THE JOURNAL

OF

MENTAL SCIENCE

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

EDITED BY

T. S. CLOUSTON, M.D.,
D. HACK TUKE, M.D.,
GEO. H. SAVAGE, 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.*

VOL. XXVI.

LONDON:
J. AND A. CHURCHILL,
NEW BURLINGTON STREET,
MDCCCLXXXI.

"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.*

THE JOURNAL OF MENTAL SCIENCE.

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

No. 113. NEW SERIES, No. 77. APRIL, 1880. VOL. XXVI.

PART 1.—ORIGINAL ARTICLES.

The Epilepsy of Othello. By ROBERT LAWSON, M.B., Deputy Commissioner in Lunacy for Scotland.

I have often stated in conversation that Shakspere, in depicting the agitation into which Othello was thrown by the artifices of Iago, subjected the Moor to an epileptic seizure. Almost without exception, this statement has at first been contradicted; but a perusal and an analysis of Scene 1, Act iv. of the tragedy of "Othello" have, I think, convinced all enquirers that the dramatist's design in the matter was not open to doubt.

It will be remembered that Iago, influenced by jealousy of Cassio and dislike to Othello, and incited by the importunities of Roderigo, his deluded victim, had, by the practice of subtle malevolence, aroused in Othello's mind a predisposition to believe in the unfaithfulness of Desdemona. By a dexterous use of simple current events, more effective than any preconcerted scheme could have been, Iago had worked upon the mind of the trustful Moor, turning even his virtues into weapons for his humiliation, and by perverted ocular demonstration, by the affectation of diffidence and the employment of the grossest effrontery, had influenced Othello's beliefs so thoroughly that nothing but the evidence of his own senses, or the confession of the guilty parties, was able to add intensity to his convictions. Having hinted that Iago should supply him with an actual demonstration of Desdemona's guilt, Iago, with convenient moral compunctions, disowns the possibility of such a course, but adds that—

> If imputation and strong circumstances
> Which lead directly to the door of truth
> Will give you satisfaction you might have it.

Forthwith, with a show of diffidence, he tells Othello that—

> There are a kind of men so loose of soul
> That in their sleeps will mutter their affairs;

and relates how in his hearing Cassio, in a dream, had given open evidence of his attachment to Desdemona. Having by this means intensified the bitterness of Othello towards his wife so much as to wring from him a threat to "tear her all to pieces," he pursues further the line of circumstantial evidence. He informs the Moor that Cassio possesses a handkerchief which he may have seen in the hands of Desdemona, and, by Iago's description, Othello at once recognises that Cassio has become the possessor of that which not only had a special value as being his first gift to Desdemona, but which (as subsequently shown by the Moor) by its having quitted the hands of the latter, supplied the most solemn evidence of tradition to the truth of the underhand suggestions of Iago. Othello now craves for a more terrible revenge than that of tearing Desdemona to pieces—

> Oh that the slave had forty thousand lives,
> One is too poor, too weak for my revenge.
> Now do I see 'tis true. Look here, Iago,
> All my fond love thus I do blow to heaven—
> 'Tis gone.
> Arise, black vengeance, from thy hollow cell;
> Yield up Oh love thy crown and hearted throne
> To tyrannous hate! Swell bosom with thy fraught;
> For 'tis of aspick's tongues.

The malignity of Iago having feasted on the perturbation produced by "imputation and strong circumstances" takes one step farther, and, acting by broken sentences, too readily completed by the Moor, Iago now leads Othello to a belief in the existence of the crowning evidence of Cassio's guilt—his own confession.

Othello's response to this climax of Iago's villany is not characterised by an accession of fury such as had marked former steps in the development of the ancient's plot. He is to all appearance stunned; he becomes incoherent, and dreamily recalling the several signs by which Cassio's guilt had been manifested, he shakes and trembles, and with an imprecation showing the existence of strongly compressed emotion, "he falls in a trance."

It is this passage of the tragedy (Act iv., Scene 1) which

describes Othello's epileptic seizure, and in order that my remarks may be followed without interruption I transcribe such parts of the scene as are essential to my present purpose.

Othello—Handkerchief—confessions—handkerchief. To confess and to be hanged for his labour. First to be hanged and then to confess. I tremble at it. Nature would not invest herself in such shadowing passion without some instruction. It is not words that shake me thus. Pish! Noses, ears and lips. Is't possible? Confess! Handkerchief. O, devil.

[*Falls, in a trance.*

Iago—Work on,
My medicine, work! Thus credulous fools are caught
And many worthy and chaste dames even thus
All guiltless meet reproach. What ho! my lord!

Enter Cassio.

My lord, I say! Othello! How now, Cassio?
Cassio—What is the matter?
Iago—My lord is fallen into an epilepsy:
This is his second fit; he had one yesterday.
Cassio—Rub him about the temples.
Iago—No; forbear.
The lethargy must have his quiet course;
If not, he foams at mouth, and by-and-by
Breaks out to savage madness. Look, he stirs;
Do you withdraw yourself a little while.
He will recover straight. When he is gone
I would on great occasion speak with you.

[*Exit* Cassio.

How is it, General, have you not hurt your head?

So acute a critic as Dr. Bucknill, misled by the habitual mendacity of Iago, has expressed an opinion that the designation of Othello's trance "as an epilepsy, of which it is the second fit, appears a mere falsehood."* I think I analysed the passage quoted so as to convince Dr. Bucknill that the "trance" into which Othello fell was a genuine epileptic seizure; and on commencing to write on the subject I find, in a different edition of Shakspere from that which I formerly used, that Charles Knight in a note bearing on the stage instruction "*falls, in a trance*" expresses a similar opinion. He says:—"The stage direction of the folio is

* "Shakspere's Medical Knowledge." By Dr. Bucknill, 1860, p. 274.

'falls in a trance.' We have altered the punctuation to express what, no doubt, was meant, that Othello actually falls. The direction of the first quarto is '*he falls down.*' Iago's statement to Cassio—'My lord has fallen into an epilepsy' is not meant for a falsehood." ("Knight's Cabinet Shakspere:" W. & R. Chambers).

It will be my object, in the few remarks which are to follow, to show that the dramatist's intention was that Othello, at this stage of the progress of the tragedy, should present such of the features of an epileptic seizure as were consistent with the dignity and impressiveness of the drama. I shall advance evidence that in Shakspere's eyes there was a fitness in the representation of epilepsy as a result of high-strung emotion. I shall endeavour to show that there is much in the construction of the tragedy of "Othello" which makes the accession of epileptic unconsciousness in the Moor a highly sequential and most effective anti-climax, and by a short analysis of the passage quoted, I shall demonstrate the existence of internal evidence which leaves the poet's meaning clear.

That Shakspere looked upon epilepsy as a likely sequence of an intense emotional state is shown by the fact of his inflicting a fit upon Julius Cæsar during the disappointing emotions which were aroused in him by the applause with which the populace greeted his last refusal of the crown. The elements of Shakspere's description of the scene are borrowed from "Plutarch's Lives," ("Life of Cæsar." Ed. William Tegg, 1865, p. 515). And there is not only no evidence that at that time Julius Cæsar really had a fit; but there are strong reasons to lead to the positive conclusion that he had not. Plutarch says in the simplest words that when the populace showed how strongly they rejected the idea of Cæsar's assuming the royal insignia, he (instead of taking a fit, as Shakspere represents it) rose from the "golden chair upon the rostra," on which he had seated himself, "and ordered the diadem to be consecrated in the Capitol." Not only did the coronation befit a poetical invention, but by a careful reading of Plutarch one can trace the passage which most probably led Shakspere to introduce that seizure which the poet's Brutus spoke of as a likely termination to the scene. Comparison of Plutarch's Biography with the words placed in the mouth of Casca ("Julius Cæsar," Act i., Scene 2) shows that in the event spoken of by the Roman citizen, Shakspere utilises incidents which Plutarch mentions as having occurred, not

at the offer of the "diadem wreathed with laurel," but on previous manifestations of Cæsar's haughtiness. The cue for the epileptic seizure following on the abandoned coronation is to be found in Plutarch's remark that Cæsar, finding on reflection that it would be necessary to give some excuse for having received the consuls and prætors and the whole body of patricians, sitting, "bethought himself of alleging his distemper as an excuse, and asserted that those who are under its influence are apt to find their faculties fail them when they speak standing, a trembling and giddiness coming upon them, which bereaves them of their senses. *This, however, was not really the case.*"

Shakspere's account, therefore, of the circumstances of Cæsar's chagrin as put in the mouth of Casca, being evidently a reproduction of Plutarch's account, the fact of Shakspere's having introduced into the scene an epileptic seizure, which Plutarch not only does not mention, but which he distinctly repudiates, shows that in his innovation the poet was influenced by ideas of dramatic harmony and effect, and that to him it appeared natural that Cæsar should show his epileptic propensities at such a crisis in his career. It is important to notice with regard to Casca's description of Cæsar's epilepsy that no mention is made in it of the presence of convulsions. "He fell down in the market place, and foamed at the mouth, and was speechless." As, beyond the mention of shaking and trembling, there is no reference to a convulsive condition in the similar seizure of Othello, it is fair to assume that in the latter case, in which epilepsy may be regarded as somewhat unlikely, the convulsive part of the fit is suppressed—as it is in the undoubted case of Julius Cæsar—from motives of mere histrionic propriety and dignity. I may add that the existence in Shakspere's mind of the natural relationship between epilepsy and intense mental agitation is made all the more evident by the fact that the production of the tragedy of "Othello" was much earlier than that of "Julius Cæsar," and that the value of a device already introduced in one tragedy was to him sufficient excuse for the modification of Plutarch's history, so as to bring the agitation of Julius Cæsar into correspondence with a dramatic principle which he had employed in the depiction of the agony of Othello.*

*An illustration taken at random from Trousseau's Chapter on Epilepsy (Clinical Medicine, Vol. 1), will show that Shakspere's idea of epilepsy being primarily produced, and subsequently re-induced by painful emotions, was, to

What evidence is there in the development of the tragedy of "Othello" which makes an epileptic seizure presumable in his case? The character of Othello is apt to be much misunderstood. Shakspere's evident intention is to depict in the beginning and the end of the tragedy a hero distinguished for his magnanimity, his vital sense of honour, his attachment to whatever is noble and beautiful, his freedom from passion, and his affectionate constancy. One sees how much he was attached to the even tenor of his way by the fact that the gentle Desdemona had to assume an almost unwomanly part in raising him from a condition of general generosity to one of special attachment to herself—

> She bade me, if I had a friend that loved her,
> I should but teach him how to tell my story,
> And that would woo her. Upon this hint I spake.
> She loved me for the dangers I had pass'd,
> And I loved her that she did pity them.

And when, looking round upon the terrible reverse of this picture, one sees how much difficulty Iago at first experienced in poisoning Othello's mind with jealousy, it is again manifest how inapt he was to change his mental state. In fact, when a condition of variableness is suggested to him he exclaims—

> Why, why is this?
> Thinkst thou I'd make a life of jealousy
> To follow still the changes of the moon
> With fresh suspicions? No, to be once in doubt
> Is once to be resolved.
>
> . . . . . .
>
> And on the proof there is no more but this,
> Away at once with love or jealousy.

But when the wily accumulation of evidence has become so great as to lead him to the acceptance of the dishonour

say the least of it, a happy conception, which has its counter-part in clinical facts. I shall classify Trousseau's comments on a case to show the close resemblance of its features to those of the conception of Shakspere. *Primary Causation.*—One night the patient had been suddenly awakened and frightened by terrible shrieks from his wife, and a few days afterwards he had his *first* attack. The attacks recurred at regular intervals, and were brought on *by the slightest painful emotion.*

The features of a seizure were *quivering of the legs*, delirium, convulsions and *unconsciousness.* He looked *exactly like a delirious maniac.* The fits lasted about twenty minutes, and *without any transition* the patient became calm. The words which I have italicised have their counterpart in Iago's description of Othello's state, and in the words of Othello himself.

which had fallen upon him through the supposed unfaithfulness of Desdemona, the platform of his very existence, so to speak, is knocked from under him; the conviction seizes him that the perils and labours and distinctions which had marked his life since in his own words,

> These arms of mine had seven years' pith,

were irretrievably eclipsed by the dishonour which had accrued to him through the unfaithfulness of Desdemona.

> My name that was as fresh
> As Dian's visage is now begrim'd and black
> As mine own face.

The chaos which he had predicted as a consequence of the absence of Desdemona's love surrounded him; he was "eaten up with passion," he became violent in his deeds, his love turned to hate, his hate to frenzy, his frenzy led to murder, and his mental oblivion caused him to exclaim—

> O, unsupportable! oh, heavy hour,
> Methinks it should be now a huge eclipse
> Of sun and moon, and that the affrighted globe
> Did yawn at alteration.

Over and over again his friends testify to the absolute difference of his character from what it had been throughout his whole life, and Lodovico asks:—

> Are his wits safe? Is he not light of brain?

Shakspere's apparent intention in these numerous side enquiries and comments is to show that the principle of honour, upon which Othello's whole life had been constructed, having been shattered by the unfaithfulness of Desdemona, which was now a conviction in his mind, his consciousness was virtually abrogated. In a metaphysical sense this would no doubt be accepted as a safe conclusion. The sense of honour in which every thought and action of his noble life had had its existence, was, in his opinion, a thing of the past, and "he loses his self-control when all the props of his existence—at least, of his consciousness—have broken down."* To use a more modern phraseology—honour was the substratum of his consciousness; when honour failed his being failed; and the unconsciousness of his epilepsy is, so to speak, the index of his extreme divergence from his real personality.

* Ulrici, Shakspere's Dramatic Art, Vol. I.

Look at the meaning of the passage which I have quoted at length when it is regarded from a dramatic standpoint. Recall Othello's calmness in the Council Chamber while justifying his dealings with Desdemona—his nobility, his modest reserve, his manifestation of almost every quality which goes to constitute true greatness; and then picture the scene in which he lies prostrate "in a trance." Examine the grouping of the characters to see how strikingly Shakspere utilises the unconsciousness of Othello. Iago and he are at first alone. Iago has virtually completed his diabolical mission. He has

> Put the Moor
> At least into a jealousy so strong
> That judgment cannot cure.

He gives us the best assurance that Othello's unconsciousness is a reality, by the exultation which, with Satanic malignity, he manifests over the prostrate body of the Moor. Trustful nobility lies helpless in the presence of the spirit of evil, and Iago, with his heel virtually on the neck of his tortured victim, triumphantly proclaims the motive and the success of his prolonged machinations—

> Work on,
> My medicine work; thus credulous fools are caught,
> And many worthy and chaste dames even thus
> All guiltless meet reproach.

Passing still farther in the development of the tragedy to the period at which Othello, after the murder of Desdemona, has again had his honour established, and the dignified appearance in the Council Chamber is seen to have its balance on the other side of the scene of epileptic prostration in the final words and attitude of the Moor. He has proclaimed himself an "honourable murderer." To him the most revolting parts of the tragedy are but "unlucky deeds," because nought has been done "in hate, but all in honour," and his equanimity again gives such a nobility to his character that his cheerfulness presents no painful contrast to the carnage with which he is surrounded. Amidst the manifestations of tender emotions, with manly confessions and honourable reflections, he finds in the climax of a simple tale the violent climax of his own afflicted life. Regarded from this point of view, I think it will be seen that Othello's epilepsy has a definite and highly artistic place in Shakspere's tragedy, and that it gives completeness to a picture of

Othello during his period of extreme perturbation and the virtual annihilation of his individuality, which has its contrasts in the opening and closing dignities of the drama. This striking collocation of effects could not have remained in obscurity but for the fact that the portion of the tragedy which depicts Othello's epileptic trance, as well as another effective part which follows it, have no place in the ordinary acting edition.

After what has been already said, it seems to me that it is not necessary to enter into any minute analysis of the passage quoted to show that Shakspere's intention was that Othello should have on the stage an epileptic seizure. This, I believe, is the only passage in which Shakspere uses the word "epilepsy," but in King Lear, Act ii., Scene 2, Kent says to those who laugh constrainedly at his somewhat sarcastic speeches:—

> A plague upon your epileptic visage.

To all appearance this is a mode of expression derived from the analogy between a fixed unnatural laugh and an epileptic contortion of the facial muscles. The fact that Shakspere puts this word "epilepsy" in the mouth of Iago in describing to Cassio the condition of Othello, and the words which he subsequently uses to convey to Cassio the impression that violence might follow an interruption of the fit, indicate that the dramatist meant, by Othello's falling into a trance, a condition very different from a simple unconsciousness. But there are in the passage other evidences of the poet's intention in this matter. In their order I shall indicate these briefly. Shakspere represents incoherence as a decided prelude to the occurrence of the fit, and the fifty words immediately preceding the fall in a trance are a jumble of phrases suggested by a loose retrospection of Iago's disclosures. At first Othello mistakes the nature of the muscular spasm from which he suffers. He expresses himself as trembling at the nature of the confession which he has just heard, and immediately before his fall he says, "It is not words that shake me thus." I have already said that the soliloquy of Iago over the body of the Moor sufficiently indicates the existence of his absolute unconsciousness; but if confirmation were needed, it would be found in the entrance of Cassio, which, if Othello had been cognisant of it, would have occasioned in him a terrible increase of mental commotion un-harmonious with the progress of the

tragedy. The entrance of Cassio during the climax of Iago's villany has no meaning, except in so far as it enhances the dramatic effect of the Moor's prostration, to which I have already referred. The originator of all Othello's troubles is represented by the dramatist as audibly exulting in the completion of his design; and the innocent passive agent of them, against whom Othello harbours the most murderous sentiments, passes across the stage without awakening in him the slightest evidence of perception. There can be no doubt that Shakspere's intention was that both these incidents should minister to a powerful dramatic effect, of which the absolute unconsciousness of Othello was the necessary condition. Iago is anxious that Cassio should withdraw before Othello regains consciousness, and he states the effects of interfering with the course of the fit in such terms as to leave no reasonable doubt that the "epilepsy" which the dramatist had in his mind was no other than the falling sickness. It might be advanced that Iago's avowed anticipation of violence as a consequence of interference with the natural progress of the seizure was designed to account, by anticipation, for the unrestrained fury which Othello, independently of his epilepsy, would have shown on coming to himself in the presence of Cassio. It seems to me, however, that a subtle touch of the dramatist has shown conclusively that Iago himself had a keen sense of the danger which he laboured under on the awakening of Othello from his "trance." After a significant inquiry as to whether the Moor had not hurt his head, followed by a few tentative suggestions, the result of which was not reassuring to Iago, he goes on to say to Othello:—

> *Stand you awhile apart;*
> *Confine yourself but in a patient list.*
> Whilst you were *here*, o'erwhelmed with your grief,
> (A passion most unsuiting such a man),
> Cassio came hither. I shifted him away,
> And laid good 'scuse upon your *ecstasy*.

Iago, evidently remembering the throttling which he had already received from Othello, desires to keep a safe distance between the Moor and himself at a time which he had confessed to Cassio was one of imminent danger. He consequently directs Othello to go to a distance, and the words, "whilst you were *here*," indicate that Iago remains in the place from which the Moor has risen. The use of the word,

"ecstasy," which Iago employs in speaking to the Moor himself, shows that he really believes the seizure of Othello to have been one different from a mere swoon—by being closely associated with madness—the words "madness" and "ecstasy" being, more or less synonymous in Shakspere's use of them. It is still further shown by what follows that Iago found it necessary to be cautious in assuming that Othello's mind had so far regained its balance as to make his proximity safe; and it is only when Othello states coherently his intention to continue his bloody work of retribution that Iago is reassured. Then, as if expressing an opinion as to Othello's restoration from his epilepsy, he says—

That's not amiss.
But yet keep time in all. Will you withdraw?

To me, then, it appears evident that Iago spoke so as to indicate the poet's intention, when he told Cassio that Othello was prostrate with epilepsy; that the term was meant to convey the same meaning as that which educated persons would gather from it at the present time; that comparison of "Othello" with "Julius Cæsar" shows the probability of a simple psychological motive in Shakspere's employment of epileptic seizures; and, finally, that the epilepsy of Othello, and the unconsciousness which accompanies it are synchronous with the extreme success of the villany of Iago, and that they form an essential and artistic feature in the development of the tragedy.

The Comparative Mortality of Different Classes of Patients in Asylums. By T. A. Chapman, M.D., Medical Superintendent of the Hereford County and City Asylum.

In the Journal of "Mental Science" for April, 1877, I published a note on this subject, and had to regret that the conclusions deduced were drawn from comparatively so small a number of cases, that some further statistics on the subject would be necessary to show how far the figures then given could be depended upon.

It occurred to me to secure the statistics of several other Asylums to form an aggregate for this purpose, and found three other Asylums who have supplied me with the necessary statistics. Several others promised to do so, but from various reasons the returns have not been received. The

numbers are again small, and the results would be again open to exception on that ground, did it not happen that they agree very closely in their main features with those given in April, 1877; so that though the more minute accuracy to be obtained from larger numbers is still desirable, the results in their main outlines are sufficiently definite.

I have to express my thanks to the Superintendents of the Worcester, Carmarthen and Abergavenny Asylums for the trouble taken by them in making the returns. The figures are those for the year 1878; a classified list of patients was drawn out at the beginning of that year, and at its end those who died during the year were noted on the list.

The classification is the same as adopted in 1877. The following Table gives the figures for 1878 for comparison with the Table 5 of my first notes :—

TABLE 1.

Showing the Number and percentages of Deaths occurring among different classes of Patients in Four Asylums during the year 1878.

Classes of Patients.	Numbers Resident January 1st, 1878.			Deaths During 1878.			Percentage of Deaths on Number Resident.			Death Rate Corrected to Average Number Resident.		
	M.	F.	Tot.	M.	F.	Tot.	M.	F.	Tot.	M.	F.	Tot.
Probably Curable Cases	45	69	114	1	4	5	2·22	5·78	4·39	3·1	8·1	6·2
Congenital Cases:—Free from Epilepsy ..	113	91	204	3	2	5	2·68	2·20	2·45	2·8	2·3	2·6
Congenital Cases:—With Epilepsy	35	39	74	2	1	3	5·71	2·51	4·05	5·9	2·6	4·3
Epileptics(non-congenital)	132	102	234	15	4	19	11·36	3·92	8·09	12·1	4·1	8·6
Organic Brain Disease:—General Paralysis ..	50	11	61	19	2	21	38·0	18·18	32·78	57·0	27·3	49·2
Organic Brain Diseases:—Other forms	37	34	71	12	12	24	32·43	35·29	33·80	38·9	42·3	40·7
Chronic Insanity	546	665	1211	26	29	55	4·78	4·36	4·54	5·0	4·5	4·7
Totals ..	958	1011	1969	78	54	132	8·14	5·34	6·70	8·8	5·8	7·2
All except Epileptics and Paralytics	704	825	1529	30	35	65	4·26	4·24	4·25	4·4	4·4	4·4
Average Mortality in the Four Asylums for 1878, calculated on the Average Number Resident										11·8	6·3	9·0

For greater convenience of comparison I repeat the percentages from my paper of 1877, beside those of the present returns in the following

TABLE 2.

Percentage of Deaths on average Numbers resident in different classes of Patients.

Classes of Patients.	Hereford Asylum, 1873—1876.			Four Asylums, 1878.		
	M.	F.	Total.	M.	F,	Total.
Probably Curable Cases	3·4	7·1	6·0	3·1	8·1	6·2
Congenital Cases { Free from Epilepsy	1·9	1·7	1·8	2·8	2·3	2·6
Congenital Cases { With Epilepsy	8·2	4·7	6·8	5·9	2·6	4·3
Epileptics (non congenital)	12·4	3·2	9·0	12·1	4·1	8·6
Organic Brain Disease { General Paralysis ..	75·0	50·0	68·0	57·0	27·3	49·2
Organic Brain Disease { Other forms	26·5	—	18·0	38·9	42·3	40·7
Chronic Insanity	4·7	5·7	5·3	5·0	4·5	4·7
Totals	7·5	5·4	6·5	8·8	5·8	7·2
All except Paralytics and Epileptics ..	3·8	5·4	4·7	4·4	4·4	4·4
Average Mortality for these Asylums (*i.e.*, including Admissions of the Year)	9·32	6·74	8·00	11·8	6·3	9·0

Whilst in my last paper on this subject I merely advanced these figures as presenting material suggestive of further research, I think I am now entitled, by the agreement of the second series with the first, to draw some conclusions as to the actual rates of mortality that prevail among different classes of patients. There is one disturbing cause in the 1878 figures, the elimination of which would probably bring the figures to a very close agreement; this is the fact that the female mortality for 1878 in the Worcester Asylum was extremely low, viz., 4·0 per cent., which is less than two-thirds of the average female mortality of that Asylum, and as the Worcester figures form a large proportion of the total, this seriously diminishes the percentages of mortality among females in the above Table. This low mortality of females at Worcester for 1878 appears to have affected all classes of patients, and it may be of interest to append the actual mortality in each class of female patients at Worcester for comparison with the above figures.

TABLE III.

Mortality percentage among female patients in the Worcester Asylum during 1878 on total residents (compare with third column Table I.)

Curable Cases	4·0
Congenital Cases...	3·2
„ Epileptics	0·0
Epileptics Non-Congenital	0·0
General Paralysis...	0·0
Other forms of Brain Disease	24·0
Chronic Cases	2·0
Total	3·0
Including Admissions of Year	4·0

The only deduction seriously disturbed by this accidental aberration of the Worcester female mortality is that the female chronic patients have a greater mortality than the males, according to all the other, than the Worcester figures. With them the females have the less mortality. Of course, had the figures been drawn from a wider area, such accidental deviations from the normal would have been eliminated; but I believe the figures present only this one serious deviation, requiring such an allowance to be made for it.

