrial habits, to occupy the mind pleasantly and profitably, to produce contentment and happiness, to beget self-esteem and strengthen the power of self-control, so as to fit the individual for liberty and the duties of life—all these means which have been found beneficial by those having experience in the treatment of confirmed drink cravers are, says Dr. Bucknill, "philanthropic *fribbles* which make me right angry!"

Such is the spirit and tenor of this remarkable letter, and such are the so-called *fribbles* which, I believe, almost the entire medical profession in Britain are at present desirous should be legislated for, and in support of which the eminent Lunacy Specialists before the Dalrymple Committee gave more or less decided evidence. Thus, Dr. Arthur Mitchell in his evidence (1201) enters with much particularity into the consideration of those institutions which he thought might be founded by Government, and associations, and private enterprise, and licensed with powers to receive and detain persons who entered voluntarily and non-voluntarily. Dr. Crichton Browne (462) says, "I believe the foundation of such institutions to be the only chance of benefiting habitual drunkards;" and, again (464), the existence of such "is the only hope of curing a certain proportion of cases." Dr. Skae (610, 11) entirely agrees with Dr. Browne's opinions; and Dr. Forbes Winslow says (1332), such institutions "are to my mind one of the great and crying wants of the age;" and, again (1338), "they would be a national blessing, and in many cases self-supporting."

In support of these opinions many other psychologists, alienists, and distinguished physicians might be quoted; but I need not dwell further on this part of the question, than to say that dipsomaniacs of any class are not fit subjects for lunatic asylums, not because of any doubt—as insinuated by Dr. Bucknill—that they are not mentally unsound, but because they have been found most troublesome and mischievous when associated with the general insane, and because they require special medical attention and government. This is fully attested and explained in the course of the evidence already referred to, and, indeed, by all asylum superintendents.

In regard to contemplated institutions for the treatment of confirmed drink cravers of the lower classes, of course, government could not be expected to do more at first, at least, than sanction tentatively some reformatory accommodation on a small scale, and at the public expense; but to meet the wants of the other grades of society we would confidently look to the efforts of associations, and to private enterprise. Respecting sanataria for the upper classes, Dr. Bucknill has thrown out an insinuation that "gold dust"—the expectation that the "rich man's captivity made profitable"—lies at the bottom of the present movement to obtain a permissive law; and he has endeavoured to torture this conclusion out of what I said as to the various arrangements—even luxuries to the rich man—which he has a right to expect—necessary to make such establishments successful. The sole motive thus assigned is so vulgar, and the objection so absurd and equally applicable to every private asylum for the insane, that I shall not condescend to discuss the matter. I do not hesitate, however, to say that should power be granted to control confirmed drunkards, the founding of establishments to meet the requirements of the upper classes would be a perfectly legitimate investment of money, energy, and medical skill; and, further, I believe that any man undertaking such a responsibility, and bringing mental power, and moral and religious worth to bear on his work, would assuredly make the enterprise profitable to himself, while he would be conferring a great blessing on individuals and the public.

In conclusion, I must thank Dr. Bucknill for the opportunity given by his letter of enforcing anew the obligations of humanity and the law of love in connection with this disputed question. The quotations, too, at pages 429, 30, and 31, answer my purpose excellently; for that evidence being hidden in a blue book is not readily accessible to many; and while the alleged "torment" by the Select Committee of the House of Commons may be seen to have been agreeably mild, I do not apprehend any serious consequences to myself or the important psychological and social question at issue from the torment attempted on my letter of the 21st July, or in any remarks which may hereafter be made. However, considering the strong animus which has been shewn by Dr. Bucknill, and the uncourteous—I may say virulent—strain of attack on myself, I must view him—so far as I am concerned—beyond the pale of professional fraternity, and decline replying to any further communication he may chose to make in your Journal.

I am, Sirs,
Your obedient servant,
A. PEDDIE.

15, Rutland Street, Edinburgh,
4th November, 1876.

JOHN HOWARD.

To the Editors of The Journal of Mental Science.