The returns also showed the ages of the patients and the duration of residence. The numbers are, of course, too small for the tabulation of these facts to give very accurate results. They present, however, some points of interest, and I consequently allude to them in the following notes as to each class of patients.

The Recent Curable Cases—In both series the female mortality is more than double that of the males. Before attaching much importance to this it should be remembered that coarse cerebral disease is much commoner among males than among females, and that where it does occur among females it is of much obscurer type, and apt at first to be classified among the curable cases.

Such, at least, was the case with the one contribution to the mortality in this class made by Hereford. The patient classed at the beginning of the year as recent and curable died of brain disease, from which she unquestionably had all the time suffered. The mortality among curable cases is but little greater than that of chronic cases, and below the average mortality; so that it does not swell the mortality of the short residents.

The number (114) is too small to afford anything trustworthy as to mortality according to age, which is, however, as below :—

	Under 50.		Over 50.	
	M.	F.	M.	F.
Curable cases ...	29	57	16	12
Deaths ...	0	4	1	0
Percentages ...	0	7·0	6·0	0

The Congenital (non-epileptic) Cases show a larger mortality than in the Hereford series; the males a greater mortality than the females.

The mortality according to age is—

	Under 50.			Over 50.		
	M.	F.	Total.	M.	F.	Total.
Cases ...	92	64	156	21	27	48
Deaths ...	2	—	2	1	2	3
Percentage ...	2·2	—	1·3	4·8	7·4	6·1

Figures very little in excess of those of the general population. As to the duration of residence, the figures are :—

	Cases.			Deaths.		
	M.	F.	Total.	M.	F.	Total.
Under 5 years' residence	52	43	95	1	0	1
5 to 10 „ „	42	24	66	2	0	2
Over 10 „ „	19	26	45	0	2	2

As in the Hereford series, the epileptics show a comparatively high mortality, acquired epilepsy being much more fatal than the congenital form; and the remarkable circum-

stance is distinctly confirmed that epilepsy is much more fatal in males than females—twice as much so in the congenital form, and from three to four times in the acquired form.

Congenital Epilepsy.—Classified according to age. The figures are:—

	Under 50.			Over 50.		
	M.	F.	Total.	M.	F.	Total.
Cases ...	33	37	70	2	2	4
Deaths ...	2	—	2	—	1	1
Percentage ...	6·0	—	2·9	—	50·	25·

All the deaths occurred among residents of over three years' duration.

Acquired Epilepsy.—Classified according to age.

	Under 50.			Over 50.		
	M.	F.	Total.	M.	F.	Total.
Cases ...	108	91	199	24	11	35
Deaths ...	12	3	15	3	1	4
Percentage ...	11·1	3·3	7·5	12·5	9·0	11·3

According to duration of residence:—

	Cases.			Mortality per Cent.		
	M.	F.	Total.	M.	F.	Total.
Under 2 years	38	21	59	2·6	—	1·9
2 to 5 years	43	32	75	16·6	9·0	13·3
5 to 10 years	30	26	56	10·0	—	5·4
Over 10 years	21	23	44	19·0	4·8	11·4

The excess of male deaths is marked at all ages and at all durations of residence.

The non-viability of epileptics leads to one remarkable feature in these figures—namely, the very small proportion of cases at the higher ages. This is especially so among the congenital cases, only a fractional number exceeding fifty years of age; but it is also marked among the acquired epileptics, and is only less than it is, no doubt, because epilepsy is often acquired at an advanced age. As compared with other classes of cases, it appears that the percentages that exceed fifty years of age are as under:—

	Percentage of cases above 50 years of age.
Curable Cases	24·
Congenital Cases	23·
Brain Disease { G.P.	26·
Brain Disease { Other	57·
Chronic Insanity	48·
Acquired Epilepsy	15·
Congenital Epilepsy	5·3

The large proportion in the case of chronic insanity is, of course, due to their low mortality leaving many survivors to the higher ages. In the case of the miscellaneous brain diseases the large proportion of aged cases is due to the number of senile forms of disease.

The General Paralytics show, so far as the small number may be trusted, a much greater mortality among males than females, a mortality gradually less with increasing age, and also with increased duration of residence.

The figures are as under:—

General paralytics classified as to age:—

	Under 30.		30-40.		40-50.		50-60.		Over 60.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Cases ...	4	—	16	4	17	4	11	3	2	—
Deaths ...	3	—	9	—	4	2	2	—	1	—

Classified as to duration of residence.

	Under 1 Year.		1-2 Years.		2-3 Years.		Over 3 Years.	
	M.	F.	M.	F.	M.	F.	M.	F.
Cases ...	20	4	12	1	4	2	14	4
Deaths ...	10	1	7	—	1	—	1	1

The other forms of Brain Disease, no doubt, contain very various forms of disease, and the total numbers are small. They resemble the general paralytics in having a greater mortality during the earlier years of residence, but are precisely the reverse in the mortality increasing with the age of the patients.

BRAIN DISEASES.

	Age under 50.		Over 50.	
	M.	F.	M.	F.
Cases ...	15	15	22	19
Deaths ...	3	2	9	10

	Under 2 Years' Residence.		Over 2 Years' Residence.	
	M.	F.	M.	F.
Cases ...	22	19	15	15
Deaths ...	10	8	2	4

Those aged over fifty, and less than two years' residence are—

	M.	F.
Cases	17	10
Deaths	8	7

Chronic Insanity.—We now come to the chronic cases, which are sufficiently numerous to render analysis more trustworthy. Though entered as chronic cases, they are simply the residue after the preceding classes have been eliminated, and, no doubt, present very varying mental conditions, and still more varying histories. They are not all, or even largely, acute cases of mania or melancholia become chronic, but include many cases of various forms of insidious mental decay that would be classified as mania for want of a better name, but that have really no close relationship to acute mania.

The females have a lower mortality than the males, but this is due, as already noted, to the low female mortality of the Worcester Asylum.

The mortality increases steadily with age, and diminishes with duration of residence. The first five years' residence, indeed, have so high a mortality as almost to force the conclusion that some cases of brain disease have been classified with them, chiefly, probably, cases of senile dementia. The tables, indeed, prove that the mortality during the early years of residence is derived from persons of the higher ages, who are, therefore, already aged on admission.

The high mortality among males of 3-5 years' residence is distributed among all the ages, and if it is not a deviation due to chance among small numbers, it must be due to slow and obscure forms of brain disease that must have been classified as chronic insanity, because their slowness appeared to eliminate the diagnosis of cerebral disease.

The one Hereford contribution to this figure favours this supposition, being a case of senile atrophy due to atheroma.

Chronic Insanity.—Classified according to age.

	Under 30.		30-40.		40-50.		50-60.		60-70.		Over 70.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Cases...	53	41	124	118	137	146	104	146	80	131	48	83
Deaths	1	—	3	1	4	6	3	2	9	6	6	14
Per ct.	1·06		1·65		3·53		2·0		7·15		15·27	

Classified according to duration of residence.

	Under 1 Year.		1-2		2-3.		3-5.		5-10.		10-15.		15–20		Over 20.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Cases	49	63	53	62	74	61	85	85	140	191	81	100	25	55	39	48
Deaths	5	6	3	4	2	4	10	2	4	4	1	4	1	1	—	4
Per ct.	9·9		6·08		4·44		7·06		2·42		2·76		2·50		4·59	

Under sixty years of age and over five years' residence there are 443 cases with six deaths, a mortality of 1·35 per cent., which is about the mean mortality of the general population from 40-45 years of age. Under five years' residence and over sixty years of age the numbers are 127 with 22 deaths, a mortality of 17·3 per cent.

In the different asylums the mortality ranges for cases under sixty years of age from 0·79 to 2·57, and for cases over sixty from 6·44 to 15·00.

The Physiological Action of Alcohol in its Relationship to Animal Heat, and its influence upon the vaso-motor Nervous System. By W. Bevan Lewis, L.R.C.P., Lond., Senior Assist. Medical Officer, West Riding Asylum.

The physiological action of Alcohol upon thermogenesis has been the subject of much dispute, and its effects upon tissue metamorphosis is still a moot point with many authorities in Therapeutics.

As regards large doses of Alcohol, the general belief appears to tend in the direction pointed out by Wood.* When discussing the physiological effects of Alcohol, he makes the following statement:—

"That the antipyretic action of Alcohol is not exerted through the nervous system was proved by Binz, who found that the drug acted powerfully upon the fever of animals after cervical section of the spinal cord, and even prevented the *post-mortem* rise of temperature. It would appear to be a necessary corollary to this that *alcohol in very large doses lowers temperature by directly checking tissue metamorphosis.*"

According to this line of argument, Wood infers that the antipyretic effect of Alcohol is attended with an absolute

* "Treatise on Therapeutics," by H. C. Wood, M.D., 1st Edition, 1874.

lessened formation of heat. The equalisation of temperature in the animal body is due, in great measure, in healthy conditions, to the fact that the *fresh heat formation* is directly compensatory in amount for the heat *lost or dissipated.* When lessened tissue metamorphosis coincides with the maintenance of an equable temperature, a change in the vasomotor regulative centres must be admitted to explain the persistence of a normal temperature; in other words, compensatory heat retention occurs through the agency of the capillary vessels. Supposing, then, that in the normal condition, where the balance between fresh heat formation and heat discharge is exactly maintained, the action of a large dose of Alcohol is brought into play. We shall then get a lessened heat formation as the result of diminished tissue change, whilst the discharge of heat from the body surface remains normal or exceeds the normal amount—hence the body necessarily falls in temperature. This is, as I understand, the assumption of Wood in his deductions from the statement made by Binz. If, however, it can be shown that parallel with a decline of temperature the *absolute heat formation* is *increased* rather than diminished, and this fall of body temperature is also coincident with a greatly increased discharge of heat from the body, the formula becomes much more complex, and the accuracy of the deductions drawn by Wood rendered very dubious. No less an authority than the late Prof. Parkes thus states his dissent from the generally received views that Alcohol lessens tissue change :—"The experiments, already referred to by Count Wollowicz and myself, prove that the metamorphosis of the nitrogenous tissues is in no way interfered with by dietetic doses (of Alcohol). Whether the carbonic acid is really lessened may be also questioned."* We must conclude that the action of *dietetic* doses of Alcohol and the *large* doses spoken of by Binz upon the nutritive processes, must produce diametrically opposite effects to reconcile the discrepancy apparent between the views of Binz, Parkes, and Wollowicz, and it will therefore be interesting from this point of view to consider the action of large and small doses of the drug upon the formation and maintenance of animal heat.

As yet my experiments have been limited wholly to animals, yet I conceive they will prove worthy of consideration, since any addition to our knowledge of the physiological action of so universal an article of dietetics as Alcohol must prove of interest to all my readers. The interest universally

* "Practical Hygiene," 4th Edition, page 275.

shown in articles by our leading physicians in recent numbers of the "Contemporary Review" upon the physiological action of Alcohol proves also how keen is the mental appetite for information upon this very engrossing subject by the public at large, and I take it therefore as the distinct duty of every physician to obtain as clear an insight into the action of Alcohol as possible, and to base his treatment by its agency upon as exact a knowledge of its physiological effects—as far as this can be acquired.

The method adopted was similar to that employed in certain calorimetric observations upon the action of several potent alkaloids in the production of animal heat, which were detailed in the sixth volume of the West Riding Asylum Medical Reports. The calorimeter made use of was the improved form recommended by Dr. Burdon Sanderson, and the animals experimented upon were chiefly rabbits. The animals were chosen in a state of perfect health, weighed carefully, and one or more calorimetric observations made in the normal condition prior to the administration of the drug, the intervals of each observation extending over a quarter of an hour. Alcohol was then given (carefully diluted), being introduced into the animal's stomach by a simple arrangement whereby rapidity and efficiency were secured without entailing any but the slightest amount of discomfort to the animal. A description of the calorimeter and the method of estimating by its means the amount of heat generated in the animal body may be found in most text books devoted to this branch of enquiry, as also in the article alluded to in the West Riding Asylum Reports. I shall, therefore, not digress so far as to enter upon these points, but shall proceed at once to discuss the results of observations tabulated below, and which are chosen from a large number of experiments as typical of the action of Alcohol upon thermogenesis when given in doses of varying strength.

In the following Table we observe the effects a *small dose* (one and a half drachms) of alcohol upon a plump healthy rabbit weighing 2363 grammes. During the first quarter of an hour's interval the total heat formation was 3387 gram. units, equivalent to 1·4 units of heat for each gramme of body weight. Observation 3 gives the maximum heat formation at 6412, *i.e.*, 2·7 heat units per gramme of body weight, whilst the three succeeding observations registered between 1·18 and 1·7 heat units. For the present we will pass over the central column of Table 1, as we may more conveniently

consider the amount abstracted from or added to the temperature of the animal's body at a subsequent period.

TABLE 1.

(Observations Extending over ¼ of an Hour).*

Rabbit treated with 90 mins. Alcohol.

Weight of Animal, 2363 Grms.	Total Heat Formation.	Loss or Gain in Body Temperature.	Fresh Heat Formation per Gramme of Body Weight.
Observation--1	3387	— 1745	1·4
,, 2	2243	— 323	0·95
,, 3	6412	+ 1745	2·7
,, 4	2800	Nil.	1·18
,, 5	4014	+ 215	1·7
,, 6	4014	+ 215	1·7

Let us now observe the effect of a larger dose of alcohol (120 mins.), noting the fact that the animal now experimented upon weighs 633 grammes less than in the preceding case, a fact which must be taken into consideration in estimating the potency of the dose administered.

TABLE 2.

(Observations ¼ hour each).

Rabbit given 120 mins. Alcohol.

Weight of Animal, 1730 Grms.	Total Heat Formation.	Loss or Gain in Body Temperature.	Fresh Heat Formation per Gramme of Body Weight.
Observation--1	Too minute for registry.	— 1837	Too minute for registry.
,, 2	3693	— 132	2·135
,, 3	3693	— 132	2·135
,, 4	4153	+ 187	2·4
,, 5	4058	+ 161	2·34
,, 6	4058	+ 161	2·34

* In each column the figures represent *gramme-units of heat.*

Here the heat produced is still more marked than in the first experiment. The primary effect seen during the first observation (Table 2) is very noteworthy. So small is the heat formation during this interval that the delicate thermometer used (extremely sensitive and registering 1-20ths of a degree Fah.) failed to detect any change in the temperature of the Calorimeter. The second and third intervals, however, register 2·135 heat units for each gramme of body weight, the last three observations giving 2·4, 2·34 and 2·34 respectively. The experiment, therefore, extended over a period of one and a half hours from the exhibition of the two-drachm dose of Alcohol. In order to appreciate these results, we must enquire into the heat production normal to the same animal and prior to the administration of Alcohol. (See Table 3).

TABLE 3.

(Observations, ¼ hour each).

Rabbit in Normal Condition.

Weight of Animal, 1730 Grms.	Total Heat Formation.	Loss or Gain in Body Temperature.	Fresh Heat Formation per Gramme of Body Weight.
Observation--1	1649	+ 98	0·96
„ 2	1649	+ 98	0·96
„ 3	1649	+ 98	0·96
„ 4	1649	+ 98	0·96
„ 5	1109	— 478	0·64
„ 6	1855	Nil.	1·08

A glance at this Table will suffice to show how much smaller the heat formation is in the normal condition and how greatly exaggerated it becomes upon the exhibition of Alcohol. The contrast may be, perhaps, shown more clearly and strikingly by arranging the estimates of heat units per gramme of body weight in parallel columns. (See Table 4.)

To illustrate the effects of still larger doses of Alcohol the observations taken in the case of an animal weighing 2033 grms. are chosen as typical of the action of these larger doses. The animal experimented upon was given 180

minims of Alcohol, and, as in all former experiments, each Calorimetric observation extended over an interval of a quarter of an hour.

TABLE 4.

Gramme Units of Heat formed per Gramme of Body Weight.

	Animal in Normal Condition.	Animal after 120 Mins. of Alcohol.
Observation—1	0·96	Inappreciable.
„ 2	0·96	2·135
„ 3	0·96	2·135
„ 4	0·96	2·4
„ 5	0·64	2·34
„ 6	1·08	2·34

The following Table gives a summary of the results of nine consecutive observations :—

TABLE 5.

(Observations, ¼ hour each).

Rabbit treated with 180 mins. Alcohol.

Weight of Animal, 2033 Grms.	Total Heat Formation.	Loss or Gain in Body Temperature.	Units of Heat formed per Gramme of Body Weight.
Observation 1	2701	— 2151	1·32
„ 2	4792	— 1974	2·35
„ 3	4934	— 936	2·43
„ 4	4064	— 462	2·
„ 5	8720	— 379	4·28
„ 6	3910	+ 352	1·92
„ 7	3910	+ 352	1·92
„ 8	3910	+ 352	1·92
„ 9	3910	+ 352	1·92

The normal amount of heat formed each quarter of an hour in this animal, prior to the administration of Alcohol, varied between 0·45 and 1·53 heat units per gramme of body weight. Under the influence of 180 minims of Alcohol, however, this heat product is steadily augmented, until in the fifth interval succeeding the exhibition of the drug it rises to 4·28 heat units, representing an aggregate formation of 8720 gram. units of heat. It cannot fail to strike the attention on glancing over the results in Table 5 that the augmentation in the heat product is not only strongly marked, but most persistent after these larger doses of Alcohol. Thus, in consulting Table 7, where but 40 mins. of Alcohol have been given, the heat increment reaches its height during the *second interval*, and declines after the first half hour; in Table 1, where 90 mins. of Alcohol was the amount administered, the highest heat product was registered during the *third interval*, beginning to fall after three quarters of an hour. In Table 2, representing the results of 120 mins. of Alcohol, the "heat climax" was obtained during the *fourth interval*, and fell but *very slowly*, remaining at 2·34 (*i.e.*, only ·06 below the heat climax) until one hour and a half had elapsed from the administration of the Alcohol. A still stronger dose of Alcohol, *i.e.*, 180 minims being given in our last case (Table 5), the heat climax of 4·28 was registered at the termination of the *fifth interval*, one hour and a quarter from the administration of the dose. This relationship between the time of the attainment of the heat climax and the dose of the drug administered was so striking and so constant a feature that it deserves to be separately tabulated (Table 6.)

TABLE 6.

Illustration of the Relationship between the Period of Highest Heat Formation and the Dose of Alcohol.

Dose of Alcohol given.	Period of Heat Climax.	Time elapsed since Administration of Alcohol.
40 Minims.	During Second Interval	½ hour.
90 Minims.	,, Third ,,	¾ hour.
120 Minims.	,, Fourth ,,	1 hour.
180 Minims.	,, Fifth ,,	1¼ hours.

The earliest indication obtained of the action of small doses of the drug always pointed in the direction of a primary check to heat formation, this action being scarcely recognisable when larger doses were administered. In the latter case, if it occurs, the effect is too fugitive to be detected except in a much shorter interval after administration of the alcohol, whilst when small doses are given there is a distinct tendency to protraction of this stage. Thus, in a rabbit weighing 2662 grammes, to which but 40 mins. of alcohol had been given, the primary check to thermogenesis occurs during the first quarter of an hour, when 0·46 heat units were registered, the healthy standard in this animal being 0·95.

TABLE 7.

(Observations, ¼ hour).

Rabbit given 40 minims of Alcohol.

Weight of Animal, 2662 Grms.	Total Heat Formation.	Loss or Gain in Body Temperature.	Fresh Heat Formation per Gramme of Body Weight.
Observation 1	1224	— 1575	0·46
„ 2	7118	— 814	2·7
„ 3	3428	+ 814	1·3
„ 4	4060	— 119	1·5

Passing now from the total amount of heat formation as the results of the injection of Alcohol, to the effect on the animal's temperature we find the primary effect one of marked loss of body heat during the first interval. In the *normal condition* the animal to which 40 mins. of Alcohol were given (Table 7) obtained an increment of 173 heat units to its body temperature during the first interval, lost an equivalent amount during the next, and again gained 421 heat units during the third interval. Such slight variations are usual in the normal state of the animal, however carefully the Calorimetric Observations are performed, as in no case can the condition of the animal in the calorimeter be made perfectly natural to it. So slight, however, are these variations that they have a scarcely recognisable effect upon the general accuracy of experimental results. Glancing at the middle column of Table 7, we observe that 40 mins. of

Alcohol had the effect of depriving the animal of 1575 heat units during the first quarter of an hour, and of 814 in the next interval, the third period being marked by an increment of 814. This loss from the body temperature *increases in amount with the dose*—thus after 180 mins. the loss during the first interval was 2151, and during the second 1974 (Table 5). If we compare the effects of the smaller and larger doses of 40 and 120 mins. in Tables 7 and 5 we perceive that the body temperature is not only reduced far more in degree by the larger dose, but the reduction in temperature is more persistent, being protracted up to the fifth interval—a period of 1¼ hours after administration of the drug. As a further illustration of this point we will compare the results of 120 mins. of Alcohol upon body temperature with the slight variations already referred to as occasionally produced by the somewhat unnatural condition of the animal. (See Table 8).

TABLE 8.

(Observations, ¼ hour).

Loss or Gain in Body Temperature expressed in heat units.

Weight of Animal, 1730 Grms.	Rabbit in perfect health and normal state.	Same Animal after 120 mins. Alcohol.
Observation—1	+ 98	— 1837
„ 2	+ 98	— 132
„ 3	+ 98	— 132
„ 4	+ 98	+ 186
„ 5	— 477	+ 161
„ 6	Nil.	+ 161

These results tabulated above speak for themselves. One point worthy of notice, however, is that the slight increment added to the animal's temperature in the normal state goes on up to the fourth interval, and then the balance becomes almost re-established by a sudden fall of 477 heat units, whilst in the sixth interval the temperature becomes stationary, no registry of rise or fall having been obtained. This sudden restitution of the normal temperature is probably indicative

solely of vaso-motor changes. I need scarcely call attention to the very pronounced and protracted fall of body temperature shown in Table 5, amounting in the aggregate to 5902 heat units in the course of an hour and a quarter from administration of the spirit. In these larger doses the normal of temperature is reached by a tardy process of small increments, there being no tendency shown to the rather sudden re-establishment of the balance, which is usually apparent after the administration of small doses of the drug.

In all our cases we observe one very important point demonstrated, viz:—that the injection of Alcohol is invariably followed by an augmentation of the total heat formation, and that though thermogenesis may receive a slight check as a primary effect of the Alcohol, the ultimate issue is invariably the *formation* and *discharge* of a much increased heat product often double or treble the normal amount.

During the earlier stages of its operation, and whilst this primary check to heat formation is more or less recognisable the greatest diminution in body temperature occurs,* whilst the attempt at restitution of the normal temperature is almost always coincident with the registry of the heat climax.†

It will prove of interest to compare the results obtained from the administration of Chloral with those we have just recounted. For this purpose I add a table abstracted from my former article in the West Riding Asylum Reports (Vol. 6), somewhat modified for more ready comparison.

TABLE 9.

(Observations, ½ hour).

Rabbit treated with 20 grains of Chloral.

	Total Heat Formation.	Loss or Gain in Body Temperature.	Heat units formed per Gramme of Body Weight.
Observation—1	10815	— 1008	7·7
„ 2	10815	— 1008	7·7

* See Table 2, Obs. 1; also Table 7, Obs. 1.

† See Table 1, Obs. 3; also Table 2, Obs. 4; also Table 5, Obs. 5.

TABLE 10.

(Observations, ½ hour).

Rabbit treated with 17 grains of Chloral.

	Total Heat Formation.	Loss or Gain in Body Temperature.	Heat units formed per Gramme of Body Weight.
Observation—1	Inappreciable	— 542	Inappreciable
„ 2	16907	— 825	11·3
„ 3	15344	— 1922	10·3

Here we note a greatly increased heat formation together with a large evolution from the body temperature. The first experiment in which 20 grains had been administered exhibits, in the course of one hour, 2016 heat units abstracted from the animal's temperature, represented by a fall of fully 6·3° Fah.

The effect of Chloral therefore upon thermogenesis is closely allied to that of Alcohol, a fact which we cannot afford to lose sight of in the administration of these drugs as remedial agents. The *extreme vaso-motor paresis* produced by the combination of these two remedies has been a fact palpable to my mind for many years. In the treatment of insanity I have had frequent opportunities of observing the distressing symptoms which follow the administration of Alcoholic stimulants upon those who have taken Chloral, in doses of twenty or thirty grains. A throbbing headache, causing very great distress, marked flushing of the face, and a strong chloral odour in the breath are the prominent symptoms, and these may be often noted for 18 to 24 hours after the administration of the Chloral. These symptoms may be present in any subject, but are less marked in younger patients—whilst in later life the cephalalgia and general malaise accompanying extensive and severe vaso-motor paresis are so distressing that I now make a point of never combining them in the treatment of such cases.

To summarise the results of these researches into the effect of Alcohol upon thermogenesis :—

1. A primary check to heat formation most marked and protracted when *small doses* of Alcohol have been given.

2. A pronounced fall in body temperature most marked during the first quarter of an hour, and therefore coincident with the primary check to thermogenesis (1).

3. A greatly increased heat formation varying directly with the strength of the dose administered.

4. This increased heat product is manifested over a more prolonged period after larger doses of Alcohol.

5. This increase in the heat product is gradually augmented from time to time until the heat climax is reached, a period usually coincident with the registry of the lowest body temperature.

6. The heat climax is more protracted or postponed, and also greatest in degree with the stronger doses of Alcohol.

7. The greatest loss of heat units from the temperature occurring, as before stated, during the first interval, subsequent intervals are marked by a still progressive loss, which, however, becomes less towards the period of heat climax, when a restitution of the *norma* of temperature begins.

8. With *small* doses of Alcohol this restitution of body temperature is usually sudden or comparatively rapid in operation; after *large* doses the return to the *norma* of temperature is spread over a longer period, being extremely tardy when very large doses have been administered.

9. These observations are directly in antagonism to the views already quoted, that "*Alcohol in very large doses lowers temperature by directly checking tissue metamorphosis.*"

10. The above considerations appear to justify the conclusion that the *characteristic* action of Alcohol is that of greatly increasing the heat product, whilst dispersion of the fresh formed heat is facilitated by peripheral vaso-motor paresis, and that it is only in very small doses that we get a temporary lowering of heat formation.

11. The action of Chloral, as affecting thermogenesis, being similar to that of Alcohol, we obtain by their combination a most powerful vaso-motor depressant, and one which should be used with great caution.

The Chemical Constitution of Cerebrine. By Edward G. Geoghegan, M.D., Assistant Medical Officer, Gloucester County Asylum.

To judge from the sparse literature of the subject, cerebrine has not often been chemically studied. The first work of any importance was done by W. Müller.* Müller obtained the body, which he called "Cerebrine," free from phosphorus by digesting the brain with baryta-water. He also analysed it, and proposed the formula, C_{34} H_{33} NO_6.

Liebreich† afterwards regarded it as a decomposition product of his "Protagon." But subsequently Diakonow‡ and Hoppe-Seyler§ proved that in all probability protagon was a mere mixture of cerebrine and lecithine. Quite lately Gamgee and Blankenhorn‖ have reasserted Liebreich's view.

Distribution of Cerebrine.—Cerebrine is to be found in considerable quantities only in the substance of the brain and nerves, and mainly or exclusively in the white matter.¶ A body which from its reactions may be considered as identical with Müller and Diakonow's cerebrine, was found by Hoppe-Seyler** in pus corpuscles; and I extracted it from the electric organ of the torpedo fish, and from a cancer of the liver. But the quantity in these latter cases was small.

Cerebrine appears to be very resistent to decomposition, as I found it in a brain that had rotted for four months.

Method of obtaining Cerebrine, and its Composition.—The brain is passed through a mincing-machine, and after treatment with cold alcohol and æther, it is boiled in alcohol. The alcohol is filtered off while hot, and the filtrate on cooling deposits crystals of cerebrine impurified by cholesterine and lecithine. The cholesterine is removed by æther, and then the precipitate is boiled with baryta-water, the superfluous baryta precipitated by carbonic acid, and the cerebrine dissolved in hot absolute alcohol, and re-deposited when the alcohol cools. Obtained in this manner, it has all the characteristics described in Hoppe-Seyler's *Handbuch der Physiol. Chemie.* (pp. 195-7).

* Müller, "Ann. der Chem. und Pharm." Band 105, p. 365.
† Virchow's "Archiv." Bd. 39, 1867.
‡ "Centralblatt für die Med. Wiss," 1868, No. 7.
§ "Med. Chem. Untersuchungen," p. 487.
‖ "Journal of Physiology."
¶ Petrowski, "Pflüger's Archiv," viii. 367.
** Loc. cit.

I analysed the body, and obtained the following figures :—

I.—0·2455 substance gave CO_2 = 0·621 and H_2O = 0.2395.
II.—0·1740 substance gave CO_2 = 0·439 H_2O = 0.171.
III.—0·1315 substance gave CO_2 = 0·332, H_2O = 0.129.
IV.—0·1685 substance gave CO_2 = 0·4240, H_2O = 0.1668.

And Nitrogen (Dumas' method) :—

I.—0·400 gave N = 0·0057.
II.—0·367 gave N = 0·0053.

Reduced to percentages :—

	I.	II.	III.	IV.	Average.
C	68·68	68·82	68·84	68·68	68.47
H	10·84	10·90	10·90	11·10	10.90
N	1·42	1·46			1.44

From these figures we may deduce the empirical formula, C_{57} H_{110} N_2 O_{25} for cerebrine. The quantity of nitrogen is only about a quarter of that found by Müller.

Decomposition products of Cerebrine.—Liebreich* mentions having found a saccharine substance by boiling his protagon with dilute mineral acids. Afterwards Diakonow† broke up cerebrine with sulphuric acid into a saccharine substance which turned polarised light to the left but did not ferment, and other substances which he did not investigate further.

After several experiments on the decomposition of cerebrine with different re-agents, I selected the following method :—

Mix cerebrine in a mortar with concentrated sulphuric acid. At first a clear dark yellow solution is obtained, with a fibrous mass floating on its surface. This mass is at first light brown, but changes to a dark purple, and finally becomes black. The change in colour seems to be due to the attraction of moisture, as I found it did not take place in a dried atmosphere. In mixing, acid fumes in small quantity are developed, probably sulphurous acid. The solution and the floating mass are then brought into about ten times their volume of water, which gives a pinkish and then a white colour to the insoluble substance. The fluid is put on a water bath till the insoluble parts adhere together, and then allowed to cool, and filtered. I shall return presently to the body in solution. The insoluble body it is impossible to obtain quite free from sulphuric acid by filtration, as it swells up when washed, and cannot be further filtered. So I extracted it with æther, distilled off the æther, and boiled the body several times with water till the acid reaction disappeared. During

* Virchow's "Archiv," Bd. 39, 1867.
† Loc. cit.

this process it melts and adheres to the bottom of the vessel, and, on cooling, remains as a hard brittle body.

The substance obtained in this manner, which forms about 0·85 of cerebrine, I have called "cetylid." It is most soluble in chloroform, and easily soluble in æther and hot alcohol. It contains no nitrogen, and I have estimated its melting point to be between 62° and 65° C.

Combustion analyses of the powdered substances, dried at 105° C, give the following results:—

I.—0·210 substance gives CO_9 = 0·524, H_20 = 0·2025
II.—0·198 substance gives CO_2 = 0·493, H_20 = 0·1970
III.—0·177 substance gives CO_9 = 0·4435 H_20 = 0·1695.

Or in percentages:—

	C.	H.
1.—	68·05	10·73
II.—	67·97	11·04
III.—	67·92	10·65
Average	67·98	10·81

I then heated the compound cetylid in a platinum crucible with solid caustic potash. But as the mixture threw up such a froth, I introduced the substance with potash into a wide glass tube, one end of which was closed and the other drawn out into a long neck. This tube was then heated in an oil bath, while the neck opened under mercury to collect any gases which might develope. Gas began developing at about 170° C, but was most rapid between 270° and 300°. When the gas bubbles ceased, there was a yellowish white mass in the tube, and a little carbonaceous substance. This was put in water, and the solution extracted with æther. The quantity obtained in this way was very small, and appears to be undecomposed cetylid, as the melting point and solubility agree.

The aqueous solution was next acidulated with hydrochloric acid, and a second time extracted with æther. This time the æther took up a large quantity of the substance. After distilling off the æther, I dissolved the residue in hot alcohol, and let it cool very gradually. In 24 hours I obtained white, leaf-like, twisted crystals. The melting point of these crystals lay between 59·5° and 62° C, and the melted substance began to solidify at 57·5°. The alcoholic solution has a weak acid reaction. The crystals I again dissolved in alcohol, and added carbonate of sodium, evaporated to dryness, extracted with absolute alcohol, filtered, distilled off the alcohol, and dissolved the solid in a little hot water. When cold, the solution formed a firm soap. Adding a little more

water, and heating, by addition of chloride of barium, I converted the sodium compound into the barium salt, and analysed this salt when well washed and dried at 115° C. The melting point, crystallization from alcohol, and the firm gelatinous consistency of the sodium salt, all rendered it highly probable that I had to deal with palmitic acid; and this conjecture was confirmed by the analysis:—

0·169 substance gave H_2O = 0,145 CO_2 = 0.367 and Ba = 0·0355

	Palmitic Acid.	Analysis.
H	9·58 p.c	9.54 p.c.
C	59·35 „	59·20 „
Ba	21·17 „	21·12 „

In reading through Müller's article a second time, it struck me that a decomposition product, which he obtained by boiling cerebrine with concentrated nitric acid, was very similar to palmitic acid, and on reckoning out his figures I found they agreed exactly with the composition of palmitic acid. Naturally no value could be attached to this result, obtained with nitric acid; and, indeed, Müller does not seem to have entertained any notion of the nature of the substance.

The gases which are developed, when cetylid is melted with potash, consisted of CH_4 11·44 p.c.; H_2 50·73 p.c.; N 37·83. From the presence of hydrogen, and the formation of palmitic acid, we may conclude that the alcohol of the palmitic acid, *i.e.*, cetyl alcohol, is contained in cetylid; and further, from development of methan, we might assume that the cetyl alcohol is combined with a hydrocarbon of the composition, say of glycogen (C_6 H_{10} O_5). This supposition demands 68·39 p.c. C, and 10·88 p.c. H, in cetylid. I found an average of 67·98 p.c. C, and 10·88 p.c. H. The empirical formula would then be C_{22} H_{42} O_5.

The decomposition of cetylid into cetyl alcohol and hydrocarbon, and combination of one molecule of water, might be expressed by the equation, C_{22} H_{42} O_5 + H_2 O = C_{16} H_{34} O (cetyl-alcohol) + C_6 H_{10} O_5. There is, however, no proof of the presence of a hydrocarbon, further than the development of marsh gas. But on any other supposition it must be shown that such compounds exist, of the same composition as that I found for cetylid; and its decomposition is inexplicable to me on any other supposition than the one I have given.

The formation of palmitic acid from cetyl alcohol is expressed by C_{16} H_{34} O + KOH = $2H_2$ + C_{16} H_{31} KO_2.

With the object of further investigating the constitution of cetylid, I heated it with water in a sealed tube up to

200° C. After eight hours I opened the tube, but there was no pressure of gas. By this means I obtained a substance, which melts at a temperature below 100° C, and a strongly acid, yellowish fluid, which at first had a sharp disagreeable empyreumatic odour. The distillate from this fluid reduced nitrate of silver (formic acid?). Nothing was extracted by æther from the residual fluid, which had an acid reaction, and formed, with barium, an insoluble crystalline precipitate of unknown composition.

In the decomposition of cerebrine by sulphuric acid, its nitrogen appears to be partly at least given off as free ammonia, as I obtained a precipitate of ammonium-platinum-chloride, on adding chloride of platinum to the sulphuric solution.

I have determined the acid nature of the copper-reducing substance, which is produced at the same time and dissolves in water. It forms salts which resist the action of carbonic acid. It appears to deflect polarised light to the left, in the same manner as the substances which are obtained from mucine, chondrine, and the urine of animals poisoned with chloral and carbonic oxide. I have failed as yet to obtain it pure.

This last acid appears in many ways to resemble Uramidocamphoglycuronic acid, described by Schmiedeberg and Meyer* in the last number of "Hoppe Seyler's Journal."

On the Connection between the Mental State and Inequality of the Pupils in General Paralysis. By Francis Wyatt Thurnam, M.B., Assistant Medical Officer, Bristol Borough Asylum.

Out of 946 cases admitted into the Bristol Asylum since January, 1870, symptoms of General Paralysis of the Insane have existed in 116; of which 83 occurred in males, and 33 in females, the admissions being respectively 440 males and 506 females.

The percentages thus are—

18·863 amongst Insane Males.
6·521 „ „ Females.
12·162 „ „ of both Sexes.

* O. Schmiedeberg and H. Meyer, Ueber Stoffwechselprodukte nach Campher fütterung, "Zeitschrift für physiol. Chemie." III., 6, p. 451, Nov. 7, 1879.

Out of these 116 cases of general paralysis, inequality of the pupils is noted as having occurred in 73 instances, or nearly two-thirds (it probably existed in a far larger proportion), and in 52 of these, the side of the larger or smaller pupil is stated in addition. The mental state, *i.e.* exaltation or depression, is also recorded in 46 of these 52 cases; in the remaining six cases the statements are too vague (or mental state too varying) to be depended upon, consisting as they do of notes in the case books by various observers.

In 24 of the 73 cases in which inequality was noted, the left pupil was the larger, while the right was larger in 28; not stated in 21. Of those cases (28) in which the right was the larger pupil, depression of the mental faculties was noted in 18, or 64·3 per cent., exaltation occurred in 7, or 25 per cent. Of the instances (24) where the left pupil was larger than the right, exaltation accompanied this condition in 15, or 62·5 per cent.; depression in 6, or 25 per cent.

From the above figures it appears that—

Exaltation with left pupil larger, or depression with right pupil larger	Occurred in	63·4	per cent.
An opposite condition	Ditto	25·	ditto.
Varying, or doubtful	Ditto	11·6	ditto.
Total ...		100·0	

Occasionally the state of the pupils has been observed to change with the alteration in the mental state; or it may vary without any such corresponding change being apparent.

The result of these statements goes to show that depression is generally associated with a state of dilatation of the right pupil and contraction of the left (as compared with each other). On the contrary a state of mental exaltation, as a rule, accompanies contraction of the right pupil; the left being dilated, or at any rate larger.

In nearly all the cases mere difference in size has been noted, without stating (except as compared with its fellow) whether either pupil were contracted or dilated.

Contraction of both pupils is often a somewhat persistent and early symptom, while dilatation may supervene later on. There is a general opinion that in General Paralysis the diseased mental state is first shown by depression, and that exalted ideas are more frequent in a later stage. Perhaps we may infer that those cases in which the right pupil was

the larger and the mental state was one of depression, were in an early stage, while those in which an opposite condition obtained were further advanced.

Now, a state of contraction of the pupil is to be attributed to irritation of the third nerve, and dilatation to paralysis of the same. In a disease depending on a progressive disorganisation of the brain, such as that now under consideration, irritation is the first stage, while paralysis points to the disease being further advanced. Supposing then the disease to have commenced upon the left side of the brain, we should get contraction of the left pupil and mental depression. As the disease advanced we should get contraction of the right pupil from irritation, and subsequent dilatation of the left from paralysis of the third nerve, along with exalted ideas.

The following physio-pathological observations may be of interest as bearing on the subject, and I would draw special attention to the fact of the intimate connection of the origin of the *third nerve* with the *corpora-quadrigemina*, which, as will be seen, are proved by Ferrier's experiments to be the centre for *reflex expression of the emotions*.

The third pair of cerebral nerves (oculo-motor, which also supplies the circular fibres of the iris), arises from a central nucleus situated in the median line below the upper part of the aqueduct of sylvius, and is thus in close relation with the corpora-quadrigemina.

Now the experiments of Ferrier* and others prove that the optic lobes are the centre of co-ordination between retinal impressions and movements of the iris. Destruction of the corpora-quadrigemina causes dilatation of the pupil, while mechanical irritation of its deeper layers causes contraction.

Electrical irritation of the surface of the anterior tubercle of the corpora-quadrigemina of one side causes wide dilatation of the opposite pupil, followed almost immediately by dilatation of the pupil on the same side. There would thus appear to be some partial discussation in the nucleus of origin of the third nerve, or in the optic lobes. Irritation of the corpora-quadrigemina does not produce dilatation of the pupils, if the cervical sympathetic nerves have been divided, owing to paralysis of the fibres which supply the radiating muscular fibres of the iris. The dilatation is probably an indication of sensory irritation; sudden painful

* "On the Functions of the Brain," 1876.

stimulation of sensory nerves being often associated with such a condition.

The corpora-quadrigemina, especially their deeper parts, seem to be centres chiefly concerned in the reflex expression of emotions, and this curious coincidence becomes of special interest in reference to the supposed connection between mental states and the condition of the pupil in general paralysis.

In Ferrier's experiments* the expression of emotion, generally pain or fear, was the result of an impression travelling along an afferent nerve (the hemispheres having been removed). But we may imagine an impression of a mental idea occurring in a supposed "centre of depression or exaltation" to be conducted to this reflex centre, viz., the optic lobes, and thence to be reflected along the third nerve as an expression of emotion, perceptible in the state of the pupil.

The phenomena of aphasia illustrate in a remarkable manner the functional difference between the cerebral hemispheres on either side, and show that in ordinary individuals the education of centres of volitional movement takes place in the left hemisphere. It has been noticed, however, that in some cases aphasia has been associated with left hemiplegia in left handed persons, in whom we may conclude that from some hereditary or other tendencies the centre, on the right side, had been the favoured one.

Ferrier calls attention to the less volitional and greater automatic power of the right hemisphere, and Bastian† believes that the "irritatory action of the left hemisphere, in relation to speech movements, is connected with a very slight precedence in its development, as compared with that of the other hemisphere; and that this precedence is itself a more or less remote consequence of an inherited tendency to right handedness."

Now as we find localisation of the speech "centre" in the third frontal (Broca's) convolution of the left side to be the result of education, hereditary tendency and habit; so without necessarily imagining "centres" for each particular mental state, we may imagine that cerebration, accompanied

* The condition of the iris was also found to be affected on irritation of the cerebellum, which causes contraction of the pupils, more particularly of that on the same side as the irritation. The pupils dilate on stimulation of the posterior half of the superior and middle frontal convolutions, and contract on stimulation of the angular gyrus.

† In his "Paralysis from Brain Disease," 1875.

by mental exaltation, takes place habitually in one hemisphere, while ideas, attended by depression, have their origin in the other. M. Voisin* supposes the existence of a "centre of grandeur," which his reviewer, in the "Journal of Mental Science," for Oct., 1879, calls a "fanciful idea," considering that grandiose delusions are the result of unchecked or uncompared ideas. To this objection, it might be replied, by those who are prepared to go so far, that the unchecked ideas were the result of paralysis of a centre of depression, which, in healthy states of the mental apparatus, exercises a comparing or inhibitory faculty as regards the centre of grandeur.

Without committing myself to asserting the existence of a "centre of grandeur," I would point out that an investigation of the facts, as set forth in this paper, would tend to support M. Voisin's theory, and would point to the possible existence of a "centre of exaltation" in the right hemisphere, the irritation of which may give rise to grandiose delusions or exalted ideas (especially when, through paralysis of the comparing power, or opposite centre, it is unchecked in its action), while mental states of an opposite nature may be produced by irritation of a "centre of depression" on the left side of the brain.

Since the foregoing remarks were written, my attention has been called to Austin's† observations on this point; which I find also noticed by Sankey,‡ who does not, however, confirm them; but I was not at the time aware that previous observations had been recorded or made public.

It will be seen that my independent observations tend to confirm those of Austin, who writes as follows—"When the right pupil has been the more affected, the *general* tone of the delusions has been melancholic; and with a more implicated left pupil, their *usual* complexion has been elated, and their colouring gorgeous." To this rule he finds but two exceptions in a hundred "unselected" cases. In writing of the pathology of this disease, he concludes "that the ganglia of pleasure and pain are on different sides of the encephalon," and localises the seat of painful and pleasurable emotions in the right and left optic thalamus respectively; he also considers that disease of these great central ganglia is to be regarded as the primary physical cause of the malady. The

* In his "Traité de la Paralysie Générale des Aliénés," 1879.
† "On General Paralysis," 1859.
‡ "Lectures on Mental Diseases," 1866.

writer of this paper is not inclined to localise the "centres of exaltation or depression" beyond placing them in the respective hemispheres. He also considers that these "centres," which are equivalent to "ganglia of pleasurable or painful emotion," are situated on opposite sides of the brain to those given by Mr. Austin.

In attempting to explain this discrepancy of the conclusions arrived at, it at once appears that in Mr. Austin's case the more disorganised the right thalamus was, the more surely was this condition associated with melancholia, and *vice versâ*. Now in the author's opinion this state would be attended by paralysis of the function of the part, while if the disease were less advanced in the opposite centre the function of the latter would predominate. Such complete disorganisation as occurred in Mr. Austin's cases points to the fact of the stage of irritation, which might be attended by increased functional activity being past. The cortical changes, upon which the mental phenomena are generally considered to depend, seem to have escaped observation, as they are barely alluded to by Austin; while from more recent accounts of *post mortem* observations he would appear to have exaggerated the amount and importance of the affection of the basal ganglia.

It must be borne in mind that the cases from which the statistical portion of this paper has been compiled are taken as recorded in the case books, and that the object of the paper is suggestive rather than assertive.

CLINICAL NOTES AND CASES.

Spontaneous Hypnotism. By Sidney Coupland, M.D., Physician to the Middlesex Hospital.

The following case, which fell under my notice in the summer of 1878, seems to me to present points of unusual interest. Its subject is a young friend of mine, and I saw the case very often during its strange and varied progress:—

C. N., æt 12, is the second child of Mr. A. N., a man of robust frame, considerable intellectual power, and of a rather finely balanced nervous temperament, who has enjoyed good health, but is subject to attacks of "nervous headache." Of his five brothers two died from "rapid consumption;" the others are alive and well. His wife, who was somewhat strumous in youth, has enjoyed fairly vigorous health

in adult life. She has an unusually strong will, and has always exercised considerable firmness with her children. None of them have ever been spoilt by fondness, nor yielded to, but all have been brought up with remarkable judiciousness and kindness. To make the history complete, I will add a few of the mental and physical characteristics of these children. 1. A. æt. 14; a studious, silent boy, yet entering thoroughly into school sports. He strongly resembles his father in his nervous temperament, and, like him, suffers from headaches. When younger he was a somnambulist. 2. C., the subject of this paper, 12 years old, is said to be "extremely sensitive and girlish, of most affectionate disposition, idolising his mother; high-principled, possessed of considerable inventive and imaginative faculty, frequently saying comical and witty things. He is very fond of games." He is most painstaking and ever anxious to succeed in study. He is also very fond of drawing, inheriting a talent for this from his father, who is no mean artist. A year ago he had an attack of so-called "brain-fever." It followed on some unusual work at school, which he had sat up at night to finish. For three weeks he is said to have been in a state of stupor, constantly complaining of his head, and moaning; but never delirious. He became also very pale. 3. F. æt. 9; is a cheerful, lively, high-spirited and impulsive boy. In the spring of 1878 he had what was called "congestion of the brain," and was delirious for two nights; and in January, 1879, he had a similar attack, marked by insomnia, delirium, night-terrors, &c. 4. P. æt 8; very excitable, but has had no nervous attacks. His head is rather ricketty in shape, the forehead very prominent. 5. M. æt. 6; an excitable but otherwise ordinary girl. 6. *Infant*, born in February 1879—a girl; who quite recently (October 1879) was seriously ill for a month with cerebral symptoms. All the children are of nervous temperament, but well grown, and as physically healthy as most children.

At the beginning of August 1878, the parents brought their four eldest children to London on a visit. The house they inhabited, situated in a busy thoroughfare, was not only noisy without, but was also full of noise within, several other children dwelling there. The boy C. was taken to many of the London sights, and he was allowed to sit up late at night. The effect of this continual excitement culminated in about a fortnight. On August 24th, after spending the morning at the Tower, he came to some relatives to play cricket in the afternoon. Extremely fond of the game, he had looked forward to this visit with pleasure, and was greatly disappointed at the unfavourable weather putting a stop to the proposed game. His manner at first was unnatural; he appeared unusually quiet and taciturn; but as the day wore on his normal vivacity returned, and he acted in charades with great spirit, becoming, if anything, too much excited over them. That night he did not sleep, and in the morning (the 25th) complained of headache. His mother treated it as a "bilious

attack," and kept him in bed until noon. But the headache lasted; he was listless and indifferent to surrounding matters; and he lost his appetite. He passed another sleepless night, and during the whole of the 26th still complained of headache. Some castor-oil, given in the morning, acted once, but without relieving the headache. In the evening he began to wander in his talk. He had lain on the sofa all day, quiet and listless as before, but now he began to say strange and nonsensical things. Mr Owen, of Cleveland Square, was sent for, and prescribed for him; and desired that he should be kept in bed. All night he was delirious, talking incessantly, but not yet showing any violent movements. When seen next morning he exhibited much emotional disturbance, constantly bursting into tears without apparent reason; quite unlike his normal cheerful mood. The headache persisted, and it had become worse towards evening. There was now added to a wild and rambling talk about all kinds of topics, much restlessness, throwing himself about the bed. But he was conscious and recognised every one who came to see him. He slept during the night at times, but his sleep was disturbed, and full of restless activity, tossing himself from side to side, wandering and chattering nonsense.

At 8 a.m., on the 28th, he got out of bed, and rushed downstairs; and when brought back, began to cry a great deal. Mr Owen saw him twice during this day, and found his condition decidedly worse. For now the boy began to have periods of hallucination and active delirium, and to cease to recognise any of his relatives, except his mother. He fancied he was playing cricket or football, or hunting, fishing, swimming, and with each changing fancy he altered his actions to suit his words, becoming greatly excited in every part he played. He was passing through, in fact, a succession of active dreams, from which he could be recalled by his mother's voice, only to relapse again after a brief rational interval of quiet, into the previous abnormal state. Mr Owen administered chloroform at one time, but as the boy's pulse seemed to fail somewhat, he judged it wiser to desist.

No change for the better had taken place next morning. Indeed, the periods of mental excitability and failure to recognise his friends were even more prolonged and more marked. Among other things, he chattered about history, asking such questions as "Who were the Norman Kings?" then immediately himself supplying the answer, and so on, giving dates with remarkable rapidity and correctness. Then passing to other of his lessons, *e.g.*, grammar and parsing, he would take up all sorts of points, giving questions and answers himself, not waiting for replies from bystanders, but invariably addressing his remarks to a hypothetical "Bill." Every now and again the noise of a passing train, as it steamed out of the railway terminus close by the house, would attract his attention; he would then pause in his rapid talk, listen attentively, and then imitating the sound, break off into a laugh. The slightest noise would thus

attract him; and all the while he was invariably cheerful, with hardly a break in his incessant chatter, laughter &c.