Sirs,—I believe that I am not altogether out of order in asking you to allow me space for a few remarks provoked by the exceptional manner of your publication of my paper on John Howard in your issue of July, 1876.

In the first place, allow me to correct two printer's errors. At page 184, line 10, for "there alone," read "the real ones;" and at page 196, last line, after the word "more" insert "good."

I scarcely complain of the "comments" of the gentleman (or lady) whom you consider "singularly qualified, by study of Howard's life and character, to give a just opinion concerning both;" as they are so evidently, not only one-sided, but also hasty, that I imagine that they are rather calculated to create an impression in my favour from their very unceremonious severity. Scarcely one of them can be called justifiable.

With respect to his qualifications for the task he undertook, I have one remark to make. It appears most extraordinary that so qualified a critic should have been wholly ignorant of the particulars of Howard's remarkable

interviews with the Emperor of Austria, at Vienna, which are related as characteristic of him in his life, by Dixon, at page 354-360. Yet, he says, in his third note (page 188) upon my statement that Howard kept Emperors "standing for hours in deference to his unbending humour." "This is new to me!" I propose to give other examples to shew that his study of Howard's life and character seems rather to have had the effect of incapacitating him from giving a just opinion of what I wrote, or from giving it even ordinary or necessary attention.

His first note (page 182) is one example. My remark to which it refers, plainly related to prisoners *in general*. The *particular* prisoners with whom he suffered in France, he would have been a very chief butler to forget. But the fact alleged makes it all the more remarkable that his interest in prisoners in general was not excited till 18 years after. I am conscious of no oversight.

The 2nd note, on the same page, is equally pointless, or misdirected. Though his general reforms quite early included the prevention of gaol diseases, his attention was not devoted to other diseases till near the end of his career.

The note on page 183 shews entire inattention to the text. I had stated that no expense was spared on Howard's education; and in the sentence criticised, I remarked upon the effect of *unwonted* (not unexpected) wealth on—*not* an *individual*, but—a *family*. It is not those who become wealthy so much as their children, who become liable to mental aberration. (See Maudsley's "Phys. and Pathy. of the Mind," 1st Ed., p. 206.)

At page 186 my critic twice complains of my omission to notice particularly the motives that Howard alleged for his conduct. My reasons for generally rejecting all reasons alleged by anyone for his own acts, applied of course particularly to Howard, or they would have been irrelevant. For obvious reasons, I thought it unwise, as well as superfluous, to touch more on the subject of his religion than I did at page 193, lines 21 to 29, which evoked no remark from my critic.

The note at page 187 scarcely touches my position.

On page 188, the first note shews the animus and the hastiness of my critic. My statement that Howard was far from impoverishing himself, is strictly accurate, and can scarcely have received proper attention. He was—if his biographies are at all accurate—wealthy—not poor at his death. He may have been less wealthy than formerly, but he certainly had not reduced himself to poverty, which would have to have been the case for my statement to be inexact.

The second note (page 188) is worse. I deny the alleged inconsistency with any previous statement, and I say that such an allegation should have been more specific. I had said (page 181) that the severity with which he had been charged (and which was direct and personal) could scarcely have permanently affected his son's mental constitution. I had said that perhaps over-care in expenditure and selection of guardians may have had a bad, instead of a good effect on his son. But I had not anywhere excused him for the continued personal neglect—by absence—to which I alluded at page 188. It was none the less neglect, because his personal care would perhaps have been more mischievous.

The third note (page 188) as before observed, admits incapacitating ignorance of some of the most remarkable incidents of Howard's life.

The fourth note on this page is entirely incorrect, if Dixon's life of Howard is to be depended upon (see pages 390-4) with which my statement of the circumstances is in strict conformity. I appeal also to the inscription on his statue.

The first note (page 191) is either the expression of an extraordinary misconception, or is inexcusable after the grounds of my assertion had been given at page 186. Had those grounds not been given, I should have guarded against being supposed to mean that all men desire to do good, without expecting to benefit or please themselves. But I had, surely, sufficiently explained (page 186) that "all men desire good by whatever means they propose to attain to it."