In the evening of the 29th, Dr. Thomas Barlow met Mr. Owen in consultation, and he has supplied me with the following note:—

"The boy was lying in bed without any sign of distress; skin cool and soft, tongue quite clean, pulse 100, rather small, but without the slightest irregularity. He was breathing naturally. His head was cool; there was no tenderness and no retraction; no photophobia; the pupils were equal. He had a slight 'nervous' cough, for which nothing could be found to account, either in the pharynx or thorax. The abdomen was not at all retracted. The patient was a fairly nourished, clear-skinned, blue-eyed, light-haired boy with an intelligent but slightly feminine cast of face. He was a little pale, but there was nothing more to be said about his bodily condition. The boy was imitating the puff of an engine when I first saw him. When told to put out his tongue he said the word 'Tongue, tongue,' a great many times, and at length put it out. When listening to his chest he told me I wanted to 'get inside.' When told to get out of bed, he immediately ran to the corner of the room to look, as he said, for his bat; and not finding it went through the pantomime of imaginary bowling. When told to get in bed again he jumped in with the greatest alacrity. Within a quarter of an hour the boy gave a sigh, and then came a lucid interval. The change was very remarkable. The expression of the boy's face altered completely. He recognised Mr. Owen, but could not tell his name, until he was told it began with O, and then he recalled it. He could not remember anything about his dreams, except that he had dreamt, and they were not pleasant dreams. When asked again to get up, he raised himself, but immediately put his hand to his forehead and moaned, but he could give no account, when asked, of the position or character of his pain. In a few minutes he relapsed again, and began to talk about cricket; but he was quiet directly his mother spoke to him. As to diagnosis, it appeared to me that organic brain disease of any coarse kind could be excluded; that his sex was against the symptoms being those of simple hysteria, and that, on the whole, if one must give it a name, 'acute mania' would describe it best. The lad had an ice-bag to his head, some bromide of potassium, and chloral. The only suggestion I had to make was to withhold the chloral, and to back up Mr. Owen's exceedingly wise advice that he should be removed to a hospital if the condition continued."

Throughout that night, and during the whole of the next day, there was no change in his condition. He recognised the difference between his uncle and his father, but did not know them; the one he called "that man with a beard," the other, "another man." He could hardly be said to have any lucid intervals, for although, after a pro-

longed active state of dreaming, in which he would call "Bill" to "come and play" with him, and in which if his mother answered he would address her as "Bill,"—he could yet be recalled by her, and leave off and go to sleep on her direction—a sleep of the briefest duration, followed by a relapse into the previous condition.

On the 31st Mr. Owen writes to Dr. Barlow:—"There is no decided improvement in the boy. In spite of quiet nights he awakes and continues excited during the day. As the urine is very copious and of a low specific gravity, I have discontinued the sedative, except at night, and have just begun sesquicarbonate of ammonia with quinine and tinct. sumbul. The pulse, temperature, &c., are as you found them."

It was on the afternoon of this day that, on returning to town, I first saw the patient. I found him lying in bed, with his eyes open, and with a strange, unnatural expression, talking rapidly but coherently about some exploits which he was going through with a supposed companion, and all the time actively moving his limbs in imitation of the actions which he imagined he was performing. I have no notes of this first visit. Suffice it to say that the condition in which I found him was similar to that described above, and to that noted in detail on subsequent occasions.

Sept. 1st.—The exalted mental activity continued with fewer and briefer intervals of lucidity. During the early morning he had been saying that "we must go to church, for it is Sunday," and had then said, "Bill, what shall we do?" "Now I am going to preach a sermon," and forthwith gave out the text, and delivered a discourse, perfectly fluently and well connected, arranging his subjects under different heads—"firstly," "secondly," &c. Then, "let's have some hymns;" and he commenced singing, also with perfect correctness, various hymns. Later on he would again meet "Bill," and say, "What shall we do?" "Play cricket?" "No, we can't play to-day, because it is Sunday." "Let us go hunting?" "No, we must not to-day; we will to-morrow." And so on with other proposals which he made to himself, and repeated the answers which he supposed to hear from "Bill," always coming to the conclusion that they must not play that day. Every now and again, as before, the whistling or puffing of the engines would evoke an imitation of the noise from him.

I met Mr. Owen, and we agreed that it would be well if the lad could be transferred to quieter surroundings, and it was therefore arranged that he should be taken to a relative's house at Kensington that afternoon. On the way there he was quiet, and seemed to enjoy the drive.

When he saw his cousins, he did not recognise them. "That lady," he said, when speaking of either of them. He was certainly quieter under his new conditions, but sometimes wandered in his talk. At night he was given a draught containing ten grains each of

bromide of potassium and chloral, with ten drops of tincture of hyoscyamus.

Sept. 2nd.—He fell asleep about an hour after taking the draught; and half an hour later was very restless, and when he awoke, two hours afterwards, he complained that he had had disagreeable dreams. About 1 a.m. he awoke, calling out for help to save him from drowning. Some milk was given him, and after a long interval he went to sleep again. But at three o'clock he awoke in a very excited state, crying out that he thought his mother was dying. Again he fell asleep for about another hour, and on waking still complained of "horrible dreams." He now remained awake for some time, then dosed, and awoke again at 7.30, remaining quite lucid for fifteen minutes, when he relapsed into a rambling state till 9.20. He had complained much of pain in his head all night and in the morning.

I saw him at 9.45 a.m. He was then rational and lucid; he knew me, and his face had lost the expressionless character it had when he was in the abnormal state. Temp. 98°, pulse 96, soft, compressible and rather small. He complained of giddiness when he sat up in bed, and if he got out of bed he reeled about. The pulmonary and cardiac sounds were natural.

I had not been in the room ten minutes before he closed his eyes, kept perfectly quiet for a short time, and then called, "Bill, what shall we do to-day?" "Go out fishing?" "No!" "Game of cricket?" "Yes." "Bill! Bill!! Bill!!! Let's go to —— cricket ground." Then "I am going to play for the 'Gentlemen.'" "They have to go in." Thereupon he commences imitating the act of bowling. "Three out, middle pegs, running!" "Caught!" "that's four!" (imitating bowling and catching, and then clapping his hands). Then almost at once, after more imitation of bowling, he cried, "All out for a duck!" "I have to go in now." And now he imitates violently and extravagantly the act of batting, as if he were batting every ball sent him as hard as he could. Then he calls out, "That's 50, 120, 130, 160;" and then "that's 200 to me!" "Send me a good ball—that's 300, 350 . . . all the other men are out. Carried my bat out!" He ran up this score with great rapidity, hardly pausing to take breath between the different numbers he called out. Having achieved this feat, he says—"I am so tired, Bill! Come and lie down in the grass, just there." It is noteworthy that in all his various imaginary games he sooner "gets tired" now than before. After a brief interval he laughs, and moving his arm and leg says, "Shall we sing, Bill?" He begins to sing, and then becoming more excited in his movements his mother says, "I would not do that . . ." to which he responds at once, "all right, ma," and leaves off. This is always the case. His mother seems to be the only person who can recall him at all. But almost immediately he says, "Lady Clare!" and proceeds to sing a verse of that song, first in a low voice and then

in a high-pitched falsetto. Then, seeing his mother, he breaks off, laughs idiotically and says, "Cricket-balls?" the name by which he denotes grapes. Having some given to him, he says, pointing to me, "Give one to this gentleman," and then, "Now I am going to sleep," turns over on to his side, and in a few minutes waked up perfectly natural and lucid. He now recognised me as well as his mother, and appeared to have no knowledge at all of what had passed during the last quarter of an hour. In this way invariably does the paroxysm begin and terminate. An apparent short but heavy sleep, of only two or three minutes' duration, always preceded the onset of one of his "active dreams," and always intervened between its termination and his restoration to complete lucidity. Frequently too, when in the midst of a paroxysm, he is told to go to sleep; especially when his mother tells him to, it had the effect of abruptly terminating the abnormal state. I give this as one example out of many which occurred several times during the preceding days, and were frequently repeated subsequently.

The same evening (Sept. 2), his mother reported that he remained much as I had left him in the morning up till half-past four o'clock. The "delirium" seemed to take a quieter phase than hitherto. He expressed himself as too tired to play, and talked quietly, amusing himself with making animals out of his handkerchief, throwing them into the air, or else repeating some of his lessons. It was noticed for the first time in the course of the morning that he stammered in his speech; and this increased so much that about 3 p.m. he could not utter a word without stammering. He therefore talked less, and amused himself with quietly playing with a toy-boat. His manner had thus been unnaturally childish, but he was more lucid throughout the day than at any time before in the course of his illness. He took ample nourishment. The bowels were moved, motions offensive. Still he had had no sleep, and I thought that a warm bath might induce this better than the sedatives given on the previous night, for after taking them his face became very flushed, and the night was passed restlessly. Accordingly, at 8.30 p.m., I put him into a bath at about 90° F. He enjoyed it very much, and was quite rational whilst taking it, *e.g.*, instead of misplacing the terms "cold" and "hot," as he had previously done, he correctly remarked that it was "hot." He sweated freely after the bath, his face became much flushed, and he said that he felt very hot. Some iced milk was given him. But he did not long remain rational, for he had not been in bed a few minutes before he cried out, "Bill! cricket?" "No; too hot!" and then "Oh! the grass is quite hot!" "Let's go into the water;" and then, with a tone of disappointment, "That's hot, too!" Then he imagines himself as lying on the grass looking at a cricket match, and he frequently applauds the feats he observes. An ice-bag was applied to his head, and I left him at 9.45 p.m., when he had fallen into an apparently natural sleep.

There had been a fair amount of urine passed during the day. It was pale, of sp. grav. 1024, and deposited a large quantity of phosphates.

Sept. 3rd.—After a comparatively quiet night, in which he awoke at intervals, sometimes excitedly, complaining of his dreams, it was noticed that he spoke distinctly and without hesitation on first waking; but that afterwards he stammered much. He recognised me when I called in the morning, and stammered out a welcome. He also seemed to be at a loss for words; nor did he understand many. His head ached, and he described the sensation as that of "two little men knocking" inside his head, and asked me if I could stop them. He said without prompting, "It is F—'s birthday to-day," a perfectly correct statement. But seeing my watch, he said, stammering, "Is that the thing that tells you the time?" The pulse and temperature were unchanged, the urine was sp. grav. 1015, pale, with much phosphatic deposit.

During the day the "lucid intervals" were very brief; all the rest of the time he talked at random on various topics with his friend "Bill," and often became very excited. His stammering was very marked. Dr. Barlow, who saw him with me in the evening, thought there was some improvement. He agreed that the bath should be repeated, and suggested that his mother should try the effect of gaining his attention by reading aloud to him. This she did, and he seemed to like it, often repeating afterwards the stories she had read.

Sept. 4th.—His sleep at night was fitful, and disturbed with dreams. The stammering was even worse, and his hallucinations marked and frequent. To-day he had been telling tales frequently to "Bill," being "too tired to play," and the tales were mostly very coherent and finished, all invented at the time. At 7 p.m. I found him chattering volubly, and to quiet him, I asked him to rest and go to sleep. He had hold of my hand, and said he would not let me go. Then he fell fast asleep; in less than two minutes he was in profound torpor, breathing heavily. But a minute or two later the sleep was interrupted, he let fall my hand, turned over on to his side, laughed, and said, "Bill, we won't play to-day; I'm tired. Let's lie on the grass and I will tell you a tale." Then he began talking volubly, but without the least stammering, whilst he recounted a tale about a giant for some ten minutes, the account being perfectly connected, and frequently illustrated by his actions. As the climax of the story was reached, and he was becoming very excited, I asked his mother if she could quiet him, when she said, "Now try and go to sleep;" he addressed her as "Bill," and said, "Just a little more to finish it," and on he went again with the culminating episode of the giant's final feats and discomfitures. Still not ceasing, his mother once more essayed to quiet him, to which he replied that he had "only a very little more to finish it," and soon left off, turned over in the bed, fell

apparently fast asleep, again breathing heavily just as when he "went off," and in a minute or two awoke with a start, stared wildly about him, but was at once recalled by my voice. His stammering returned with his lucidity. During the day he had frequently transposed the meanings of terms, speaking of sovereigns as pennies, and thinking a penny to be a very valuable coin. Similar instances of transposition of words were frequently noticed. There was no change in his physical condition. The bath was repeated in the evening.

Sept. 5th.—The night was again restless, and he dreamt much. The headache also continued. He was ordered a mixture containing the bromides of potassium and ammonium, with tincture of henbane, to be taken every four hours. Again, during the day, as soon as he fell asleep, he commenced to dream actively, telling tales and acting the incidents in them. At one time, such a tale, told with great circumspection without the least hesitation, lasted for about half an hour. It was full of varied incidents, and he was relating it to his friend "Bill," as they were lying together in an imaginary grass-plot, "because it is too hot to play," and because "we are too tired," he said. At the close of the narration he said, "Now we will go to sleep." He did so, but awoke in great terror, screaming and starting, and for some time after complained of intense headache, always increased if the head was raised. That night I did not give him the bath, as it seemed on the previous evening to increase the pain in his head.

Sept. 6th.—He slept well from 8.30 p.m. to midnight, but then feared to sleep again because of dreaming. After that his sleep was very broken, and his head ached much. At 5 a.m. he awoke alarmed, and said he wanted to jump out of bed to run away from his dream; whilst on waking at 7 he was shouting, "Hurrah! I have killed so many of them." He never could recall any of these dreams; he only knew they troubled him, and even if questioned at once on waking, he could not say what it was that had excited him. Temp. 98·4, p. 112. Tongue clean.

He has been free from headache during the day:—"The two little men," he said, "are sitting in chairs." But as the day progressed he has appeared to be deaf, often requiring to be spoken to two or three times before he heard; and then turning his left ear to his interlocutor. At 6 p.m. I found that he could only hear a watch tick at $1\frac{1}{2}$ inch distant on the right side, and 8 inches on the left. Still he talked to me, and seemed quite as bright as he had been during the last few days. I was away from the house from 7 till 9 p.m., and on my return found that he had passed into another phase. About 7.30 he said that his ears pained him very much, and his head also. He then became almost suddenly completely deaf, and closing his eyes, relapsed into as marked a condition of altered consciousness as at any time during his illness; and this almost with-

out warning, for his faculties previously had been fairly bright ; he had even first remarked that it was Friday, and that he had been ill for a week and four days. Now, however, he knew no one, except his mother; spoke of me as "that gentleman," and of one of his cousins as "that lady," although a short time before he had been conversing with us. There were several other hallucinations. When roused he would shout in reply as a deaf person might. I determined again to place him in a bath, this time making it mildly tepid. The effect was striking. Perfectly oblivious of what was being done to him when he was put into it, he had not been there three minutes before he opened his eyes, recognised me, heard perfectly, answered naturally. His delusions and deafness left him, and he enjoyed the bath much.

Sept. 7th.—His manner seemed to grow more childish and imbecile ; some of his amusements were almost infantile.

Sept. 8th.—About 7.30 a.m. he suddenly closed his eyes, said, "I can't see," and began to cry. Then three hours later, whilst lying on the sofa, his eyes still shut, he abruptly ceased speaking, and became practically dumb. In spite of keeping his eyes firmly closed, he wrote several sentences, and even a complete letter in a fairly good hand. He recognised people by feeling their faces, and hearing only when spoken to in a loud voice. He had also been "dreaming" again more than once, and now in going through a game of cricket, instead of calling out the score, he wrote the figures down as they were made, and added up the total. His eyes seemed to be so firmly closed as to make it impossible for him to have been looking from under the eyelids. Once, whilst having his dinner, he opened his eyes suddenly and recognised his mother and myself; but as suddenly closed them again. He now became absolutely deaf. During the afternoon his childish amusement with dolls, which he had manufactured from handkerchiefs and tied on to a string, seemed to engross his attention. But he also —still with closed eyes—occupied himself with drawing grotesque figures and incidents on paper. The accuracy with which many of these rude sketches were made was astonishing.

At 7 p.m. Dr. Barlow and myself saw him. After passing his hands over Dr. Barlow's face he laughed and clapped his hands, and made a sign as of writing "B" in the air. During and after a warm bath he regained his speech and hearing. A little wine was given him, and half-an-hour afterwards he was crying very much with pain in his head, eyes and ears. Frequently he stopped abruptly in his crying, extended his limbs rigidly, and remained quite quiet. Then at the end of two or three minutes the rigidity relaxed, and he burst out crying again. We decided to discontinue the bromides and the ice bag; to continue the bath every night, and to give him wine in small quantities, and cod-liver oil.

Sept 9th.—Condition unchanged.

Sept. 10th.—Believing that if we could make the boy exert his own will we might get rid of all these strange vagaries, provided that at the

same time we could show him that he was not an invalid physically, and needed neither careful cherishing nor extraordinary sympathy, Dr. Barlow and I now made a radical change in his moral treatment and surroundings. We found him at 8.30 p.m. in bed, and in a most excited condition. He had laid out a doll's table, spread for a meal, ready for my arrival he said. Having these toys swept away, we asked to be left alone in the room with him. He was lying with his eyes closed, shouting excitedly, for he imagined himself to be taking part in a sea-fight. A pinch on the cheek elicited the cry, "I am wounded," and still he pursued his excited efforts, from which we could not rouse him. Then, getting him out of bed, in spite of his frantic struggles, we succeeded in making him stand up, and to walk with our guidance to the sofa. Still he remained oblivious of us, and, absorbed in the imaginary struggle, he continued to shout and fight. A wetted towel was now flapped in his face. In a few minutes he was awake, and himself again. It was notable that his face at once assumed an intelligent expression; the blank, half-childish, half-imbecile look left him. He could hear us talk, and spoke to us; asked for his mother, and cried petulantly because we firmly declined to let him see her. We led him back to the bed, on which he lay for some time sobbing and crying for his mother to be allowed to come in. We talked firmly and kindly to him, tried to show him the folly of his behaviour, and gradually he became more and more reconciled. In order to complete the impression and make him exert himself, we told him that he must get up and dress himself. This he did with some hesitation, after repeated encouragement. Then he walked down stairs unassisted, and came into the room where his mother and relatives were at supper. When upstairs with us he once or twice refused to speak, and now and then appeared to be deaf. But having duly explained to his relatives that no mention was to be made of his illness, and no notice taken of his appearance at the table as anything unusual, we got him to talk a little; sometimes with very marked stammering, but sometimes without any at all; and he could also hear what was said to him even in whispers. So rapid had been the transition from apparently hopeless fatuity to fair intelligence, that had I not witnessed it, I should not have deemed it possible. He sat there, pale, but natural-looking, and though somewhat subdued, not to say sheepish, casting now and then a sidelong glance at his medical tormentors, he was evidently "clothed and in his right mind." After saying good-night all round the rather large family circle, he went upstairs with us, undressed himself without assistance, and went to bed, and to sleep. We left him to himself, having had all the numerous signs of a sick chamber cleared away, and urged firm moral control.

As showing how completely he led a "double life" during the attack, I may mention that once, early in the case, he was given some pudding for his dinner. It was placed on a chair by the side of the

bed. He, however, went to sleep, met "Bill" in his dream, and proceeded to play a "game" with him. The "game" proved to be exhausting, and he suggested to "Bill" that they should have some refreshment. They agreed to this, and paid "ten shillings" for it. He then proceeded to eat the pudding on his own and "Bill's" behalf. When he awoke from this dream, the plate having been removed, he asked where his pudding was, for he was hungry. He said that he had not eaten it, but had left it on the chair when he went to sleep. Again, at a later period, when in one of his dreams, he suggested to "Bill" that they should "go to the cricket ground;" he asked for 6d. to pay for their admission, and held out his hand for it. His mother put the coin into his hand, but when he awoke and found it there, he could not make out how it had got into his hand, and concluded that it had dropped down "from above."

The subsequent history of the case may be very briefly disposed of. For some days he was remarkably quiet, almost sheepish, languid, and pale; but a few weeks spent at the seaside speedily improved his general health, and although he was subject to headaches, and frequently had bad dreams at night, his mental condition was far more stable. On his return home in October he was quite well, and remained so until the following January, when he was sent to school again. A reproof from the schoolmaster one day soon after returning, was followed by the lad falling into a state of stupor for several hours, so that he was taken home again. Since then he frequently dreams, and often complains of headache, but his general health remains good; and as for mental discipline, he is allowed to follow his bent in working at a school of art, and in doing such other lessons as he can without definite tasks being required of him. At times he seems capable of much application, at other times he will fail to comprehend even the simplest things. Occasionally he has severe headaches, which cannot be relieved; but he eats and sleeps well, and altogether his health has greatly improved.—Nov. 9th, 1879.

I have thus endeavoured to depict, as minutely as possible, the chief features of this case. Its nature was exceptional and puzzling. The child had strong neurotic tendencies, and had lapsed into the state after unusually prolonged mental excitement and diminished sleep. The idea of organic brain disease was early set aside. Pain and delirium without any of the concomitant phenomena of meningitis, cerebral tumour, &c., were the only symptoms that could indicate the presence of gross lesion. Then the idea of insanity came to the front, and as the days passed, and the condition varied in character, it seemed as if the brain were becoming more and more exhausted, and fears as to complete restoration to sanity arose. Still, through it all, and especially as the case wore on, we could not help

hoping that the condition might fall under hysteria, but hysteria of a strange and complex type; one's own knowledge at the time could not supply a parallel to the case in the multifarious manifestations of this condition, and it was notable that the phenomenon, which seems to be so constant a feature of the hysterical state, was absent. We more than once tested him for anæsthesia and never found a trace of it; nor was there any quivering of the eyelids.* Still, we could not help being struck by the aspect of the lad; and his general physique reminded me so strongly of a lad, who showed some of the sensory phenomena of hysteria to a marked degree—whose case is reported by Dr. Henry Thompson in the Clinical Society's Transactions (vol. xi., p. 31)—that I was led to favour the notion that this also was an example of hysteria of an unusual type. Dr. Barlow was also led to the same conclusion, and we determined, as a last resource, to make an effort to get the boy to exert his will.

There are several points in this case which are of psychological interest. I will briefly recapitulate some of them. (1) The mode of onset of the abnormal state, a brief and seemingly profound sleep passing into a stage of extreme excitement and unconsciousness of surroundings, the recovery from which to perfect lucidity was always ushered in by another brief sleep. (2) The connected chain of ideas that ran through all his delusions. The almost invariable address to "Bill" (which turned out afterwards to be the cognomen of a favourite school-fellow) to join him in the games, &c., which formed the staple of his second life. (3) The heightened acuity of the senses, especially hearing, during the attacks in his earlier days, followed later by the apparent blunting of them in the later stages. (4) The supervention of stammering in speech in the lucid intervals, and never in the delusions themselves. (5) The surprising power of writing, and sketching without the aid of sight, which so forcibly reminded one of the heightened powers of the mesmerised.

It will probably be said that if the same measures, which proved successful in the end, had been tried earlier, we should have cut short the disorder. I confess I am not quite sure of this; during the first week I think it might have been impossible to have so thoroughly turned the current of the perverted cerebral activity. Still, knowing what

* A somewhat analogous case has been published in the "Revue Mensuelle," April, 1879. [See next Case.—Eds.]

may sometimes be done with hysteria, it would be rash to speak positively.

[*Note by Dr. D. Hack Tuke.*—I think the foregoing case is of interest as illustrating one of those forms of mental disorders which in their main features closely resemble the state which, when artificially induced, is known as Hypnotism. In this Journal for April and July, 1866,* I drew attention to the remarkable parallelism between the symptoms of these two conditions—the spontaneous, as witnessed in some cases of insanity, and the artificial. I believe that some cases of quiet delusional insanity are of this class. Others, again, accompanied by excitement are, in the first instance, examples of active mania of the hysterical type, the consequence of partially localised brain exhaustion, and pass into a condition essentially the same as hypnotism, or sleep-waking, an expressive term to indicate that some of the cerebral centres are asleep and others wide awake.

Thus it is important to recognise their identity, because the kind of treatment required is at once suggested.

Dr. Coupland's case, which most alienists would classify under Hysteria or Hysterical Mania, but of which the most striking feature is no doubt the Spontaneous Hypnotism, is not only interesting as occurring in the male, but forms an excellent illustration of the success attending a distinctly psychical or moral method of treatment, founded upon arousing and directing the patient's will, the suspension of which is characteristic of the hypnotic state. The brain was, in consequence of mental excitement and the succeeding exhaustion, thrown into partial and irregular action; the healthy will had lost its command, and the reflex action of certain cerebral centres was no longer controlled.

The rapid change which sometimes occurs in the functional activity of the sense-organs is familiar enough to those who have witnessed hypnotic experiments—the complete temporary deafness, for example, and the remarkable inability to see; these functions being restored in an instant under certain well-known conditions. That which can thus be done artificially in the way of producing deafness and blindness, occurred spontaneously in Dr. Coupland's patient. Nothing, again, is more common than for a manufactured somnambule to enter into conversation with an imaginary being; a circumstance forming a striking feature in the foregoing case.

Had the late Mr. Braid treated this case, he would, in the first instance, have intensified the hypnotic state, and equalised the nervous sleep, thus obtaining a profound slumber and refreshing rest for the tired and excitable brain. Having done this he would have got the patient completely under his control when awake, would have regulated the disorderly cerebral action, and would have ended by re-

* "Artificial Insanity, chiefly in relation to Mental Pathology."

storing to the patient his lost will.* But although this systematic course of hypnotic treatment was not adopted by Drs. Coupland and Barlow, its most important element—that of mastering the patient in order to make him master of himself, and so arousing the dormant volition to control the reflex cerebral action—was done by them, and with marked success, when other means had failed. As to the name, "only make sure of the thing, call it what you will."]