Good, of course, for themselves. If they err, they err in judgment, not from a desire for evil *per se.*

The second note here shews animus to an extraordinary degree. I never questioned that Howard did good to others than prisoners. In the same paragraph I had mentioned examples. But I challenge all impartial, and even most partial persons to shew how my penultimate sentence in it is not strictly accurate (page 191).

The note on page 192 is very inconsiderate and unfair. No one can possibly be in a position to say that Popham would not have succeeded in completing what he had well begun, had Howard never lived. But I recognised the possibility that Popham might not have succeeded nearly so soon. My critic assumes that Popham failed because he had not already done what he had just begun. He forgets that Howard likewise had not then succeeded in doing it. But did I depreciate him for that? My critic here objects to my application of the term *enthusiasm* to Howard's work. He may perhaps know the meaning of the word enthusiasm better than anyone else, but when he writes for others to read, he should use words in the sense in which they are generally understood, if he wishes for attention or comprehension. Did he never see a book called, "Ecce Homo?" From it he may, at least, learn what enthusiasm means.

In his next note (page 194) my critic rudely says "obviously untrue." Is he prepared to deny that poverty is one cause of crime? Yet, that is the basis of my statement. He can scarcely think that "*they*" (line 1) refers to the children. But if he can, let him ask the opinion of some one who understands English.

In the next note (page 194) he says "some proof of this" (the larger propagation of the unfittest) "ought to have been given." This is done—I think sufficiently—in the remainder of the paragraph. Proof is not exactly the word, but no more proof than reasons should have been demanded.

In the first note on page 195, I am accused—if serious—of inconsistency. This remark indicates an inadequate grasp of the subject. The reason I urge for the extermination, "with tenderness and humanity," of the mindless, and of infecters with poisonous diseases, is the promotion of a higher social and moral feeling than now anywhere subsists; a superior regard to larger and ultimate, rather than immediate good.

As to the second note on the same page, I admit that, strictly speaking, all action in nature is equally natural, and that in subdividing nature into—artificial, or a class of facts influenced by civilised man, and natural or a class of facts not so influenced by civilised man, another term, than the general one, which includes both, should have been used to connote the latter. But not even my critic could misunderstand me, for it is notoriously customary to use the terms natural and artificial in the same manner contradistinctively. And, is it not a fact, that the natural law of the survival of the fittest fails solely when artificially interfered with by man? Ask Mr. W. R. Greg.

On the last page my critic remarks—upon my statement that the non-survival of the fittest is a great and increasing fact—that Howard did largely save the healthy and moral from disease and degeneracy. That I never questioned. But he did not do all he might have done to save his son from either. My contention, however, is that he did importantly more towards the non-survival of the fittest—physically, morally, and intellectually.

His last note is not quite intelligible. But if he meant that Howard did not, as I affirm, *principally* work to improve the condition of criminals or prisoners, the world is at issue with him as much as I am.

I can only say that these notes impress me strongly with the incompetency of the writer to deal in any way with the subject. They are inconsiderate, inexact; and apparent haste seems their only excuse.

The principal defect of which I am aware in my paper is unnoticed by my critic. The proof is inadequate that Howard should be held responsible for the irrational, immoral, and fatal sentimentality, in deprecation of which my paper was written. In fact the action of Mr. Popham and of the Committee of

1701-2 might be taken as evidence that it was strong, and perhaps excessive before Howard's time. This view would, of course, detract from Howard's originality and precedence, which might not suit such a blind admirer of him as my critic. But, in any case, I maintain that my general contention is just and true. I am, Sir, yours &c.,

HOKOR,

Melbourne, 4th October, 1870. Author of the paper on John Howard.