A Case of Hysteria with Somnambulism. By M. Ernest Chambard ("Revue Mensuelle de Médecine et de Chirurgie," April, 1879).

This case shows some features common to the foregoing one, and evidently belongs to the same class. It is that of a young woman, 23 years old, who showed no hysterical tendency till the age of 20, when she received a severe mental shock by being witness to an attack of suicidal mania on the part of her mother, who was removed to the St. Anne Asylum. From that time she became *triste*, and complained of epigastric sensations. The developed attacks did not occur till three years later. She was a well-developed, chlorotic girl, subject to attacks of vomiting and precordial pain; ordinarily placid, she was yet emotional, but not delirious or excitable. She constantly dwelt on her mother's madness, and the scene she had then witnessed played a large part in her somnambulic state. She had no anæsthesia or analgesia; no ovarian tenderness or neuralgia. The somnambulic state was of two forms—the one simple, quiet sleep; the other accompanied by various nervous disturbances and by talking. They occurred spontaneously, and could also be provoked by pressure on the ovarian region, by closing the eyelids, &c., and she described their onset as accompanied by a sensation of some kind of a ball rising from the lower part of the abdomen to the throat and stifling her. Then she passed into deep sleep, in which she could be made to converse, to answer questions slowly, performing voluntary actions, but with diminished sensibility. The return to the normal state was as abrupt as the lapse from it, and either occurred spontaneously or by opening her eyes, blowing on the neck. After the attack she was quiet; complained of pain in the head and limbs, and appeared fatigued, retaining no recollection

* Such psychical treatment ought, no doubt, to be combined with the administration of an ample supply of nourishment.

of what she had passed through or done whilst in the hypnotic condition; a loss of memory that held also for the events immediately preceding her entrance into that state. Sometimes she was much surprised on waking not to find the tonic which she had drunk during the attack, and sharply accused the bystanders of having robbed her of it. Sometimes she was astonished to find herself sitting in a chair at some distance from the bed. The other kind of seizure took the form of delirium, in which she would hold conversations with imaginary individuals, and enact scenes she had passed through previously. By simply suggesting topics to her when in this state, anyone could start a long attack of this sort. It seems that every vivid moral impression, or even intellectual fatigue would give rise to a somnambulistic attack. Once the admission of an insane patient into the ward affected her so much, apparently by calling up the recollection of her mother's attack, that a few hours afterwards, whilst seated with her companions trying to work, but unable to do so, she suddenly closed her eyes, fell into a lethargic state lasting a quarter of an hour. An attack could also be induced by wearying her with conversation and questionings, as well as by various mechanical and sensorial excitations, as pressure on the ovarian region, a bright light, the "magnetic forms" of Braid—magnetism itself. M. Chambard adds some interesting comments.

Cases of Hysteria, with Paralysis, treated by Metallotherapy. By Dr. Franz Müller, Second Physician to the General Hospital at Graz. Translated by William Samuel Tuke, M.R.C.S.

(Concluded from the last No., Vol. xxv., *p.* 524.*)*

In order to avoid these sources of error, the experiments on the patient were always performed with bandaged eyes, and nothing was said having reference to metalloscopy; on the other hand, I always endeavoured by test-experiments to confirm the positive results obtained. I will now quote the most important of the experiments.

On Nov. 23rd I applied to the right anæsthesic forearm, first copper-plates, and when, after 45 minutes, no result occurred, I exchanged them for small zinc plates, still similarly without result. Then I replaced the latter with similar plates of tin. Twenty-five

minutes later, patient exclaimed that she felt a strange tickling and pricking sensation at the seat of application. After three minutes more this sensation radiated centripetally into the axilla, where an intense burning was felt. A slight hyperæmia in the neighbourhood of the seat of the application was visible. At the same time, at the latter parts, gentle needle-pricks, and soft contacts with the head of the needle were accurately perceived as cold and warm, while two minutes later the whole arm up to the shoulder became sensitive. Simultaneous exploration of the left upper limb exhibited total anæsthesia, which appeared sooner than at other parts, at a spot corresponding to the seat of application ; indeed, synchronously with the application. After three minutes more, shoulder, neck, trunk, lower limb, and head were sensitive ; the whole left side of the body from vertex to sole being, on the contrary, in a state of complete sensory paralysis.

The most surprising thing was, that the paralysis of the right leg had completely vanished. Both when horizontal in bed and in the vertical position, all the movements could now be performed with normal force and power.

It was a striking fact that the left leg appeared in the same state of relaxation and paralysis as did the right at the beginning of the experiment.

The squeeze of the right hand, measured with a Collin's dynamometer, was 27 kilograms, whereas that of the left hand had sunk to 4.

Solutions of sugar, tartaric acid, and quinine were accurately distinguished on the right half of the tongue.

Instead, a left-sided loss of taste could be observed. Likewise the loss of smell had changed sides.

Hearing tested by a watch, as well as with the voice was quite normal on the right side; on the left the patient only heard the ticking of watch at a distance of two centimetres.

The sensibility of the skin was tried with a Stöhrer's induction-current. With the coils quite pushed home, the application of the electric brush to the whole left half of the body (the limbs being tetanized by it), was borne without any expression of pain or distortion of countenance.

Application of the brush to the right upper extremity is just bearable with the coils at a distance of 15.

Now for the first time the eye-bandage is taken away, and the power of sight examined. The right eye now reads with ease Jäger No. 3, and recognises all the colours. (The trial always made with pigments). The left eye begins to read at No. 18, and only recognizes red.

The experiment was concluded at 6.45 p.m. About midnight patient, being in deep sleep, was pricked deeply with a Stöhrer's acupuncture needle on the bare left upper arm, without any reaction

ensuing. A similar impression on the right upper arm made her awake immediately.

Next morning at the 8.30 visit, the transference had vanished, and the previous state was restored.

24th November. A test-experiment with eyes covered. I applied first copper, then zinc, without effect, and then instead of yesterday's tin, small plates of iron, and as these remained without effect, now for the first time the tin again. Already in 15 minutes the before-mentioned subjective sensations appeared, and in 24 minutes the same condition was fully reached, which yesterday appeared first in 30 minutes.

27th Nov.—4·15. This time tin was taken as the first metal and applied to the right forearm. 4.35. Sensation of warmth and trickling (Lauf) at the seat of application, and returning perception of the needle prick. The eye bandage is now quickly removed, and only the achromatopsy further observed; it was complete as far as red. 4·39 ; the right eye also perceives yellow; 4·41, blue; 4·42, already green, but violet is not yet recognised. About 3 minutes later, perception of violet has also returned.

The left eye, which was now exposed, had lost the perception of all colours up to red. This transference of colours, as well as of common sensibility had again vanished next morning. The experiments from the 29th Nov. to the 7th Dec. (5 in number) I arranged only with the object of noticing whether the colours appeared always in the same sequence, or whether they followed no order.

The five experiments showed that the sequence in which the colours appeared on 27th Nov. remained constant; without exception the perception for yellow appeared first, while violet invariably ended the series.

As soon as this constancy was observed to be certain, it was clearly of interest to see in what order the perception of colour disappeared in the left eye. What was the result of the experiments? First vanished the perception of violet, then that of green, then, on one occasion, blue, on another, yellow.

The perception of violet disappeared as if by rule sooner than that of green, and the latter sooner than that of blue or yellow.

From the 9th to the 13th Dec., I conducted a series of experiments to see whether some other means might not be efficacious. Having bound the eyes, I applied as an experiment, iron, gold, silver, lead; never arriving at any positive result with them, while there was at once an effect when I substituted tin.

On the 13th, I replaced the plates of metal with the same precautions by discs of cork of similar size, and pressed them down with a firmly-applied bandage, allowing them to remain thus for 12 hours; during the whole of this period no trace of change in sensibility appeared.

On the 14th, an Esmarch's bandage tightly bound to the forearm,

remained on for an hour and a half. The hand was intensely swollen, and deeply cyanotic. After removal of the eye-bandage, patient was much frightened to see her arm in the condition described. Needle-pricks, when applied to it, were followed by violent cries of pain.

In order to assure myself of this restoration of sensibility, I again bandaged the patient's eyes. Now the deepest pricks of the needle could be made, indeed the forearm could be literally perforated with an acupuncture needle, without any perception of it resulting. Moreover, the electric brush, with the coils not separated, could be painlessly applied and removed over the whole right half of the body.

By this means irrefragable proof was obtained that in trying the sensibility with the bandage removed from the eyes, I had not sufficiently guarded myself against the interference of sight and psychical influences, which resulted in a manner readily understood when patient saw her arm shapelessly swollen and strongly cyanosed.

On the 14th December I varied the experiments in so far that instead of plates of metal, I selected and applied some of oak, beech-wood, horn, and glass; the result of all these experiments was negative; while their replacement by the application of tin plates, which was so done that patient could know nothing about it, brought about in 25 minutes the before cited phenomena.

In the month of April I had already made similar observations with Charcot at the Salpêtrière, by which I was able to observe in the case of four patients with paralysis of sensation who were susceptible to metals, magnets, and solenoids, and promptly reacted to them, the inefficacy of marble, flint, and pieces of glass.

On the 15th Dec. I applied for the first time a powerful horse-shoe magnet directly to the ulnar aspect of the forearm, which was resting horizontally (the south pole was peripheral.) After only two and a half minutes patient complained of so severe a pain at the seat of application that she tried to resist any further proceedings. At the same time the polar regions as well as the space between the poles proved sensitive to the prick of the needle. After another minute the whole right half of the body was already sensitive, the left, on the other hand, absolutely anæsthesic.

In the right arm, however, after rapid, short, clonic convulsions had come on in the ulnar extensor muscles, the ext. min. dig., and the ext. communis, transient contractions appeared, and the wrist was in a state of extreme extension, the metacarpo-phalangeal and phalangeal joints bent upon the palm. The duration of this contraction amounted to 10 minutes after the removal of the magnet. After six hours the anæsthesia of the right half of the body had returned.

The remarkably rapid action of the magnet was worthy of note. This observation exactly coincides with a communication of Charcot's made to me by letter—"I am persuaded that all patients who are at any time susceptible to a metal, are also susceptible to the magnet, and that the action of the latter is much more general and rapid."

On the 16th Dec. I exhibited the patient on the occasion of my paper on "Metalloscopy and Metallotherapy" read before the Medical Society at Graz, and demonstrated ocularly the whole series of what are called metalloscopic phenomena; so that those who were present were able to convince themselves both of the returning sensitiveness of the skin and of the special senses, and also of the complete transference of hemianæsthesia and hemiparaplegia.

From the preceding experiments it comes out clearly that the restoration of sensibility on the application of tin plates did not always appear after the lapse of a constant number of minutes, for irregularities of as much as 15 minutes became apparent.

I did not regard it as improbable, assuming the action of the metal plates to be dependent on galvano-electric currents, that perhaps the varying degree of moistness of the epidermis might be responsible for this difference. In order to furnish myself with an explanation on this point, I moistened the parts of the skin concerned with a warm solution of common salt before applying the bandage with the tin plates.

Already, in five minutes the sensitiveness at the seat of application began to return, and the transference to develop itself at the corresponding point of the left side. In four minutes more (thus in nine minutes altogether) the right half of the body was normally sensitive, the left, on the contrary, in a state of complete anæsthesia and paraplegia.

This experiment was made on December 18th. On the morning of the 19th, the transference, as usual, was gone, and the right-sided hemianæsthesia present as at first. The previous experiment of moistening with a warm salt solution was repeated, and the appearances already mentioned were observed in only seven minutes. My hypothesis is in this way confirmed by facts, supposing that the simultaneous thermic excitation had nothing to do with them.

After 27th December, up to which day no change had taken place in the character of the malady, patient took internally, as an experiment, tin chloride; of a 1 p.c. solution of this, 6 and then 12-20 drops were given twice daily; and beginning on the 15th Jan., the same quantity of a 2 p.c. solution.

On the 22nd January, examination gave the result that the achromatopsy had completely gone, as also the amblyopia; in general all the troubles of the higher sense organs were quieted.

Common sensation on the whole head, and on the neck to the level of the 5th cervical vertebra had returned, and was quite normal. At the level of the vertebra alluded to, sensibility ceased at a sharp line of total anæsthesia. This increase in sensitiveness on the originally anæsthetic half of the body without any transference occurring, must therefore have resulted in the period subsequent to the 27th December, as the examination on this day had not yet shown it. But to state this, in the least, as an undoubted effect of the tin, I deemed in the highest degree inadmissible, for with the protean and constantly varying character of hysterical symptoms, these alterations might in four weeks appear spontaneously and in spite of the drops. I raise just the same objection also to the French communications on internal metallotherapy.

On 23rd January I applied to the anæsthesic right forearm a Rigolott's mustard leaf. It is well known that A. Adamkiewicz* first noticed the interesting fact that sinapisms also restore sensibility, though generally only at the seat of application. In 15 minutes the part appeared very hyperæmic. In 30 minutes patient began to complain of a peculiar pain there, without anything besides the hyperæmia being objectively observable.

In six minutes more, cold and warm were accurately distinguished, without the perception of pain or of touch having returned.

Three minutes later needle stabs at the seat of application were perceived as painful. Perception of touch was only apparent after two minutes more.

It was, moreover, very easy and beautiful to observe the simultaneous disappearance of these three kinds of perception on the corresponding point of the left forearm.

The mustard leaf remained on and had soon raised a blister. With increasing pain the sensitiveness extended from the periphery in an upward direction, and two hours after the commencement of the experiment had almost reached the level of the shoulder, here finally to end; for in spite of the continued influence of the mustard leaf, the improvement of sensibility advanced no further, and thus on the lower part of the neck an anæsthesic band of skin remained, which divided the sensitive arm from the previously sensitive head. Certainly a very odd picture.

The left arm had in the same extent become wholly anæsthesic.

The trunk and lower limbs were not affected by the procedure.

In the preceding year, through Westphal's kindness, I was able to convince myself readily of this local efficacy of sinapisms in the nervous wards at Berlin.

*Adamkiewicz on restoration of sensibility, Discussions of the Berlin Physiological Society, Nos. 9 & 10, 1878.

Up to the 26th January no change had occurred. On this day I applied to the right leg, which suffered from motor and sensory paralysis, a very powerful magnetic machine (Lamellen-magnet) of Van Wetteren, which I obtained from the physical Institute here through the kindness of Professor Boltzmann. In five minutes the paralysis had disappeared, and the left leg suffered from it instead. A fresh application on the left leg restored the status quo in five minutes. I could thus drive the paralysis hither and thither at pleasure.

On the 27th Jan., just the same experiments, stopping as soon as the left leg showed the paralysis. I now chose a new mode of application. I applied the magnet in such a way that the north pole was in contact with the right (the active) leg, the south pole with the left (the paralysed) leg. (The places corresponded nearly to the middle third of the tibia).

In ten minutes the paralysis of the left leg had quite disappeared, without the right showing a trace of motor transfer. Similarly the sensibility of the feet had returned. The right upper thigh and the right half of the trunk, as well as the formerly described strip on the neck, remained anæsthesic. Patient could now perform every movement to the normal extent with the legs horizontal on the bed, but the gait was uncertain and waddling, the individual movements in walking not properly complete, wanting in exact co-ordination ; in short, just as when walking has to be learnt for the first time.

On 29th Jan. patient walked evidently more securely, but still needed a support.

Since the 31st Jan. she walks alone, and quite securely and quickly, if still somewhat cautiously.

The attacks of convulsions, which till 1st Jan. were alike severe and frequent, have become during this month strikingly rare and incipient, so that the above described type can no longer be recognised. Application of tin plates, as well as of the horse-shoe magnet, are followed by no oscillation or disturbance of sensibility.

With this case, perfectly classical in the great variety of clinical symptoms, a second, no less interesting, may be placed.

From the lengthy notes, what here interests may be briefly quoted.

Johanna D., 26, suffered for the last five years with well-marked hysterical convulsive attacks. For the last year they ceased. Instead, she felt that the lower limbs were getting weaker, that they readily tired, and that with this was associated a peculiar feeling of tension in both knees, "as though the skin on the flexion aspect is too short."

The paresis quickly developed into paraplegia, and as the remedies made use of from various quarters were without effect, she came on

15th October into the General Hospital; there was advanced paraplegia (without contraction) with complete paralysis of sensation in all its forms (of the latter, the patient had no idea all this time), which reached approximately to a horizontal line joining the two anterior superior spinous processes of the ilium. The analgesia was observed by means of the electric brush. The muscular sense was absent. The knee-phenomenon was on both sides notably intensified, *the reflex twitch* highly developed.* Troubles with bladder and rectum, as well as trophic changes were wanting. The electric examination of the locomotor organs gave a negative result. Trunk, upper limbs, and special senses were intact. Although the relatively slow progressive development of the paralysis, which was preceded by no menstrual disturbance or fit, as well as the intensified tendon reflexes pointed to a grave anatomical lesion of the chord; yet from the history of the case and the *ensemble* of both bodily and mental symptoms, the diagnosis of hysterical paralysis had to be made. By means of an elastic band I applied to the right leg, 3 ctm. above the knee, four pieces of copper from Burq's series, in such a way that although intimate contact between skin and metal took place, yet it could not lead to perceptible interference with circulation or to swelling of the limb. In this way I always applied the metal discs.

Commencement of experiment, 4.45.

In twelve minutes patient perceives a disagreeable pricking, and a quite peculiar feeling of warmth, which radiated from the seat of application behind the leg into the toes. A hyperæmia of the skin extending beyond the plates about 2 ctm. was observable objectively. Two minutes later, needle stabs were first observed as painful there; almost simultaneously tactile sensibility appeared.

Peripherally as well as centripetally from the hyperæmic surface total sensory paralysis prevailed. Seven minutes more sufficed to make the whole leg sensitive. At the same time also the motor paralysis was quite removed, so that all movements in every direction were performed accurately and readily with more evident power.

On the left leg as little change had appeared as on the other regions of the body, but both legs showed a notable secretion of sweat, not present at the beginning of the experiment.

At 5.30 I removed the plates. Next day yesterday's condition having remained, I applied the same bandage to the left leg, but put about $2\frac{1}{2}$ ctm. above it a band furnished with zinc discs.

Even in three-quarters of an hour no change was evident either in motor or sensory power.

Moreover the replacement of the zinc plates by tin, and then by iron, silver, steel, was of no effect.

On the 18th Oct. I removed the two bands which had remained

* Attention seems nowhere to have been given to the occurrence of this symptom, and the marked intensification of the patellar reflex in hysterical paralysis (without contraction).

over night, after this experiment had proved without result. I now applied for nearly an hour five cork discs without effect. I replaced them by zinc plates, yet the same condition persisted forty minutes after their application. I now applied above the zinc ring a band with four pieces of copper plate; in 16 minutes the leg was in the same condition as the right two days before, freed from its general paralysis, without any transference being effected.

All the experiments were conducted with every conceivable precaution, so that the patient never knew which plates, or whether any, were applied.

Bringing the case to a close, I may add that after eight days the patient left the hospital recovered, and to this day, as we are always informed, no fluctuation in her health has presented itself; she shows, *as regards sensibility and motility, no vestige of defect or insufficiency.*

All attempts to call forth by any of the recognised methods an artificial anæsthesia (anæsthesia post-metallique), failed.

This case appears to me especially worthy of attention, not only on account of the restoration of motility resulting in so short a time (about 15 minutes on two occasions), but much more on account of the manner and mode in which it appeared. It is on the succession of the subjective as of the objective symptoms and their transference that I lay stress.

The observed succession of the symptoms described agrees exactly with the experience of other observers. This complete agreement, this harmony in the course of the phenomena I would emphasize and would recommend to particular attention.

The case moreover gains a still greater interest, because the patient knew nothing of the sensory paralysis, and her whole attention was directed only to the well-marked loss of motility. And yet the sensibility returned under the application of metals in a manner which differed in nothing from those cases in which hemianæsthesia alone existed, or at least was the symptom most visibly striking, and which most absorbed the patient's attention.

The rapidity with which the paralysis disappeared, never to this day to return, may at first seem very extraordinary, although it is not quite without analogy. I only call attention to hysterical aphonia, which, with Faradisation through the skin, suddenly—in a few minutes—completely disappears as an ordinary thing, and may have lasted for many months, as in a case lately observed by me which had continued eight months.

Let us now collect together all that has been contributed,

and we can affirm that our experiments, conducted with all conceivable precautions (test-experiments), completely confirm the assertions made by Charcot, Westphal, and other observers, while, at the same time, they go beyond these, as they also prove the transference of motor paralysis, show still further the superiority, in a new direction, of the action of the magnet over metal plates, and further teach that the action of the metal plates is notably hastened by previous moistening of the skin with an electrolytic substance.

Thus, there can be no doubt as to the reality of the so-called metalloscopic phenomenon. To the objection that it might have had to do with a specially crafty hysterical deception, to which all observers have alike fallen victims, it may be confidently replied as follows: disregarding the fact that the restoration of sensibility results in the same way in hemianæsthesia well known not to be hysterical, but dependent on chronic alcoholism, cerebral hemorrhage, lues cerebri, lead-poisoning; the agreement of the metalloscopic observations, made at various places and on divers persons, with the characters determined by Charcot, may be regarded as a most delicate proof of the accuracy of the results obtained, as certain matters of fact.

Previously I saw altogether nearly a dozen cases of hemianæsthesia (from various causes) in which, with the sole exception of one of Wilks's cases, the so-called metalloscopic symptoms could be brought out.

The circumstance, frankly admitted, that we still fail to get an insight into the precise mechanism of metalloscopic phenomena, cannot injure well-observed matters of fact. Only too true are Claude Bernard's words—"The physiology of the nervous system is still but little advanced. Should pathology wait for information from this quarter, it would run a risk of missing important matters. It is better for it not to wait, but to advance, recording matters of fact, and leaving their consideration and solution to physiology."*

Bennett,† Donkin,‡ and Carpenter,§ clearly evade the

* Compare Schiff., Contribution à l'étude des effects des bobines d'induction sur le Système Nerveux. ("Archiv. des Sciences Phys.," etc., Vol. vii., No. 3, 1879.)

† Bennett, Lectures on Nervous Diseases. "Brit. Med. Journal," No. 934; Brain., Oct., 1878.

‡ Donkin, "Brit. Med. Journal," 28 Oct., 1878.

§ Carpenter, The Effects of Attention on the Bodily Organs. "Brit. Med. Journal," No. 937, 1878. Compare also—Jenning's "Comparaison des Effets de divers Traitements dans l'hystérie précédée d'une esquise historique sur la Metallotherapie," 1878.

question when they try to make *exclusively* psychical causes, "expectant attention," answerable for metalloscopic phenomena. In this matter they rely partly on *à priori* assumptions, and partly on the circumstance that Bennett and Westphal succeeded in one case in obtaining positive results from the application of bone and wood counters. (Although Westphal puts down the pressure and lacing as the probably efficient cause in his observation.)

The illogical character of such a conclusion is manifest. Admitting that this explanation proves efficient for the two cases mentioned, it does not further follow from this that it is so in all other cases. It is indeed conceivable that we have to do with different causes, physical and psychical. Tuke,* and Sigerson† believe at least in such a possibility, in their just published very discriminative memoirs.

But I must insist that to this day the proof has never been brought forward that purely psychical causes are in a position to account for the recognized phenomena. The two cases of Bennett and Westphal are not at all convincing on this point.

In Westphal's case the return of sensibility over the whole half of the body, except the head, was first observable after 24 hours.

Now, everyone knows that, when we have to do with the unstable balance of a hysteric's nervous system, the most important fluctuations may occur in sensibility within twenty-four hours; and that within so long a period even complete anæsthesia may totally vanish without any treatment having been tried, as indeed I was able to see in a case in Westphal's ward for nervous patients. In Bennett's case the restoration of sensibility only appeared on the arm chosen for the application of the plates of wood.

The first-named English authors are therefore in want of every proof for their assumption, so long as they do not show that by the simple arousing of "expectant attention," the phenomena known as metalloscopic come into action at the same time and in the same order as they do when a consequence of the influence of the magnet, solenoid, and metal plates.

* Hack Tuke, Metalloscopy and Expectant Attention. Reprinted from "The Journal of Mental Science," Jan., 1879.

† Sigerson, An Examination of certain recently-reported Phenomena in connection with Hystero-Epilepsy and Cerebral-Anæsthesia. "British Medical Journal," 1879, Nos. 944 and 946.

A case of Obstinate Constipation and Inactivity of the Liver. By F. Wilton, M.R.C.S., Ticehurst.

M. D., female, single, aged 68, labouring under chronic melancholia. The patient has been insane for many years, and has from childhood suffered from inactivity of the bowels, requiring almost daily use of enemata.

Her state on July 23rd, 1879, was as follows :—Tongue clean, bowels distended with gas, &c., and tender, not having been relieved since July 18th. Pulse natural.

Little relief from the last two injections (soft soap and warm water) and an injection was given of Ol Ricini ℥j, Ol Terebinth ʒj. This returned the same as injected.

July 24th.—Stomach slightly distended. Has not passed any motion since the 18th.

3 p.m. Twelve ozs. of olive oil were injected. The rectum was then plugged, which was done in the following manner :—A sponge about the size of a large orange was wrung out in warm water, a tape about 2 feet in length was passed through the centre and tied. The sponge was passed up beyond the sphincter and left in the rectum; the tape was left outside.

9 p.m. ℥ß of concentrated decoction of aloes was given.

July 25th.—During the night the sponge and oil were passed into the bed.

10 a.m. A simple warm water enema was given, but no motion was passed.

6 p.m. A pint of olive oil was passed into the rectum, which was again plugged.

July 26th.—The plug, which had remained up, was now giving her a great deal of pain, and the nurse accordingly removed it.

Takes beef tea, light puddings, with two glasses of port wine daily.

July 27.—Had a quiet night. Stomach distended.

2 p.m. Asked to get out of bed and use the night stool.

About half a pint of oil escaped and a quantity of small lumps of white currant-like matter passed. Enough to fill a small teacup. Urine passed.

4 p.m. Took a pint of beef tea with 2 drops of croton oil.

July 28th.—An elastic tube was passed up to the length of 2 feet and a half, and an injection of castor oil and turpentine was given at 3 p.m, which remained up for two hours ; it then returned, and with it two white, putty-like lumps about the size of a cricket ball.

July 29th.—Quiet night. Stomach distended ; has passed a large quantity of urine; sat up from 3 to 5 p.m. Had a good dinner of rice pudding, and has taken a glass of port wine. She also took a glass of port wine and water during the night.

July 30th, 4 p.m.—A simple injection of castor oil and soft soap was given, which was returned without any fæcal matter.

9 p.m. Olive oil ℥xij placed in the rectum, which was then plugged.

July 31.—The plug escaped during the night, and the oil was passed in the bed at nine this morning.

6 p.m. A waterproof bed sheet with elastic funnel and tube 3 feet long was placed on the bed, the tube passing into a foot bath under the bed; the patient was then placed on the sheet, the nates over the elastic funnel.

An elastic tube was passed up through the rectum the length of three feet; a large quantity of warm water was injected and allowed to escape into the funnel and through the tube into the foot bath under the bed.

A quantity of air escaped without any fæcal odour.

After straining off the water in the foot bath, about three pints of the white putty-like matter, the size of white currants, remained.

August 1st.—Has passed a good night and has taken food.

11 a.m. An injection of castor oil and turpentine was given, but returned as administered.

August 2nd.—3.30 p.m. Has taken very little nourishment; abdomen distended and tender; has passed a large quantity of urine; refuses to take beef tea, port wine, or anything. She was fed with Ol Tiglii gr. ii., castor oil ℥j, the yolk of an egg, and 12 oz. of beef tea.

August 3rd.—Has had a quiet night, with some sleep, and has taken two glasses of port wine. To remain in bed.

August 4th.—Passed a good night, and had three hours' sleep; has passed urine, but nothing else. Has taken beef tea.

3 p.m. Four feet of elastic tube were passed up the rectum; a large quantity of warm water was then injected (the patient being placed on the waterproof sheet). A large quantity of white, putty-like matter escaped. The tube was then withdrawn. ℥ iv of Ox Gall, with ℥ vj of olive oil were then injected into the rectum, which was plugged.

6 p.m. The patient has been very restless and irritable; wanted to remove the plug, and at last got out of bed, seated herself on the night stool, removed the plug, and passed a large quantity of white, putty-like matter.

August 5th.—Had a good night, and has taken plenty of nourishment.

4 p.m. Hyd. Chloridi gr. ij were given on some bread-and-butter.

August 6th.—The bowels have acted naturally, but still of the same character.

August 7th.—Takes her food well, and has been sitting up for an hour.

The abdomen is of its natural size.

To take the one-twelfth gr. of Podophyllin three times a day in port wine, and a teaspoonful of castor oil every third night.

August 14th.—The bowels act after the oil (taken at bed time),

and the liver is acting, as shown by the colour of the motion. Sits up every day, and takes her food well. Has three glasses of port wine daily.

August 30th.—Sleeps well and takes plenty of food. Is fond of her port wine, into which is placed ʒj of the Tr. of Podophyllin.

Requires a dose of castor oil once or twice a week. The bowels then act well, passing plenty of bile.

September 30th.—No change to report. To go on with the Podophyllin.

October 31st.—Still in the same state. Gets up every day; reads, or does a little plain work.

To leave off the Podophyllin. The liver acting well.

November 29th.—No change to report.

OCCASIONAL NOTES OF THE QUARTER.

Renewed attention has been directed to the question of the abolition of Private Asylums by the reading of a paper by Dr. Bucknill on the subject, at a meeting of the Metropolitan Branch of the British Medical Association, held at Bethlem Hospital, Jan. 21st, 1879; the discussion being adjourned to Feb. 4th, 1880. A report of the proceedings will be found under "Notes and News."

The paper and the debate were alike what might have been anticipated—the former, able; the latter, the reverse of dull. No one could feel surprised that some irritation should be felt and expressed at so vigorous an attack upon the principle involved in the keeping of Private Asylums. The rejoinder was natural, and was forcibly put by Mr. Hayes Newington in reply—the temptation to do wrong exists, but why should Private Asylum proprietors be supposed to yield to temptation more than any one else? To prove that in a certain calling wrong-doing may bring gain, and that men may be found who will so enrich themselves, is only to state what is unfortunately too true of any circumstances in which temptation and human nature are factors. The counter reply no doubt is that those who would suffer on the supposition of wrong being done, are persons who are unable to look after their own interests, and are weighted by a foregone conclusion that their statements are unreliable. The whole force and vitality of the feeling which has been for some time aroused against these institutions lie in this fact. The

public seem more willing to be guided by the theoretical objection, than by the absence of proof of considerable abuses existing in their practical working. We are satisfied of two things—paradoxical as they may seem to be—namely, that the general feeling of the community is strongly opposed to private asylums, and that the preference is generally given to them by the same community when the question of placing a lunatic under care arises. This preference is mainly due to the idea of greater secrecy in regard to a disorder to which a stigma is still unfortunately too often attached. The fact itself was called in question by the writer of the paper; in Private Asylums, he said, there is the committee of visiting magistrates; in registered hospitals there is the committee of the institution. He thought, indeed, the former might be the least secret of the two, as he had known the names of distinguished inmates used as decoys. However, there is no doubt that on this point the public sentiment will associate privacy with that which is called private. In one particular, this, it must be admitted, is warranted; for the general visitor is surely more frequently to be seen in a public than a private institution; and such unofficial visitation may often lead to recognitions which grate upon the feelings of the patient's friends. "I met your husband the other day at Brighton," would be a natural observation, and could cause no annoyance; but "I met your husband the other day at Ticehurst," would be an unwelcome disclosure, and might cause some resentment. Then in the comparatively small size of most Private Asylums, and their more home-like character, there is, it may be fairly urged, a very considerable advantage. It is one, in truth, which we should part with, not without regret, if they are abolished. Here, and perhaps in some other particulars, but chiefly in this, we agree with the conclusion of the Lunacy Commissioners that they supply a want that the public asylums do not exactly meet. Such being the case, it may well be said, what right has Parliament to interfere between the physician who is willing to treat patients in his own house, and the patients who—and here one at once feels one cannot finish the sentence in the like terms, but must introduce another element and say, whose *friends* are willing to place the patients under the physician's roof? Had we been able to word the last clause of the sentence thus—the patients who are willing to place themselves under the physician, we think there would have

been no sufficient answer to this question. But as it is the friends of the patient, and not the patient himself who is the second party to the agreement, we hold that Parliament has a right to step in, if for good reasons it sees fit to interfere. In fact it has already claimed and exercised the right to interfere. It is allowed to contravene by its action the dearest right we possess—the boast that every Englishman's house is his castle. This is clearly not true of the proprietor of a licensed house; not so true as of the humblest peasant in the land. And why? Because of the anomalous character of the agreement between the two contracting parties. Dr. Bucknill said, speaking of the authority vested in the proprietor of a Private Asylum and the character of his relation to his patient, that there was nothing like it. On the other hand, it must be remembered that the interference with the rights of the physician is no less exceptional.

It being admitted, then, that this interference is allowable and necessary, the reason which justifies it also justifies still further interference, if in the interest of society at large. The question is, therefore, reduced to one of expediency. Has the time come when Private Asylums ought to be abolished? Shall they be forbidden in England, as they are in at least one European State? If so, is it to be on the ground that the proprietors have failed in the trust confided to them; that they have acted frequently or generally from base motives, and that therefore they are to be deprived of their present position? We cannot think so.* On the contrary we hold that the exceptions are quite insufficient to invalidate the general statement that they are performing an honourable and useful function in the State. In spite of this, however, we have arrived at the conclusion, and we have done so very reluctantly, that the time has arrived when it may be best to look to the ultimate disappearance of Private Asylums—unless, indeed, the improbable course be taken by the Legislature of requiring all cases to go before the Magistrates, or, as in

* It is true that if the recoveries in the three classes of asylums are compared, the result without an explanation is confessedly not particularly favourable to private asylums. Thus during 19 years (1859 to 1877 inclusive) the cures were for County and Borough Asylums, 35·38 per cent. (of admissions); Registered Hospitals, 37·99; Metropolitan Private Asylums, 27·27; Provincial Private Asylums, 31·21; Private Single patients, 9·43. But Mr. Newington's reply to these figures would be that the proprietors of Private Asylums are practically debarred from their full share of cures by the late arrival of patients.

Illinois, before a jury. And we are driven to this conclusion on the ground that the supposed equivocal nature of the relation between physician and patient in a private asylum—the apparent interest to detain a good paying patient too long—does now, and, so far as we can see, always will, create a restless and most undesirable feeling of opprobium in the public mind towards these institutions, however worthy of confidence they may actually be. If this conclusion, however, were not facilitated by another circumstance, we should feel great difficulty in maintaining, and still greater difficulty in pressing it. The facilitating circumstance is that the medical proprietors of private asylums are, under the circumstances, willing, and in some instances more than willing, to part with their asylums, and retire from what they feel has become an invidious position. They are justly wounded by the aspersions cast upon them; and they may not care to be regarded as carrying on what Dr. Bucknill laid so much stress upon in his reply—a "business." After all, however, many forms of medical practice are business; and for the matter of that, so it be honourably conducted, we do not think any discredit ought to attach to the private asylum proprietor on this score. It would be easy to give instances of the willingness to make a vital change in the mode of carrying on Private Asylums. We have been assured by one who has a large stake in a licensed house that he would welcome definite legislation, however revolutionary; that anything, in fact, would be better than the present state of suspense. At the last annual meeting of our Association, Dr. Monro said he wished with all his heart that private asylums were at an end. We could not speak so strongly. Dr. Bodington also observed at the meeting at Bethlem Hospital that he did not care how soon the institutions in question were abolished. And everyone knows that a meeting of Private Asylum proprietors called together for the express purpose of cursing Mr. Dillwyn's Bill, introduced last Session, ended in blessing it.

Of course those who speak thus, assume that proper compensation will be given. It is certainly only on the condition that they should be fairly and very liberally considered that we should be reconciled to the present proposal.

Dr. Bucknill attaches more importance to the visitation of Justices than of the Commissioners. "Great changes are needful in the administrators of the lunacy laws. The Com-

missioners in Lunacy are administrators in the Metropolitan District, and inspectors only in the remainder of England and Wales; and it is very certain that the worst asylums to be found in the country are under their immediate jurisdiction." We shall be curious to see whether the Commissioners will challenge the statement, or offer any explanation of the fact, if it be one. Dr. Bucknill proposes that the Local Government Board (or the Minister of Health, if one is appointed) should be placed in authority over pauper lunatics wherever they may be; and that the Lord Chancellor's officers in Lunacy should exercise authority over all non-pauper lunatics—"a change which would leave no sphere of action for the present Lunacy Board," half of the members being incorporated in the Local Goverment Board, and half of them being associated with the Lord Chancellor. Thus the Lunacy Board would be practically shelved.

One thing is clear, and this is something to be thankful for, in the presence of the horrible fogs in which we have been enveloped this winter, that no one can say of Dr. Bucknill's paper that it is "neither fish, nor flesh, nor good red herring," for unquestionably a red herring has been trailed along the path of the proprietors of Private Asylums, and even—*horresco referens*—across the floor of the Commissioners' Board Room. It may be that the former will retort on their assailant, "What is sport to you, is death to us," but the form in which death will come in this instance, will not, we venture to prophesy, be in the form of the King of Terrors, but rather in that of a shower of gold. In the meantime, therefore, there is no reason why the most perfect good humour should not prevail. Slightly parodied, the lines of Dr. Watts may, perhaps, be borne in mind with profit—

"Birds in their little nests agree,
And 'tis a shameful sight,
When doctors of one family
Fall out, and chide, and fight."

Since the foregoing was written, Mr. Dillwyn's Bill, "To Amend the Laws Relating to Lunatics," has appeared. The following are its main provisions:—

1. The powers conferred on the Justices by the 16 and 17 Vict., c. 97, ss. 46 to 52, to raise money for providing accommodation for pauper lunatics, is extended to the said Justices to raise money to provide accommodation for others than paupers, and if they see fit,

they may purchase any private asylums and licensed houses with all rights belonging to them from proprietors willing to sell.

2. The price to be paid for Private Asylums shall be determined by the money value of the lands, buildings, plant, fixtures, and furniture purchased by the Justices, and by a sum of money to be paid to the proprietors in lieu of goodwill, which sum shall not be less than the yearly average of the profits of the establishments during the three years immediately preceding the sale. In case of dispute, it shall be settled in the manner provided by the Lands Clauses Act. The money required shall be raised in accordance with the provisions of the 16 and 17 Vict., c. 97, ss. 46 to 52.

3. Private Asylums and Licensed Houses, under the immediate jurisdiction of the Commissioners in Lunacy, shall, after Jan. 1, 1881, be under the jurisdiction of the Justices in their respective districts, and be subject to all the provisions of this Act.

4. In order to provide an Asylum or Asylums for private lunatics in the Metropolitan Districts, the Justices shall, within three years of the above date, provide, at least, one such Asylum, in the same manner and under such powers as they possess in regard to asylums for pauper lunatics.

5. The moneys received for the care and treatment of lunatics shall constitute a common fund. Any surplus shall go to lessening the rates levied for the maintenance of the pauper lunatics.

6. Private Asylums and Licensed Houses, becoming the property of the Justices, shall thereafter become public asylums, and shall be governed by the rules in Sections 24, 25, 26, 44, 53, of the 16 and 17 Vict., c. 97.

7. Medical Visitor to be continued.

8. Provides for superior accommodation for private patients sent to pauper asylums.

9. Provides a paid chairman and deputy-chairman, and two additional Commissioners.

10. It shall not be lawful for any person to be received into an asylum except upon an order granted by a Justice of the Peace of the district in which the lunatic resides, or if a wandering lunatic, of the district in which he is found, such order to be granted upon a petition subscribed by the party applying, who must be a relation in blood, within one or two degrees of relationship, or the clergyman of the parish, or the relieving officer, accompanied by a statement of particulars, and by certificates, bearing date within seven days prior to the signing of the petition, under the hands of two registered medical persons not related to the lunatic or in any way interested in the asylum; and no superintendent shall receive or detain any person as a lunatic therein unless there shall be produced to, and left with such superintendent, such order by a Justice, dated within seven days prior to the reception of the lunatic; provided, however, that the superintendent may detain therein for any period, not exceeding forty-eight

hours, any person as a lunatic upon the petition, statement of particulars and one medical certificate, whose case is duly certified by one medical person to be a case of emergency, during which time the additional certificate and the order of the Justice must be obtained.

11. The powers conferred by the Justice's order shall cease with the order of discharge of such lunatic given by the superintendent to the Commissioners, and in no case shall it remain in force longer than the 1st day of January first occurring after the expiry of one year from the date on which it was granted, or on the 1st day of January in each succeeding year, unless the superintendent on each of the said days, or within fourteen days immediately preceding, transmit to the Commissioners a certificate to the effect that the detention of the lunatic is necessary.

12. Section 18 of the Lunacy Acts Amendment Act, 1862, is hereby extended, so that it shall be lawful for the superintendent, with the assent in writing of two of the Commissioners, to keep as a boarder any person desirous of submitting to treatment whose mental condition does not render certificates of insanity necessary ; provided always that such assent shall only be granted on the written application of the person desirous of becoming a boarder, and that every such boarder shall be produced to the Commissioners and Visitors at each of their visits ; and that he shall not be detained for more than three days after having given notice to the superintendent of an intention to leave, unless certificates of insanity and an order by a Justice are obtained.

13. It shall be lawful for any person to obtain from the Commissioners an order for the visitation and examination by two medical persons of any lunatic in an asylum, and on production to the Commissioners of the certificates of two medical persons approved by them, certifying that after the separate examinations at intervals of at least seven days, they are of opinion that any lunatic may without risk be set at large, the Commissioners shall order his liberation, and upon such order the superintendent shall, at the expiration of ten days, liberate such lunatic ; eight days' notice of such intended liberation being given to the person at whose instance he was detained ; or in case of a pauper lunatic to the parish or union.

14. Requires Commissioners to visit public asylums twice in each year.

15. Gives power to Commissioners to order removal of patients from private to public asylums.

16. The Commissioners shall be empowered to grant licenses to attendants on their production of a certificate from any superintendent stating that they have been employed by him for not less than six months, and that he considers them qualified ; the Commissioners having power to cancel licenses in consequence of misconduct.

The Bill is under the consideration of the Parliamentary Committee of the Association. It is obviously unfair to the proprietors of Private Asylums.

The Government Bill on the Lunacy Laws, promised in the Queen's Speech, has not appeared up to the date at which we write, but we hope to be able to give its provisions in "Notes and News."

PART II.—REVIEWS.

The Relations of Mind and Brain. By Henry Calderwood, LL.D., Professor of Moral Philosophy, University of Edinburgh. 1879.

In considering the value of this work, we must endeavour to realise clearly what are the main conclusions at which the author arrives, to estimate the value of the evidence adduced, and to consider whether there are any other conclusions more congruous with facts. And inasmuch as our general agreement with the author's final conclusions will be far from inconsiderable, we deem it all the more necessary to don the critic's cap, and consider what objections will be raised, whether conclusively or not, against the reasoning and inference of the Professor of Moral Philosophy in the Edinburgh University.

One word, before entering upon the main argument, about the use of the term "Philosophy," in the opening chapter. Contrasting it with Science, he says "the one is concerned with the facts and problems of rational life, the other with the facts and problems of material existence, animate and inanimate." Is it wise to use the term Philosophy in this restricted sense—a sense well expressed by the word Psychology—when it has been so largely employed in another sense, for which no other term exists, namely, as expressing those widest generalisations which verify the partial generalisations of particular sciences, and which apply not to the phenomena of Chemistry alone, or of Botany alone, but to all existing phenomena? Thus employed, the term has a most important meaning, unexpressed by any other word, and capable of being applied to all attempted Systems of Things reaching from the ancients down to the "System of Synthetic Philosophy."

The conclusions arrived at in this book may be fairly summarised by these three propositions:—1. The action of

the nervous system is insufficient to account for all forms of human conduct. 2. The action of the nervous system is an insufficient cause of the phenomena of Consciousness. 3. In order to account for human conduct and the facts of Consciousness, it is necessary to postulate the existence of a directing immaterial Will.

The doctrine of animism is, in short, regarded as the best solution of the problem of human life. Many anatomical and physiological facts, as well as facts of personal experience, are considered, and the conclusion is again and again arrived at, that only by the action and reaction of the nervous system and this directing intelligence can mind and conduct be adequately explained.

It will no doubt be objected that the force of the author's reasoning is weakened by a want of discrimination, as regards the first and second of the above conclusions, in assuming that because certain mental phenomena are not caused by nerve action, therefore human conduct is not to be explained by nerve action. It will be urged, in fine, that Professor Calderwood seems to regard animism and materialism as the only practicable alternatives, and that he ignores the position assumed more or less fully by many modern psychologists and physiologists, although no name appears to have attached itself to the theory, that while all human conduct consists of an unbroken chain of physical causes and effects, the aggregate of states of consciousness composing mind cannot in the nature of things be caused by physical processes; some of the most distinguished rejectors of animism having strongly, perhaps more strongly than any one else, pointed out the fundamental contrast between the physical and the psychical, and the logical impossibility of regarding the former as the cause of the latter; and by these it will be said that a very important view of the question has been left out of consideration. While physical phenomena, it will be argued, are those which we observe outside of us—which we observe through our sense organs—mental phenomena cannot be observed outside ourselves. If any other thing besides a man has consciousness, he is absolutely debarred from observing it, and can only *infer* its existence by observing the analogy between the motions of such an animal and similar motions which in himself he has noticed to be accompanied by consciousness. So profound indeed is this contrast of the physical and mental that the conception of any relationship of cause and effect between

them has been declared impossible, and must at least be regarded as one, the possibility of which ought not to be lightly assumed. But the author would probably reply, not without reason, that while as a fact it must be admitted that such an alternative exists, seeing that it is held by some eminent psychologists, the position thus taken logically leads to animism. At any rate, the position is not only consistent with animism, but the distance between the two is infinitely less than that between the former—call it subjectivism or what you will—and the gross materialistic hypothesis which insists that brain secretes mind, or that they are identical. A Platonic attachment is in fact permitted between brain and mind; they are inseparables, although they are condemned to pursue asymptotic courses throughout their whole existence; they are marvellously correlated, although the relation is such that they must never be allowed, strictly speaking, to influence one another. It is not an unknown thing, however, for Platonic attachments to end in one of the parties exerting a very decided, if unexpected, influence upon the other. We shall return to the striking fact—the insisting of the contrast between the physical and the psychical by the school of thought where it might least have been expected—in a later stage of our review.

We now proceed to the evidence brought forward by the author, the true explanation of which he holds to be only found in the doctrine of animism. In Chapters II. to VI. the structure of the brain in man and other animals, the results of stimulation and destruction of the cortex, and various other points in nerve anatomy and physiology are clearly described. These must be passed over briefly, as those essential to the argument may be better considered in dealing with subsequent chapters. Some very interesting suggestions are made as to the relation between shape and artificial stimulation of brains, and the activities and muscular development of animals; the conclusion being reached that brain development and muscular development are closely connected, "the more intricate arrangement and subdivision of the brain being connected with more detailed arrangement of the muscular system, in contrast with mere mass of muscle." Some details given about the human brain and the structure of our complex organs are not brought to bear very directly upon the main question. This is to be regretted, as this branch of knowledge seems to take the place of what would have been more useful—a study of the actions of very

simple organisms, for it is only by studying life in its beginning that we are able to understand the essential function of nerves. It is true that the nerve system is spoken of as "sensori-motor;" motor cells and sensory cells, afferent fibres and efferent fibres, are well described, but we are left without a sufficiently clear generalised conception of what a nerve system really does. This defect is, we think, due to the fact that the most complex developments of nerve apparatus are studied before a clear notion of what nerve-action really accomplishes in its simplest beginnings is obtained. A nerve system is then seen to be an arrangement whereby an organism is able to co-ordinate actions in harmony with its environment; such a description being applicable not only in the case of those simple forms of life in which a nerve system is only potentially present in the undifferentiated protoplasm, not only in the hydrozoa whose commencing nerve-paths enable them to carry on an "adjustment of internal to external relations"—those few external relations to which they are susceptible; but to the nerve system of a statesman who has to co-ordinate a vast array of actions in harmony with an environment, of which a vastly increased number of relations affect him. By such a conception as this, Herbert Spencer and those who adopt his teaching would no doubt think that more light is thrown upon what we mean by intelligent conduct than by what our author tells us about brain structure and the results of electrical stimulation of the cortex. Not that in our opinion they lessen the importance of the latter mode of research.

A defect in these chapters, the importance of which is experienced further on, is that while the functions of different portions of the cortex are ably discussed in the light of Hitzig and Ferrier's researches, the difference in function between the hemispheres, the basal ganglia and the spinal centres—at least, the different kind or degree of co-ordination which each fulfils—is not clearly dwelt upon. The importance of discriminating between primary, secondary, and tertiary centres is not enforced. This omission is probably to be traced to beginning at the wrong end by studying the most complex centres first. A realisation in the first instance of what the primary co-ordinations of the cord-centres are capable of accomplishing, and what the secondary co-ordinations of the basal ganglia effect, would have led, we think, to a more favourable estimate of the powers of the hemispheres by affecting tertiary, quaternary,

or still more complex co-ordinations. On the contrary, however, the cortical centres are treated rather as though they were simply the meeting places of primary sensory and motor nerves, instead of complex arrangements for co-ordinating, by the help of the centripetal and centrifugal fibres, which unite them with the lower centres, the action of the basal ganglia and the spinal cord. If we call the co-ordinations effected at the cord-centres "primary reflexes," those effected by the basal ganglia "secondary reflexes," we might call the actions of Ferrier's cortical centres "tertiary reflexes;" and if still wider co-ordinations are effected in other parts of the cortex (whether in the frontal or occipital regions), they may be regarded as "quaternary reflexes." The essential difference between these groups of centres lies in the number of impressions they co-ordinate with corresponding impulses; thus while a spinal centre co-ordinates the movements of a few muscles with the tactile impressions made in their neighbourhood, the highest cortical centre will be one which receives impressions through the lower centres from *all* parts of the body, and which controls *all* the motor centres below it. It might seem that most of that which Professor Calderwood allows the nervous system to be capable of doing, might be done in the absence, if not of the hemispheres, at any rate of their highest centres. It would not be fair, however, to imply that nowhere throughout the work is any reference to the cerebrum as a supreme centre made, but this is done too casually, and as a fact of secondary importance, instead of being brought prominently forward and reasoned on.