The author of the short foot notes appended to the "Essay on John Howard," printed in the "Journal of Mental Science," July 1876, p. 189, has forwarded to us the following explanation and remarks :—

In the first place, he wishes it to be distinctly understood that his notes were written as a short running commentary on the original MS.; that they were not intended for publication; that he did not see them again till the essay appeared in print; and that, consequently, he had neither the advantage of seeing his notes in type, with the text to which they referred, nor the opportunity of modifying or correcting them. (For two of the foot notes the Editor is responsible.)

A running commentary, made under these circumstances, cannot need any apology; and, on referring to the notes in detail, their author finds little to alter or to add. He cannot even take blame to himself for misunderstanding the words at p. 188.—"Emperors he kept standing for hours in deference to his unbending humour;"—for he failed to recognise in them Hepworth Dixon's account of the "singular interview" between Howard and the Emperor Joseph II. at Vienna. The facts, as recorded by Dixon, are these—Prince Kaunitz, having arranged that an interview should take place at nine o'clock on the morning of Christmas day, Howard kept his appointment with his usual punctuality. But he had peremptorily refused to be bound by the "servile etiquette" then enforced at the Austrian Court of approaching the Emperor on bended knee. This appears to have been the only difficulty Howard raised. The arrangement that the interview should take place standing, seems to have been entirely due to the Emperor himself; and, though obviously made out of consideration for Howard, does not appear to have been at his instigation. It was, therefore, in an indirect, not in a direct sense, that Howard kept an Emperor (not Emperors) standing for hours (two hours, the length of the interview), and his refusal to conform to an objectionable piece of Court etiquette, is surely not rightly designated as an "unbending humour." A conscientious feeling led him to decline the invitation of an Empress (the infamous Catherine of Russia); a like feeling forbade him to take part in a Court ceremonial which implied a degree of reverence due to no human being, but only to his God.

There is one point on which the Author of the notes desires to say a few words. Hokor speaks of *the survival of the fittest* as a *natural law*. If for *fittest* we substitute *strongest*, we give expression to the only natural law which has really been established. The application of that law to human beings in the modified form of the survival of the *fittest* is rendered difficult, if not objectionable, by the obvious necessity of defining the word *fitness*. The laggard in a herd of antelopes is the fit prey and food of the lion. Here the natural law applies itself. In the case of man living in a state of civilization the work of destruction would be found to be surrounded by very serious difficulties.

THE TRAINING OF ASYLUM ATTENDANTS.

To the Editors of the Journal of Mental Science.

Gentlemen,—The emphatic and eloquent Paper by Dr. Clouston, in the July number of your Journal, on "Getting, Training, and Retaining the Services of Good Asylum Attendants," must have called forth a response and an aspiration

in the mind of every Medical man who is or has been intrusted with the care or cure of the insane. We have favoured and fortunate fellow-labourers, who have by intuition secured, or have manufactured, a staff from the ordinary materials offered, with the assistance of which they are satisfied and successful. It may be that their standard is too low, or ours too high, that they are content with custodians, while we crave curators, companions, co-operators: but, whatever may be the cause of the discrepancy, there prevails a general complaint of the absurdity, the cruelty, and the failure which must, and does, attend the employment of rude instruments in the manipulation and re-construction of the most fragile and delicate of fabrics, and an equally general desire and demand, we cannot believe that it will be altogether Utopian, for trustworthy, teachable, intelligent and humane assistants, through whose instrumentality much that is now left undone would be effectively done; for upon the guardians of our patients must ever mainly depend the execution of our schemes and suggestions, even our medical treatment, as well as the application of the varied means vaguely comprehended under the term Moral treatment. My impression is, that the getting and retaining suitable attendants must, in some degree, be commensurate with the influence of the "immortal dollar," and some modification of Dr. Lauder Lindsay's plan of retiring and rewarding allowances. In reference to "Training," I have not one word to say in addition to what has been already so well said by your contributor, and my present purpose is chiefly to record that similar wishes and proposals have been propounded, and more than once carried practically into effect, by humble individuals who must now rejoice that what was inchaste or incomplete in their hands is now likely to be carefully formularised and applied upon a large, if not upon a Catholic, scale. It cannot for a moment be suspected that I cherish any *arriére pensée*, any quiet intention of seeking the fame of priority, in submitting to you the following extracts, as the want which I felt, and the design which I cherished, must have been felt and cherished long before and since my days of work by many "worthier sons" in our specialty than I can pretend to be; but I conceive that the subjoined quotations may serve as contributions to the history of the progress of our department, and may swell the consensus of convictions in support of Dr. Clouston's project.