The point which the author really establishes in these chapters is this: that in the present state of our knowledge, it is impossible fully to correlate intelligence with structure of brain. With regard to the difficulty of finding room in the brain, so to speak, for the exercise of mental phenomena—Thought, Emotion, and Will—when the demands made by the motor and sensory centres are conceded—on which our author insists with much ingenuity—we think that it is too much assumed that the so-called motor centres in the cortex are devoid of a psychical element. How to regard the results of Ferrier's experiments psychologically is still uncertain; their exact relation to the basal ganglia is doubtful. Until this is more clearly made out, we cannot determine the weight of this part of the author's argument. There remain in any case the "silent regions" of the brain,

and however much it may seem that richness of convolution in other regions is associated with muscular development, we certainly have in the former a like complexity without any relation to muscular activity. It strikes us that the difficulty which Professor Calderwood here raises, applies also to any doctrine of the brain being the organ of the mind in a higher sense than that of the sensori-motor functions.

Leaving now the quiet regions of Anatomy and Physiology, the seventh chapter proceeds to deal with "Personal Experience as connected with Sensation." Here—in the most important section of the whole work—we find ourselves largely in accord with the author. He shows that the materialistic hypothesis does not, and to all appearance never will, account for a conscious sensation and the discrimination between sensations. Some, doubtless, will demur to the statement "that we discriminate between sensations and perceptions, and consequently form conceptions of things, are facts towards the explanation of which all that is known concerning nerve-fibres and cellular substance contributes nothing," on the ground that to a large extent, a series of neural events may be traced parallel with the series of mental events. It may be admitted that in the complex protoplasm, which in the cerebral cortex is arranged in innumerable plexuses, connected with every point of ingress of external impressions, and with every mechanism by which the organism reacts in its environment; where every afferent impression can be reflected into thousands of recipient and motor structures in which the molecular structures proper to each are called forth, we have an organ, the events in which show a marvellous parallelism with the events of consciousness. That it is a parallelism only, however, and not an identity, must be clearly understood. A molecular thrill and a feeling of the mind appear the more distinct, the more closely they are inspected. We are brought face to face again with the fundamental antithesis of what the metaphysician distinguishes as Object and Subject, and, as we have already intimated, what may be something more. The representation of the relation between mind and brain under the terms subjective and objective is, however, no solution of the difficulty. "What," says Tyndall, "is the causal connection, if any, between the *subjective* and the *objective*, between molecular motions and states of consciousness? My answer is: I know not, nor have I as yet met anybody who knows. It is no explanation to say [as Bain does] that the objective and

subjective effects are two sides of one and the same phenomenon. Why should the phenomenon have two sides? This is the very core of the difficulty. There are plenty of molecular motions which do not exhibit this two sidedness. Does water think or feel when it runs into frost-ferns upon a window-pane? If not why should this molecular motion of the brain be yoked to this mysterious companion—consciousness?" He adds that Science lends no countenance to the conclusion that states of consciousness can be generated by molecular action.

We are conscious that at this point, however far the somatist may have gone along with our agreement with Professor Calderwood, he will take his seat on the opposition bench, but, if candid, he will admit that we have a difficult problem before us in the question, What is it which unites feelings; what is it which persists while the feelings are for ever changing, and while the brain cells are ever changing also? The theory that mind is a "Series of Feelings" is alluded to by the author, and the difficulty of conceiving this series as knowing itself, and discriminating the several experiences of which it is composed, is pointed out. The difficulty is admitted by Spencer ("Mind consists proximately of Feelings and the Relations between Feelings") even more clearly than by Mill in the quotation made from him. It will be said that this difficulty is inherent in the constitution of things, seeing that we cannot escape from consciousness in order to contemplate it; or it will be questioned whether it is allowed us to accept as an explanation, either the theory of the materialist on the one hand, or the animist on the other, as in the sentence—"Their (*i.e.*, feelings) intelligibility depends on some higher power which they cannot originate, as they do not possess any of its elements. This higher power is intelligence, which in exercising itself knows itself, and discriminates successive forms of experience." No doubt the reply would be that it is difficult to see why the objection to a "series of feelings" being "aware of itself as a series," does not equally apply to "intelligence knowing itself,"and that if we require an external something to contemplate feelings, we shall want a still more external something to contemplate intelligence, and so on *ad infinitum*—the old world fable repeated of the tortoise and the elephant. The objector might be supposed still further to say something in this wise—and it is always well to realise what an objector may say—Can this postulation, he might object, of

a discriminating intelligence be regarded as in any true sense an explanation of conceptions? If it appears in consciousness, what is it but a state of consciousness – an aggregate of related feelings, and we have advanced no further; but if it does not appear in consciousness, then we are for ever precluded from knowing it; we are endeavouring to explain the known by the unknown. Consequently, mind, so far as we know it, is a series of related feelings. Again (he would continue), if by a discriminating intelligence is meant something which is a part of consciousness, analysis has again and again reduced it into its elements—feelings (in the wide sense of the term) associated in definite relations with represented feelings, or, in other words, an aggregate or series of related feelings. To this position, the Professor replies that it is untenable, as insufficient to meet scientific requirements. There is no connecting bond. The hypothesis attributes functions to the several members of the series, which *ex hypothesi* they do not fulfil. It does not explain the unity and intelligibility of experience. Every one regards things from the point of view afforded by personal experience. "Such a standpoint is the essential condition of intelligent life; and as it implies superiority to things external and to the contributions which such things make to the course of experience, our relations to the outer world through the senses are insufficient to account for our mental life."

Passing to the analogous chapter which treats of motor activity in relation to personal experience, such sentences as these—"We find examples of motor activity which cannot be traced to any sensory impression, but depend upon personal determination;" "Two forces meet each other, and the will-power masters the nerve-power;" "Volition is in this case the cause which liberates nerve energy;" "There comes from an inner sphere, from the region of personal experience, an impulse which acts upon the motor cell, and throws it into activity;" and, lastly, "There is clear evinence that volition controls nerve action"—give a fair idea of the author's view. To this hypothesis, that an immaterial something exists, intervening between sensory impressions and motor impulses, our objector would interpose critically upon the Professor's ignoring any incongruity in the conception of a portion of mind acting on a portion of matter, and he would ask whether any one can form the vaguest mental picture of such an interaction; and how the physiologist is to discover the laws of nerve action, if nerve energy is to be

liberated by a something, the action of which he has no means of registering? He would question whether it is legitimate to call Will a force, and would retaliate by calling this materialism. He would even maintain that the animist, not realising the uniqueness of the action he postulates, assumes that he has discovered an instance in which the chain of physical cause and effect is ruthlessly broken. To all which the Professor would reply, in effect, that he has realised this unique interaction, and accepts it as the least difficulty in so profoundly difficult a problem; itself altogether unique in its nature.

The author proceeds to contrast the purely spinal reflexes (without consciousness) with "sensori-motor activity" (involving consciousness) and points out that in the former "motor activity is inevitable when sensory stimulus is applied," whereas in the latter we have evidence of a voluntary element; this latter being illustrated by the voluntary endurance of pain without shrinking; and here we come upon the contest between "nerve power" and "will power," while the conclusion is reached that the nervous apparatus is not sufficient to account for such restraint. "Shrinking is the one inevitable result of the laws of nerve action." The difficulty, however, which we feel in accepting this view arises from what we have already pointed out as not being, as we think, sufficiently recognised by the author, the important *rôle* played by the higher inhibitory nerve centres. Hence, while it is true that taking the lower centres alone we should fail to account for such restraint of shrinking, the explanation may be sufficient when we take into account, as we are bound to do, the nervous system as a whole. While we have but a single channel of exit for the nerve energy liberated in a centre by an afferent impression, there is but one kind of motion possible as the result of that impression; but when such a primary centre becomes connected by a centripetal fibre with a secondary centre, it is evident that a second possible channel is opened for the molecular motion aroused in the primary centre. When the nerve system is complete, this centripetal fibre does in many cases offer a path of less resistance than the efferent fibre. We do not, therefore, feel satisfied that this example can be fairly adduced in favour of animism, for the higher centres need not necessarily discharge themselves through the spinal centre, but may provide an adaptation to environment more suitable under the circumstances. And this view seems con-

firmed by the facts that so far from there being merely an inhibition of muscular movement, there is generally, perhaps always, some other muscular excitement, as clenched fists, set teeth, contracted eyebrows, indicating the diffusion of the impulse beyond the primary centre; and that if the afferent impression be sufficiently intense or sudden, the centripetal channel is not sufficient to carry off the molecular disturbance of the central cell, which discharges itself along the primitive efferent channel as well. Again, in great physical prostration, the endurance of pain may, it is allowed, become impossible.

The habitual conduct of human beings is next considered —skilled work, conversation, writing, &c. These are regarded as cases "where motor energy is brought into use as the servant of intelligence and will, in absence of any sensory impulse or physical condition, which could account for motor activity, under laws regulating the nerve apparatus." The case of a skilled mechanic is considered in some detail, and Professor Calderwood does not think there are any sensory impulses adequate to initiate this movement, but refers their initiation to deliberation and volition. He would restrict his opponents to a hypothesis which recognises beyond the sensori-motor apparatus another kind of nerve apparatus, "intellectual cells and volitional cells," which, literally understood, as in this case the author might seem to intend, would be as unmeaning as a blue smell or a solid area. But of course what his opponents would mean is that the nerve-cells of the highest centres are the seats of molecular disturbances. Whether these disturbances are to be regarded as the physical side of some unknown existence which, under another aspect, we know as states of consciousness, is another question. In dealing with human conduct we have to consider nerve-energy; in dealing with mind we have to consider states of consciousness. Professor Calderwood will be criticised for not attempting to analyse Will, Deliberation, &c., into any simpler elements, but his critic would be obliged to admit that so long as Reason and Will are regarded as they are by the author as entities quite distinct from the series of related feelings, a strong case is made out by him in favour of his general position. Here, where so much depends upon introspection, agreement between psychologists will, we fear, be long in coming about. So long as Herbert Spencer can perform

the feat of analysing his volition and reason into related feelings, he will probably think that Professor Calderwood might succeed in doing the same. And no doubt when Will is regarded as the "unbalanced surplus of Feeling," most of the arguments in this chapter lose their cogency, the question then being narrowed to the relationship between Feelings and Forces. But we are not prepared to admit as quite certain that this "surplus," though it may determine the Will is the Will itself; and therefore we should have to confess to not having yet succeeded in performing the Spencerian feat ourselves. This, however, may only prove our clumsiness in mental gymnastics.

Turning now to the other aspect of the question, it is proper that we should consider whether the author does justice to the powers of brain in regulating conduct? It will be admitted that in the brain we have the opportunity for another remarkable parallelism. In a place of meeting for impressions from all parts of the body, and one in which the innumerable commissural fibres allow for the revivication of activity in other centres than that primarily stimulated; and in short, where these recipient regions are connected with a vast number of motor districts, in which a disturbance is set up either strong enough to cause the appropriate movement, or so weak as to be only a nascent motor impulse, we have a field for the play of innumerable opposing forces, only ending in a distinct motion after a long period of hesitation. It may well be granted that here real sensori-motor centres are at work, for we have the evidence of incipient movements going on all the while, as when the individual is debating something in which the remembrances of words are largely used, in which case the nascent activity of the speech centre causes slight inaudible movements of the vocal organs; sometimes the discharge becoming so strong that words are involuntarily uttered; or slight movements of the hands occur, the beginnings of movements which the represented actions would render appropriate; or again, straining movements of the eyebrows, and turnings of the head are observed, actions which would clearly be fitting if these objects were actually presented which are only represented.

Professor Calderwood gives as an illustration of the insufficiency of the nervous system, the weaver, who, while working the treadles with his feet, is employing the shuttle with his hands, in accordance with a pattern hung before

him, and observes that the former action is merely sensori-motor, but the latter not, for "intelligence is not directing the feet, but intelligence is directing the hands." The case cannot, however, be admitted to show that the difference between these actions is not attributable to the nervous system, connected, that is to say, with the greater complexity in the action of the hands than in that of the feet. In accordance with this, the weaver, when he first began to work the treadle, would undoubtedly be conscious of very considerable voluntary effort, and some deliberation as to the right moment at which to press down the foot. Everyone accustomed to the use of a treadle will confirm the fact that should he chance to amuse himself by turning his friend's lathe, or his mother's sewing machine, he has at first to give considerable attention to the action of his feet, so much so that he would find it difficult to employ his hands in any careful work at the same time. It is only by practice that the action goes on, as we say, of itself, which means that the appropriate nerve channels have become far more direct and less resistant, and *may* mean that a lower centre is adequate to the co-ordination of the movements. An action, in short, once performed with difficulty and conscious effort can now be readily performed without attention. May this intermixture of the voluntary and the sensori-motor functions be taken as a proof that the difference between them is not absolute, but that the one gradually merges into the other? We are not satisfied that the inference is warranted; though we do not consider that more is indicated than the re-action of encephalic and spinal centres subserving different functions. In the case of the hand, the impressions consist of visual impressions of considerable complexity, as well as the tactual stimulus, while the movements necessitated are also of considerable complexity. It would be an interesting speculation whether, supposing the forefathers or foremothers were to be occupied in weaving the same pattern for a few millenniums, their offspring would not at length be capable of weaving the pattern instinctively, and without attention.

Memory is dealt with in the ninth chapter, and a criticism is made upon Bain's calculation as to the possibility of storing up "acquisitions" in the cerebral cortex. Although no doubt this hypothesis involves the supposition that two different "acquisitions" require two plexuses which are *not identical,* it does not require that they should be wholly

different, seeing that the two acquisitions may involve certain common elements. That the different acquisitions depend upon different *combinations* of a comparatively few elements can be readily appreciated on considering language, to which Professor Calderwood refers with a different intention. He points out that Cardinal Mezzofanti spoke thirty languages fluently. Marsh has calculated that the number of extant English words does not fall far short of 100,000. If, then, we imagine it possible that a man can remember 3,000,000 words, the author leaves it to be supposed that at least 3,000,000 cells must be present in the speech centres. This calculation is invalidated by the consideration that all these words are made up of a few elementary sounds. If, then, we suppose that each possible sound is represented by a cell or small group of cells, which can cause the articulation of each sound, we shall find the modest number of 100 cells capable of giving rise to the pronunciation of a much larger number of words than could possibly be present in Mezzofanti's vocabulary. It has been reckoned that with a hundred units taken in groups of two $\left.\begin{matrix}5050\\4950\end{matrix}\right\}$ combinations are possible, while the total number of combinations requires thirty figures to express it—a million, million, million, million millions! The same considerations, of course, apply to the other cerebral centres, and should be borne in mind when we are disposed to doubt the adequacy of the number of nerve cells.

The use of speech is discussed in Chapter X. The sounds uttered by animals, including the talking birds, are contrasted with the speech of man, and the education of deaf mutes is exemplified by several interesting cases. The fact should not be overlooked that the child is born with a brain which he inherits from a long line of human ancestors, as Romanes points out in a note to his discourse before the 1878 meeting of the British Association. The brain of a child has potentialities with which the dog's brain is not endowed. Aphasia is regarded by the author as confirmatory of the supposition that the speech-centres are merely the tools of a discriminating intelligence. The condition of Aphonia, however, would seem more pertinent; for the contrast between it and real Aphasia, that in which the actual memory of words is lost, appears to suggest such a conclusion less forcibly, and, indeed, to many indicates an opposite one; for although ample intelligence remains, the memory in one direction is lost. If the "logic of feelings" persists, the

"logic of signs" is gone. Still, the sense of identity, the Ego, is intact. But this aspect of the subject is much too wide a one to admit of being pursued further in this place.

Chapter XI. describes "Action and Reaction of Body and Mind." The association of brain disturbance with "mental symptoms," such as complete unconsciousness, is consistently considered from the point of view that the implements made use of by the intelligence are thrown out of gear. Of course the *primâ facie* conclusion would be from unconsciousness following injury to the brain, and the blank on awakening, that if the brain had not recovered itself, there would have never been a conscious state of existence again—the conclusion of the somatist. But that a complete blank in the consciousness after recovery does not absolutely prove that there has not been a conscious existence, is shown by the phenomenon of "double consciousness;" the completest possible oblivion of all that has been, in a sense, consciously transacted, taking place. This only shows how cautious we ought to be before drawing inferences from the ordinary facts of unconsciousness, and also of deep sleep, in which a person cannot express to us what he has been doing in the interval.

Both those who believe that the mind acts upon the body as the fingers of the pianist act upon the piano, and those who are somatists, use the term, "action of mind on body," but with the latter it is purely symbolic and employed as expressing certain facts, and avoids circumlocution. Take, for example, the fact of fear turning the hair grey. The somatist holds that all we are justified in concluding is that a purely physical series of events occurs, viz., the impression made by some terrible spectacle on the retina, the consequent cerebral disturbance, and certain molecular changes in some unknown nerves which regulate the nutrition of the hair, causing finally the blanching of the hair. Therefore it is said it is an assumption founded on Animism, and not evidence in favour of it, when we talk about the action of the emotions on the body. But on the other hand, whether the simile of the pianist's fingers on his instrument be a happy one or not, it must be observed that no account is taken in the preceding statement of the difference and the cause of the difference, between the results which occur in consequence of the *character* of the intelligence conveyed to the brain. One readily explains the reception of news through the optic or auditory nerve, and its transmission to the highest centres,

but no molecular action explains why consciousness of a piece of intelligence which is not shocking is followed by no, and that which is shocking is followed by a great and injurious effect. Whenever conscious appreciation and not a merely reflex action determines the character of the sequence to news conveyed to the nerve centres, we have something more to explain, and it is this residual phenomenon and phenomena of a similar kind, which are often overlooked in presenting what appears at first sight to be an adequate explanation. The world of consciousness has been entered, and how the transition has been effected no one pretends to tell. There is an idea formed, and however merely conventual and popular it may be to say that this idea influences the body, we are driven to admit two factors, and that what happens to one (the body) may altogether depend upon the conscious character of this idea.

We do not think it necessary to dwell upon the twelfth chapter, in which the phenomena of sleep and dreaming receive attention, further than to remark that we do not think the latter can be fairly adduced in favour of the position taken by the author. The appearance of profound sleep ought not to be taken as any proof of the non-activity of the brain. While there is a general repose there may be partial activity; some centres active, others inactive. We should strongly advise Professor Calderwood to reconsider the arguments employed in this chapter before another edition is published. Somnambulism, upon which he also relies, is an example, again, of isolated brain activity. In the chapter on "Brain Disorders," Professor Calderwood protests against the prevalent use of such phrases as "mental diseases," seeing that on his hypothesis it is the brain and not the mind which is diseased. With at least equal reason, those who have for many years striven to insist on the supreme importance of recognising the brain in insanity, have objected to the term, and have only employed it, in consequence of the inconvenience arising from its abandonment, for as a brain disorder is not necessarily a mental disorder, some circumlocution is required to avoid misunderstanding. The facts presented in this chapter are considered under the heads of imperfect development, disease and injury, and the same conclusion is reached as in the previous chapters. It is unnecessary to go through these points after what has been already said. The fact that physicians employ what is called moral treatment and intellectual training in the care of their

patients is adduced in favour of the author's position. The reply to this, no doubt, will be that no moral treatment can be conducted without acting in some way upon the senses and the brain. While this is true, however, the fact remains unexplained why the *character* of this teaching, the nature of the principles instilled, affect human conductin so remarkable a manner, even in diseased conditions of the brain as well as in health. Most mental physicians have known a patient unquestionably insane recover, and that suddenly, from the character of the particular idea set up in the mind. True, the channel was physical; but when this idea being brought into relation with consciousness induces recovery, we must feel we are dealing with a very different order of remedial phenomena, than when we act on the disease by opium or the bromides. And in truth, we are stating what is in perfect harmony with the protests already referred to as made by physiologists against confounding the two series of phenomena, the physical and the psychical. "I have been misled," writes Dr. Jackson, "by not having seen the distinctness of physical (nervous) states and psychical states in my earlier studies, and thus I feel bold to point out the evil results of the confusion of the two things. . . . Any psychical states and any physical states, normal or abnormal, are imcomparable; they have nothing whatever in common, even for reasonable contrast; the only possible contrast is, indeed, absolute, the two things being utterly dissimilar." Again, "There are two series of states (1), an immaterial series, psychical; (2) a material series, physical. . . . During the most refined emotional or ideational state, there are certainly physical changes, nervous discharges . . . but the emotional or ideational state is not the nervous discharge. . . . . Function is a physiological not a psychological term."—(*The Medical Press.*)

"In the Royal London Ophthalmic Hospital Reports, Vol. v. p. 14, I speak of Mind as being made up of sensory and motor phenomena; it should have been 'the organ of mind.'" So in the St. Andrew's Medical Graduates' Trans., iii, 1870, the sentence, "What is delirium except the disorderly revival of sensori-motor processes received in the past," should read, "What is delirium except *mentation* occuring during, &c."—(*Op. cit.*, Oct. 1, 1879).

Whatever, then, may be the difficulties connected with the consideration of the relation between mind and brain, one point is clear to us, that so far as science reaches, the ques-

tion of materialism is not decided one way or the other, although some of the facts and arguments brought forward by Professor Calderwood raise a presumption in favour of animism. "The matter," observes Dr. Jackson, "has simply nothing to do with 'orthodoxy' in any way. Some theologians seem to think the unorthodox must be materialists, and, on the other hand, some materialists think that the insistance on the distinctness of the psychical and physical arises from a desire to uphold the theological systems of the day. Both fail to see that the question is a scientific one, or if the nature of the relation be a question, a problem in metaphysics; it has no necessary connection with theology. . . . It is commonly supposed that those who hold the doctrine of evolution are materialists. This is a great mistake. Spencer writes, 'The doctrine of evolution, under its scientific form, does not involve materialism. . . . Indeed, among adherents of it, who are friends of mine, there are those who speak of the materialism of Buchner and his school with a contempt certainly not less than that felt by Mr Martineau.' . . . 'It is difficult to see how Prof. Tyndall could repudiate the hypothesis of materialism more strongly' [than in the following quotation]—'The passage from the physics of the brain to the corresponding facts of consciousness is unthinkable. Granted that a definite thought and a definite molecular action in the brain occur simultaneously, we do not possess the intellectual organ, nor apparently any rudiment of the organ, which would enable us to pass, by a process of reasoning, from the one phenomenon to the other. They appear together, we know not why.'" (*Op. cit*).

Hughlings Jackson is right. It is no question of "orthodoxy," or otherwise. Having reached the goal to which modern physiology conducts him, the investigator is at liberty to cast about for evidence from other sources of knowledge, and if, on this evidence, he suspects there is some intelligence behind the cells, science has no absolute veto to interpose. This is true, even if the Somatist tells him that, while there is nothing to disprove an independent intelligence, all mental phenomena known to him are sufficiently explained by material processes, should he (the investigator) have other than physiological proof of such an intelligence.

As then, the question is, on the highest physiological authorities, a confessedly open one, if a man feels with Professor Calderwood that "to stand between the allurements of sense and an ideal of rational life; to recognise the duty of

guarding against the former, and aiming at the fulfilment of the latter, and to accept it as one's life work, to rise by years of patient effort towards this rational ideal, are possibilities which seem to be altogether inexplicable under a scheme which traces the whole energies of human life to the action of nerve cells," he is at liberty to maintain with Carpenter, speaking as a physiologist, that "although the connexion between mind and body is such that the actions of each have, in this present state of existence, a definite causal relation to those of the other, so that the actions of our minds, in so far as they are carried on without any interference from our will, may be considered as functions of the brain, there is an entity wherein man's nobility essentially consists, which does not depend for its existence on any play of physical or vital forces; but which makes these forces subservient to its determinations."

If further, personal experience is to count for something, and he should feel with Tyndall that in his best moments he is not a materialist, or if he see with Huxley that "the errors of materialism may paralyse the energies and destroy the beauty of a life," and with Goldwin Smith, that "there are cases in which consequences are a test of truth," he is at liberty to frame a non-materialistic hypothesis, not opposed to, but supplementing the teachings of cerebral physiology. Nor is he forbidden to formularise it in the terms of Sir James Paget and Dr. Kirkes: "to explain certain facts, no hypothesis is so sufficient as that which supposes an immaterial principle not necessarily dependent for its existence on the brain, but incapable of external manifestation or knowledge of external things, except through the medium of the brain and the nervous organs connected therewith."

In concluding the review of a book of which many questions raised by the author have been either passed over, or very inadequately considered, we thank him for the temperate spirit in which he has addressed himself to so burning a question, the absence of anything like unfair treatment of his opponents, and for an able, if not always convincing presentation of that side of the relation between mind and brain which we are too apt to lose sight of in our physiological and pathological studies.

La Syphilis du Cerveau. Par M. Alfred Fournier. Paris. 1879.

At the present time, when syphilitic nervous affections are the subjects of much investigation, the appearance of M. Fournier's voluminous work is most opportune.

A word or two as to the lesions, and more as to the symptoms of brain-syphilis.

Including under the term both the nervous substance and its meninges and vessels, the Brain is affected by syphilis either directly or indirectly; *directly*, when attacked primarily by syphilitic lesion—*indirectly*, when affected by lesions which are the result, the extension, the consequence of preceding changes of some neighbouring part, as the cranial bones. With lesions of the former kind are we alone concerned here. These direct lesions are of two orders:—

I.—Special, characteristic, primary lesions.

II.—Ordinary, common, secondary lesions, dependent upon the former, or primary ones, and not possessed of specific characters.

Lesions of the former group (the special and primary) affect either the cerebral meninges, the cerebral vessels, or the encephalic nervous substance, but, as a rule, implicate several of these structures simultaneously. They consist of cellular hyperplasiæ, whose ultimate term is either sclerosis or gumma, and are summarised under the headings of meningitis, arteritis, and encephalitis; each, respectively, of sclerous and of gummatous character.

Lesions of the latter group (the secondary) are of two orders, being either (*a*) those dependent upon an inflammatory process, or (*b*) due to local ischæmia.