I.—The first extract is from the Annual report of the Crichton Institution, for 1854:—

"A course of lectures upon mental diseases and their management has been commenced, and will be continued during the winter. It is addressed to the officers, and to all members of our community engaged in the treatment of the insane. A certain amount of education and experience is expected in every artizan, is demanded from those entrusted with the care of even domestic animals; but for those to whom the happiness and tranquility of the human mind is consigned, no training is provided, no instruction accessible. A guardian is appointed who may have no higher qualification than physical strength and courage, who never saw a case of insanity, who may attribute the errors he is expected to correct, the propensities he is compelled to control, to the manifestation of perversity, malice, or to demoniacal possession, and who may remain for a quarter of a century in daily contact with these ebullitions, in utter ignorance of their real character, and with no guide as to the mode in which his duties are to be performed, except a series of brief regulations associated in his mind with fear of punishment. No means are taken to remove ignorance, and we punish the ignorant. The errors and offences of the attendant upon the insane are less frequently the offspring of deliberate cruelty, of cold indifference and neglect, or of self-sufficiency, than of want of knowledge of their line of duty, and mistaken views as to the mode in which that duty should be discharged. Since the diminution or discontinuance of physical restraint, since the introduction of education and amusement as remedies, these officers are called upon for greater intelligence, higher motives, and a clearer comprehension of what that human and morbid nature is which they are required to guide and

govern; and instruction of some kind is obviously essential. To these persons is in great measure committed the management and moral treatment of the insane. They pass the whole day with their charges, whilst the visits of the officers are necessarily brief, at distant intervals, and are less social than supervisionary; the former cheer, repress; grant or withdraw indulgences, execute the plans which the other suggests: they are literally the companions, and ought to be the friends and teachers, as well as the nurses and guardians of the patients. Yet, for this class there is no normal school, no golden road, no road at all to knowledge. These instructions will embrace a very full discussion of the subjects embraced; but they will be so modified as to rise to the level of the educated minds addressed, and yet to fall within the grasp of the shrewd and sensible, though illiterate, individuals who compose the class of attendants. It is probable that the whole scope of the subject will not be embraced—it is obvious that the scientific details must be directed to one portion of the auditors alone; but it is believed that no one will retire from the investigation without some clearer conceptions of the great work in which they are engaged, and higher views of their own responsibilities."

II.—The second extract is from the Annual Report of the Crichton Institution for 1855:—

"It is somewhat interesting that the very time when the necessities of vast armies developed unequivocally as principles what had long lurked in the human heart as hopes and aspirations, that a higher motive than gain is required to secure suitable nurses for the sick and wounded, and that the educated as even the refined mind, is a more useful instrument amid dangers, and disease and difficulty, than ignorant obedience; there was made in this remote province the first attempt to educate the attendants upon the insane, to expose and explain the nature of their duties, and to raise them at once to a due appreciation of their responsibility, and to a capacity to discharge the duties imposed. A course of thirty lectures was commenced in October, 1854, and continued weekly until May, in which mental disease was viewed in various aspects; in which the relations of the insane to the community, to their friends, and to their custodiers, were described; in which treatment, so far as it depends upon external impressions, the influence of sound minds, of love, and fear, and imitation, was discussed; and in which it was attempted to impart attraction, by illustration and narrative, and to convey instruction by examples drawn from the actual inmates. The descriptions were powerfully aided by portraits of patients familiar to the auditors, most graphically executed by a patient who had lost, but regained, his genius as an artist. The grand objects were to impress the understanding, and to rouse the affections, by the demonstration that mental aberration was a malady, a misfortune, a misery, which was to be relieved, which it was, so far, within the power of every kind word and consoling look to mitigate; and that it was not a brutal passion that was to be opposed, a perversity that was to be resisted or resented, or a strife that was to be prosecuted until victory was obtained. Secondly, to distinguish the various forms under which alienation might be presented; what was to be apprehended and hoped in each; what was to be guarded against; and what might be accomplished by a judicious selection and adaptation of the means of alleviation. And thirdly, to show that every individual with whom the insane came into contact might, and must be instrumental in increasing or diminishing happiness; in building up or destroying the fabric of mind, and in guiding those to or from light and knowledge, who may literally be said to have eyes and see not, ears and hear not; and that this influence must be proportioned to the intelligence and humanity of the agent, to his sense of the high and holy mission intrusted to him. It is possible that much was said which met no response nor assent; which was unsuited to the previous training of the auditors; or that all might have been clothed in a more pleasing and useful garb; but it is certain that interest of some kind was awakened and sustained. The class consisted of the officers, the male and female attendants, some of the patients who belonged to the

medical profession, and occasionally a visitor. The attendance, although perfectly voluntary, was numerous, attentive, and grateful; and the conviction is believed to be general, that although these inquiries and suggestions may have fallen infinitely short of the objects contemplated, they elevated the tone of those engaged, formed a pleasing communion between the different members of the Staff, and have left many recollections of intellectual enjoyment."

N.B. That these prelections were not altogether inefficacious, may, I think, be fairly concluded from the facts that eight of the number of attendants who listened to them are still in harness, are still trusted and efficient workers, and several of them have already received Sir A. Morrison's good conduct prizes; although I attribute their continued trustworthiness and usefulness chiefly to their original goodness of heart and head.

III.—The third extract is from a letter by my colleague, Dr. Gilchrist, dated 6th Oct., 1876:—

"My efforts at Montrose were real though not prolonged, and not to be mentioned alongside of yours. I met the attendants there on more than one occasion, and explained to them their duties, and the specialty of them, as based on the nature of insanity. It was soon after I went. 1854."

(Certain alienists in America have had recourse to precisely the same mode of instruction.)

IV.—The following is taken from an article on Lunacy in the United States, in the July number of the "British and Foreign Medical Chirurgical Review," and is from the pen of an anonymous, but evidently veteran expert:—

"We have before us the evidence of a Superintendent that, failing in transforming mere hewers of wood and drawers of water into gentle, judicious, self-denying agents, he first engaged self-educated and thinking artisans, but they turned out philosophers; secondly, pensioned soldiers, but beer proved more fatal than the enemy in the field; then the communicants in the several churches attended, but their religious impressions failed to regulate their temper or passions; and, lastly, he organised a school, in which he taught, lectured, illustrated, and with greater success than had crowned his previous attempts." (P. 68.) I am, &c.

W. A. F. BROWNE,
Now a Septuagenarian Superintendent.

Crindau, Dumfries, N.B., 21st Nov., 1876.

The following letter appeared in the "British Medical Journal:"—

"DISEASE OF THE BONES IN THE INSANE.

"SIR,—You will, I trust, allow me to observe, in reference to your interesting and instructive comments on the case of the late Mr. F. W. Wimberley, in the 'Journal' of this day, that the peculiar liability of the bones of the insane to disease, and consequently to fracture 'even when no extraordinary violence is used,' has been long known. You have written thus: 'Numerous observations on the subject have been made in *recent* years. Certainly to Drs. Clouston, Rogers, Brown, Sankey, and others, are due the credit of teaching, in 1870, that the osseous system of the insane is especially liable to undergo certain chemical changes, 'approaching that observed in osteomalacia.' Much credit is due also to Dr. Morselli, of Florence, for his article entitled 'Fractures of the Ribs, and a Peculiar Form of Osteomalacia in the Insane.' Let me add, however, that long years before either one of the several gentlemen named in your editorial of August 19th, 1876, had so taught, I wrote thus, in 1857: '*One word more; osteomalacia may be confined to one or more bones, or even to a portion only of the same bone. In the examination of patients who died insane—inmates of the Middlesex Asylums at Hanwell and Colney Hatch—I have met with six examples of this affection of the skeleton: the greater number of the patients alluded to were afflicted with general paralysis. An interesting fact*

this, and one which bears me out in the views here taken of both osteomalacia and of this specific form of paralysis so common to the alienated. (See my 'Ganglionic Nervous System,' chap. iii., 'Pathology,' p. 265.) It was in 1842 that I detected, at the Hanwell Asylum, the existence of osteomalacia in those dying insane. Furthermore, in the 'Medical Times,' No. 170, vol. vii. p. 195, *et seq.* (1842), is seen recorded by me a highly interesting example of the *co-existence of osteomalacia and insanity* in a female patient who died under my care at Hanwell, in whom six spontaneous fractures of the long bones—femur, humerus, and so on—were found *post mortem.* In this case I have described the skeleton as 'CONVERTED, IN GREAT PART, INTO A DARK SEMI-CALCAREOUS GRUMOUS MATTER.'

"Under the circumstances, then, you will, I trust, afford me this opportunity to make a prior claim—one of no less than twenty-eight years' standing—to the recognition of a 'condition of the bones of the insane,' of so much importance both to the jurist and pathologist.

"I am, sir, your obedient servant,

"JAMES GEORGE DAVEY, M.D., M.R.C.P., Lond., etc.

"4, Redland Park Villas, Bristol, August 19th, 1876."

Appointments.

BATEMAN, F., M.D., has been appointed Medical Visitor of The Grove, a house licensed for the reception of Lunatics at Catton, Norfolk.

BREE, C. R., M.D., M.R.C.S.E., has been appointed Medical Visitor of Essex Hall Lunatic Asylum, Colchester.

BRUSHFIELD, T. N., M.D., has been appointed Medical Visitor of Houses licensed for the reception of Lunatics in the County of Surrey.

CASE, Mr. H., has been appointed Medical Superintendent of the Metropolitan Asylum, Leavesden, vice Shaw, resigned.

COATES, W. M., M.R.C.S.E., L.S.A.L., has been appointed a Medical Visitor of all Houses licensed for the reception of Lunatics in the County of Wilts.

DAY, H., M.D., F.R.C.P.L., has been appointed a Medical Visitor of all Houses licensed for the reception of Lunatics in the County of Stafford.

HARLAND, J. T., M.D., has been appointed a Medical Visitor of all Houses licensed for the reception of Lunatics in the County of Stafford.

KEMM, W., M.R.C.S.E., L.S.A.L., has been appointed a Medical Visitor of all Houses licensed for the reception of Lunatics in the County of Wilts.

KINGLAKE, J. H., M.D., has been appointed Medical Visitor of Amberd House, and all other houses licensed for the reception of Lunatics within the West Division of the County of Somerset.

PAXTON, F. V., M.B., M.R.C.P.L., has been appointed Medical Visitor of Houses licensed for the reception of Lunatics in the Western Division of the County of Sussex.

RAWSON, J., M.B., L.R.C.S.I., has been appointed a Medical Visitor of all Houses licensed for the reception of Lunatics in the County of Stafford.

SHAW, J. C., B.A , M.D., M.B., M.R.C.P.L., M.R.C.S.E., & L.S.A., has been appointed Medical Superintendent of the Middlesex County Lunatic Asylum, Banstead.

WAYLEN, G., M.R.C.S.E., L.S.A.L., has been appointed a Medical Visitor of all Houses licensed for the reception of Lunatics in the County of Wilts.

WYBRANTS, J., M.D., F.R.C.S.E., has been appointed Medical Visitor of Downside Lodge, and all other Houses licensed for the reception of Lunatics within the East and Middle Divisions of the County of Somerset.

In the List of Members published in the October Number of the Journal, Dr. Bucknill's address should have been 39, Wimpole Street, London, W.