Passing on to the symptoms, we must complain of our author's confusion in the use of words descriptive of the clinical divisions and sub-divisions of cases of cerebral syphilis—the use interchangeably of terms such as "groups," "orders," "forms," "kinds," "varieties."

The symptomatological forms of brain-syphilis are either—

I.—The early, the initial, the primary, or—

II.—The consecutive, the terminal.

As for the former, Fournier divides them into six forms; 1, the cephalalgic; 2, the congestive; 3, the convulsive; 4, the aphasic; 5, the mental; and 6, the paralytic.

As for the latter (no recovery taking place), the disease either becomes fixed and perpetuated in its predominant initial or primary form; or, in another group of cases, it becomes more generalised by the combination and fusion of several initial or primary forms, and therefore is evidenced by a rich variety and complexity of symptoms; from amongst which the disorders of motor power and of intellect stand out in strong relief and importance.

Reverting to the former, or initial, semeiological forms of brain-syphilis, we must, in the first place, say that the above division of Fournier's is highly artificial. The forms only represent groups of symptoms, several of which almost invariably are combined, and in the most varied ways, in actual clinical experience. And an analogous criticism applies to the sub-divisions made of the fifth, or mental, of these forms—the one of more special interest to the readers of this journal, and to which attention is restricted in what follows.

Preferably, in our opinion, a pathologico-anatomical division may be made; namely, a division of cerebral and mental affections as they arise from syphilitic neoplasms, or from syphilitic inflammation, of the several intracranial structures; or from the toxaemia, or, again, from the cachexia, of this wizard malady.

Or, for practical clinical purposes, we find convenience in the division into several groups, according as syphilitic disease attacks mainly either (*a*) the convexity of the brain and meninges, or (*b*) the basal arteries and base, or (*c*) affects a similarity to the phenomena of general paralysis (of the insane).

The intellectual troubles of cerebral syphilis pertain to two great groups; the one consisting of symptoms slow of evolution, and of depressive form, constituting a kind of gradual sinking in intelligence, of mental lowering, of progressive hebetude. The other consisting of symptoms more active, and of more rapidly developed intensity; viz., of the phenomena of cerebral exaltation or excitation, of more or less acute states of raving, of mental derangement, of mania. Of these groups the former is by far the more frequent. According to Fournier, it allows of two degrees or varieties :—

I.—Simple intellectual enfeeblement.

II.—Incoherent hebetude, or intellectual failure with incoherence.

In the former of these varieties the intellectual impairment

is associated with changes of disposition, habits, and temper. The most remarkable of the symptoms is the greater or less degree of amnesia—amnesia the oncoming of which is either gradual and progressive; or is attained, as it were, by leaps; or, rarely, by a sudden "amnesic stroke."

In the latter of the above varieties mental failure and mental alienation coexist, and may do so from the outset; but in the vast majority of the cases the symptoms at first are merely those of simple intellectual weakness, which, later on, becomes complicated with insanity. So that, to the intellectual enfeeblement of the former variety, there is here superadded an intellectual disorder or derangement; of this latter, incoherence is the predominant expression. The incoherence displays itself in the demeanour, action, and language. The mental disturbance is general, is not systematised, and no fixed idea or delusion is evinced.

Finally, in a few exceptional, indeed rare cases, the mental disorder is more partial, more systematised; of melancholic or hypochondriacal form, with associated intellectual and physical enfeeblement; or the general hebetude is complicated with fixed ideas or delusions, as, for example, of persecution. Transient, undetermined suicidal tendencies may arise.

The second large group of intellectual troubles, taking origin in cerebral syphilis, is constituted by phenomena more active than those observed in the first group, more rapid in their invasion, and consisting of intellectual excitation, delirium, maniacal incoherence, mania. Representative examples of every form of common insanity may probably be found here. Several forms are described by Fournier. In the first place there may be delirium, similar to that of meningitis, or incipient or local encephalitis; with the delirium are general excitement, restlessness, perturbation, loquacity, insomnia, varied by transitory somnolence; the delirium may be sudden, and may become furious. In the second place there may be cerebral excitation, which, stopping short of positive mental alienation, yet evidences itself as exaltation, exaggeration, ill-directed activity, and oddity, in all the acts, language, and demeanour of the patient. A third type is that of mania—a morbid scene in which exuberant loquacity stands forth in bold prominence. But, for the most part, syphilitic mania lacks the intensity, the tumultuous mobility, and violence of ordinary acute or sub-acute mania. In the fourth place stand cases far more rare, and of several kinds; those in which vivid hallucina-

tions predominate; those of acute lypemania—or, again, of predominant monomania, particularly monomania of persecution; and, finally, those of impulsive insanity.

The more active acute mental disorders of the group just described, and dependent upon cerebral excitation, follow one or other of two modes of invasion. For they may be preceded or accompanied by other cerebral affections of specific origin, whether cephalalgia, convulsion, aphasia, or seizure apoplectiform or paralytic; and these associations and combinations of various cerebral symptoms are by far the more frequent; or, on the other hand, the psychoses in question may be isolated, and free (at least at first) from any such association or combination; and this is much the more rare mode of invasion. In the former class the diagnosis of the specific nature of the case is relatively easy. The variety, association, and succession of the symptoms reveal the specific nature of the phenomena, and establish the diagnosis on a rational basis. In the latter, and more rare class, that in which the intellectual disorders are neither preceded nor accompanied by other syphilitic cerebral affections, but occur in single and solitary isolation, the diagnostic difficulties are far more difficult. No history of syphilis may be obtainable. But granted a history of syphilis, and, later on, the advent of mental disease—what warrants us in attributing the latter to the former as effect to cause?

Is it some particular type or pathognomonic attribute of the mental disorder?

Is it the detection of coexistent indications of syphilis in this part or in that?

Is it the verification of personal or hereditary predisposition to psychoses?

None of these will be our warrant. For the types are the same as those of mental disorders from other causes; contemporary signs of syphilis are usually wanting; and, for obvious reasons, the presence or absence of predisposition has only a restricted and comparative value. Thus in the life-history of the same subject we are reduced to the two facts—syphilis and mental alienation—occurring in successive chronological order. Clearer diagnostic distinctness than this is not attainable at present, and hazardous speculation and assumption supplant legitimate conclusions as to the pathogenetic relationships of the mental affection when its specific origin is postulated. This we have always felt with overwhelming force when treating, as we have

treated, many scores of such cases. And, in truth, Fournier seems to confess this same impossibility of ascertaining the specific origin in most of the cases of this particular class. But he formulates an important practical rule for the formal exhibition of antisyphilitics under the circumstances described. This, indeed, has been our own practice for a number of years, and based upon our own studies of the subject.

Fournier fails to distinguish the cases of acute syphilitic insanity supervening during the early secondary stage of the evolution of syphilis, from those supervening during the tertiary stage. The latter are not rare, and are well-proven; but, as we have insisted upon elsewhere, some of the asserted examples of the former are most inconclusive and dubious. At least in some examples, the pathological relationships are probably different in the two groups, and we deem it of importance not to confound them.

As to the ulterior course of the intellectual disorders of cerebral syphilis. If untreated, or they prove refractory to treatment, they persistently grow worse, follow a progressive course, ally to themselves various complications, and finally end in dementia, even when they do not begin therewith. And for this slow evolution several months, or one, two, or three years are requisite.

In a few rare cases cerebral syphilis sets up intense and rapidly lethal symptoms.

The thirteenth lecture is devoted to the consideration of pseudo-general paralysis of syphilitic origin. With reference to the much-debated question of the relations between syphilis and general paralysis, Fournier, as others have done before him, makes mention of two absolutely distinct groups. The one consists of cases in which true general paralysis of the insane supervenes in syphilitic subjects, but not in any unusual or undue proportion. As between the two extreme views—on the one hand, that in cases such as these, the syphilis is a mere accidental coincidence, and counts for nothing etiologically; and, on the other, that in them, syphilis, *ipso facto*, is directly pathogenetic, he takes up an intermediate position, believing that syphilis may aid in the production of such disease, not by acting as a specific cause but as a diathetic, and thus exerting merely an ordinary disturbing influence upon the organism.

The other group is that termed by him pseudo-general paralysis of syphilitic origin; as examples of which he limns

cases in which the symptoms, both psychical and somatic, and the morbid anatomy, read as do those of cases of general paralysis.

But they differ from general paralysis, *as to symptoms*—

(*a*) In the absence of ambitious conceptions, of megalomania.

(*b*) In the absence, or slightness, of the trembling of lips and tongue, which, when present, is unlike the fibrillary vermicular twitching or quivering of general paralysis.

(*c*) In the presence of true paralyses and pareses; particularly of partial, strictly local paralyses, and of hemiplegia; while, on the other hand, at one moment he denies the occurrence of true palsies in "general paralysis," at the next, admits the occurrence of hemiplegia therein, although with excessive rarity only. As to which Fournier is certainly in error.

(*d*) Further differences exist; in *the mode of onset*, which in cerebral syphilis is often by apoplectiform or sudden paralytic seizures, in general paralysis usually by intellectual or moral disorders; in *the evolution and course*, which in cerebral syphilis are far more irregular and variable, both as to the manifestations and their succession; in *the duration*, ill-defined in the syphilitic; in *the appearance and condition*, which in cerebral syphilis are often cachectic; and in *the prognosis*, which in the syphilitic cases is by no means always or altogether hopeless.

They differ from general paralysis also, *as to the lesions*—

(*e*) In the predominant lesion being meningeal, a hyperplastic meningitis—a meningeal sclerosis—while, relatively, the lesion of the grey cerebral cortex is much less. Whereas in general paralysis the lesion of the grey substance is predominant, that of the meninges subordinate. The cortical lesion, also, is more circumscribed and localised in cerebral syphilis than in general paralysis.

To discuss this view in requisite length and detail is quite beyond our present scope and limits, and we hope to do so in another number. Suffice it to say here that, in our view, Fournier has included under the term "syphilitic pseudo-general paralysis" both certain cases of syphilitic disease, resembling general paralysis (of the insane) more or less, and certain cases of true general paralysis. Furthermore, he refers to one kind alone of syphilitic lesion as bringing forth a resemblance to true general paralysis, while the writer of this review would assign that *rôle* to several kinds of syphilitic lesion in different cases.

It only remains to say that the work under review is published in the form of clinical lectures, and in an easy and familiar style. It forms a most able and most welcome contribution to the syphilography of the day.

W. J. M.

A Manual and Atlas of Medical Ophthalmoscopy. By W. R. Gowers, M.D., F.R.C.P., 1879.

This book, though devoted to the whole range of medical ophthalmoscopy, deserves notice in this Journal from the known trustworthiness of the author, and from his great knowledge and experience in diseases of the nervous system. The book itself is handy and complete, and is very beautifully illustrated. We shall only particularly notice the parts that refer to nervous diseases.

The use of the ophthalmoscope can never be learnt from books, and is rarely acquired after men have reached middle life, and to all the difficulties in its use, physicians to asylums have added the restlessness or senselessness of their patients. Many rash statements have been made in reference to the appearances of the eye in the insane, and most of these have been developed out of the theories and wishes of the observers.

Dr. Gowers' observations are unbiassed, and we believe in every case represent the opinion of the most experienced oculist as well as physician.

The book is divided into two chief parts, the first referring to changes in the retinal vessels, optic nerve, &c., of general medical significance, and the second to ophthalmoscopic changes in special diseases. Useful appendices are added, on the instrument itself, its practical use, and on test-types, while fifty selected cases are given. The book concludes with sixteen carefully prepared, generally well-executed plates.

The first use of the ophthalmoscope will help in many cases in clearing up the causation of mental disease, and in some cases absolute truth in diagnosis can be obtained early only by its use. In cerebral tumours, rare certainly in asylums, the presence of optic neuritis may enable us to point not only to the cause of mental symptoms, dementia or epilepsy, but may enable successful treatment to be followed.

At page 161, Dr. Gowers begins the consideration of the changes found in the insane, and draws attention to the great difference of opinion among observers. Our own idea, from

considerable experience is, that asylum physicians have not sufficient knowledge of the numerous appearances that are quite compatible with health, and set down any little difference from their ideal type as disease. We cannot agree with our author when he says that cases of "organic" brain disease, tumour, &c., often find their way into asylums. Out of between one and two hundred post-mortems made on the insane, we have only once found abscess and once tumour. Of course syphilitic diseases and softenings are very common.

Changes in the eyes are more common in general paralysis of the insane than in any other form of insanity, and the opinions of various authorities are given. Dr. Gowers found most of the discs of general paralysis normal, and we believe Mr. H. Power found the same to be the case after examining a very large number of cases at Hanwell. Sight is impaired in a few cases, and, in our experience, cases with ataxic symptoms often have grey atrophy, and this we have several times seen well marked.

In mania Dr. Gowers only met one case of disease of the disc, and here there was congestion with softened edge, and in melancholia he found nothing abnormal, though he maintains that Jehn described hyperæmia in 40 cases and neuritis in two. In chronic dementia, Dr. Clifford Allbutt found many changes, but Dr. Gowers says nothing for or against the observations. Our own opinion is that, in these chronic cases, changes due to age or other physical states are recorded, and though they may be facts, they have no connection with the mental disease, any more than connective tissue changes and atheroma had anything to do in the causation of the primary insanity of patients who died of old age 20 or 30 later with chronic dementia.

The state of the disc in acute dementia is no more definitely pathological, though Dr. Aldridge has described œdema of the retina around the disc.

All this is unsatisfactory in one way, but we believe Dr. Gowers has done good work by showing that one thoroughly used to the ophthalmoscope in general medicine does not find any definite changes in insane patients.

Much more observation specially directed to the cases of general paralysis will doubtless assist in subdividing the great class of nervous diseases, and may enable us in some instances to distinguish syphilitic diseases of the brain from general paralysis, and in other cases to refer dementia with tumour of the brain to its real cause.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *American Psychological Literature.*

By D. Hack Tuke, M.D., F.R.C.P.

"American Journal of Insanity," Vol. xxxiv., January, 1878, No. 3.

"The Journal of Nervous and Mental Disease," Vol. iii., January, 1878, No. 1.

"Archives of Medicine," Vol. i., April, 1879, No. 2. June, 1879, No. 3.

(*Continued from July* 1879.)

The number of the "American Journal of Insanity" Vol. xxxiv. No. 3, contains the address on "Mental Hygiene," delivered by Dr. Gray, the Editor, at the International Medical Congress, at Philadelphia. To cite all the passages which convey the principal truths which Dr. Gray wishes to enunciate in his terse and striking language would occupy a large part of the space at our disposal. The term is certainly employed in a very comprehensive sense. It "covers all the broad field of human energy, embracing all the professions and every branch of industrial life. It looks after man's moral as well as his intellectual nature, for the two cannot be separated. It enters into his domestic and social conditions, and follows him in his duties as a citizen." The problem is no less than to discover the best scheme for the development of human nature and the control of his passions.

"It resolves itself, on the mental side, into a statement of the best methods of education and training to secure the highest and truest culture. And this is the line of thought which forces itself upon the mind as the true exposition of the words mental hygiene—a system of culture embracing all the interests of man in all his relations of life; education in its highest expression and broadest application; education to secure, not simply a knowledge of man and of nature and her laws, and the awakening of the faculties to a deep obedience which will make man reverence *her* in all *her* works and ways, or in the beautiful language of Professor Huxley, 'the instruction of the intellect in the laws of nature, under which term I include not merely things and their forces, but men and their ways, and the fashioning of the affections and the will into an earnest and loving desire to move in harmony with these laws,' adding 'for an education means neither more nor less than this'—clear emphatic words of which no one can mistake the meaning; but far more than this, we should demand a broad and deep culture of man which would

do all this, and which would also awaken in the soul a full consciousness of its responsibility to One by whom all things exist; an education which would not only raise man to harmony with the laws of nature, but which would also raise him to obedience to the laws of God, which would make his life real, earnest, pure, and useful." Dr. Gray quotes Bulwer in the "Caxtons," curing a young scholar at Cambridge who suddenly caught a cold fit of free-thinking, with great shiverings, from wading out of his depth in Spinosa. "Wading out of his depth," observes Dr. Gray, "is admirable. . . . If we look through the history of such mental drifting, we cannot but recognise it as productive of vast evil. . . . Now the mental hygiene suggested by Bulwer was as admirable as his diagnosis." Dr. Gray enforces the necessity of practical occupation to save the mind becoming unbalanced by speculation. "All can find, in morbid states, some serious mental occupation, if it be only their own sphere of labour, or some useful course of reading which will occupy them out of themselves; this is the secret, out of themselves. This would be substituting *action* for mere sentiment, a most important principle in mental culture. No lesson is more important than this, and it gives emphasis to what all experience teaches, that *in the substantial realities of life* are to be found the true sources of healthful mental discipline and growth."

Passing from individuals to nations, Dr. Gray observes that the lesson of mental hygiene, learnt from all examples, is "not that education and wealth, nor the refining influences of æsthetic art, will suffice for the highest development of national mind, but that if underneath, and through all these are not interwoven the great truths of moral responsibility to the author and upholder of all governments, lifting man above the dominion of the baser passions, the nation dies as an individual dies."

Since this Address was delivered, its author has visited our country, and been heartily welcomed for his reputation as an alienist, for his geniality, and for his moral worth, the only cause of regret being that he was prevented by a Continental tour from fulfilling his intention of being present at the Annual Meeting of the Association last August, where he would have met with a cordial reception. The Editors of this Journal would express a hope that Dr. Gray may before long be able to revisit their shores.

The "Association Reminiscences and Reflections," by Dr. Farland, are extremely interesting. Distinguished American alienists, familiar as household words to ourselves, and now gone to their rest, are described with a graphic and appreciative pen. The Association was formed in 1844, three years after the formation of our own. Only four of the men who met together to establish it, are alive—Drs. Ray, Butler, Earle, and Kirkbride. Of those whose obituary notices are given, we should suppose Bell was, take him all in all, the most remarkable man. We should have liked to find room for nearly the

whole of the portraiture, but must restrict ourselves to a curious reference to his taste for occult enquiries. "He approached 'Spiritualism,'" it is related, "strictly in the spirit of scientific enquiry. On more than one occasion some of his observations were communicated at meetings of the Association, but never apparently transcending the ground of the cautious scientist. It may have been only the surmise of observing friends—and it is here given as hardly more—that these investigations, perhaps unconsciously to himself, gave a cast of their own to the closing parts of his life; that there was, despite his always expressed scepticism as to anything supernatural in what he observed and described, a melancholy fascination in enquiries, that even in the idea brought him into relations with the loved and lost."

This sketch of the Association closes with a summary of what it has accomplished, and traces, no doubt justly, the present condition of the American asylums to the sustained impulse it has given to their management. Doubtless the observation is correct that "if there are yet remaining complaints of the bearing of Expert testimony, as its province is entertained by this body, we are confident that it is not a fault of these principles in themselves, but rather of imperfection of legislation, or the failure of Courts to assign to them their well-defined and proper place."

We have always considered that the Association of the Alienists of America sets us in England a good example in the extended period over which their annual meetings last, and the consequently much larger amount of work they get through. We think that were we Americans, we should meet the English advice so often proffered on the subject of mechanical restraint by a challenge to this effect—"If you will copy us in the character of our annual meetings, we will begin to consider whether we will not copy you in the matter of non-restraint."

An article on Chloral, by Dr. Macdonald, should be read along with that by Dr. Savage in this Journal (April, 1879). He concludes that this drug primarily tends to increase the force of the heart's action, as shown by an increase of arterial tension and a decrease of the pulsations; that large doses prolong this effect, but the reduction in their number is not proportionate to the dose; that its secondary effect is to diminish both the force of the cardiac impulse and the arterial tension, and that its active effects are most marked in from twenty minutes to an hour. These effects resemble chloroform, but they appear less rapidly and continue longer; sense of weight in the head, numbness or prickling of extremities with gradually increasing drowsiness. Patient becomes loquacious, his speech thick, and he is unable to articulate distinctly. There is warmth in the stomach; his gait becomes unsteady, and he acts as if partially intoxicated. If recumbent he soon succumbs, and sleeps soundly, but can be easily aroused. Over chloroform its great advantage is comparative slowness of action, its *safety* and ready control.

So far from producing cerebral congestion, as asserted by some, it arrests the functions of the brain by diminishing the blood supply. It is unequalled as an hypnotic, and is invaluable in insomnia from cerebral hyperæmia in 20 to 40 grain doses, repeated every four hours, *s. o. s.* The sleep lasts from four to eight hours. Repetition does not diminish its power. Restlessness and muscular activity by day is controlled by small doses (gr. x to xx). The main cause for caution is in *organic* disease of the heart, but the danger is greatly lessened by digitalis.

The bromides and hyoscyamus are most useful adjuvants. In acute mania, with rapid tissue changes, stimulants should be combined. The importance of chloral in infantile and puerperal convulsions is insisted on. Dr. Polaillon, of Paris, uses it as an enema in the former (gr. iij aquæ ʒv), repeated twenty-four hours after. Dr. Salter's experience, recorded in the "Practitioner," is quoted in regard to chorea minor, in which 45 grains, twice daily, in an enema were given; increased with success to 60 grains. The use of chloral as an anæsthetic by Professor Bouchut, of Paris, is cited; he having employed it with children in 10,000 cases, without one fatality.

"Surely," concludes the author, "the results which I have mentioned, must tend to establish the value of chloral as a therapeutical agent."

A striking example in a female of resolute determination to mutilate herself, is described by Dr. Channing. The literature of self-mutilation appears to be rather scanty. There was a remarkable degree of anæsthesia in this case.

"The Journal of Nervous and Mental Disease" for January, 1878, contains many valuable articles. The first, "Contributions to Encephalic Anatomy," by Dr. Spitzka, is alike minute and accurate. Dr. Ray's paper, "On the Cost of Constructing Hospitals for the Insane," is written in a liberal spirit, while at the same time it guards against extravagant outlay, the consequence of misjudged selection of sites, and the like. He is not in favour of an asylum providing for more than 300 patients, even on economical grounds, and arrives at the conclusion that for this number the cost per head (including land) may properly range from £200 to £300. Dr. Ray thinks that the cost of building in the States would be 50 per cent. greater than with us. Making this allowance, we should have the corresponding figures at £100 and £150. Yet while, for the harmless lunatics, we can build for £86 per head, for the County Asylum the cost usually, and often greatly, exceeds £150 and even £200. But if we were to take the very extravagant figure of £300, and add to it the extra cost for building in America (including land), it would not amount to the immense cost of the Danvers Asylum in Massachusetts, namely, £720 per head, but only £450. Dr. Earle has contrasted with this princely outlay the cost of the Cupar Asylum.*

* The Superintendent (Dr. Brown) informs us that this asylum, built for 250 patients, cost £18,200, or about £73 per head; the furnishing cost £5,000, or

There is an elaborate article "On the Management of the Insane," by Dr. Dewey, of the Elgin Asylum, Illinois. He deplores "the sad idleness" which prevails "in most of our asylums." This grievous state of things is to be found in too many of our English asylums, and we are afraid that habit often blinds our eyes to the fact. The writer dwells on the rebellion against rigorous confinement so general in asylums, and considers the various plans devised to mitigate it—as the Cottage System, &c. On the authority of Dr. Folsom, he considers that there is much more liberty enjoyed in American than English Asylums. Good results are expected from the introduction of the cottage system—the minimum cost being at the rate of £100 *per caput*—the dwellings to be grouped quite separate from each other around the central building. Dismissing many of the objections usually felt to cottages, he admits the added difficulty of supervision. Abuses are more likely to arise—attendants are themselves less under control; and as regards female patients, the special difficulties are obvious. All these objections are only too real even when these cottages are placed on the grounds of the institution. The only reply is that the balance of advantages is in their favour. Dr. Dewey does not omit to point out, after showing the gain of economy, the increased expenses involved by more attendants, and the carrying of meals to the cottages, or providing cooking arrangements, except when the patients repair to the asylum dining hall. On the next section of Dr. Dewey's paper—the mechanical restraint of the insane—we need not dwell, further than to observe that to represent the imposition of hands as the substitute for mechanical restraint is not correct, except upon particular occasions, because the system to be fairly stated and judged must be taken as a whole; otherwise, no doubt it deserves to be represented as "a fanciful theory." However, in the main the views expressed are wise and unprejudiced, and any one holding them would doubtless end in resorting to restraint in only very desperate cases. Having expressed ourselves on this subject in a former Retrospect, we will content ourselves by referring back to the Journal for October, 1878.

Some practical remarks follow on the effect of asylum routine upon the individual patient. They are conceived in the spirit of Griesinger's golden words, § 206, "Nirgends ist das Bedürfniss strengen Individualisirens grösser, als in der Irrenbehandlung, nirgends ist ein stetes Bewusstsein darüber nothwendiger, dass nicht eine Krankheil sondern ein einzelner Kranker, nicht die Tobsucht sondern ein tobsüchtig Gewordener das Object unserer Behandlung sei."

£20 per head; the land £6,228, or £25 per head (about 100 Scotch acres). The number of single rooms is 60. A new wing is being built for 70 females, with dining hall for 100 patients, and kitchen, &c. Estimated expense of erection, £72 per head. The building is superior to that of the present asylum, and the single rooms (18 in nnmber) are larger. These particulars may interest American Hospital Superintendents.

On the treatment received by patients from attendants, Dr. Dewey makes some observations, the force of which will not be gainsaid by any one who has lived in an asylum for the insane. It seems that in the American Asylums "the wages received are generally only such as the commonest labour and service command in the outside world." While this is the case, the evils deplored will no doubt continue, although some of the best attendants we have known have been very poorly paid. All that can be said is that good wages will not ensure good attendants, but that in the long run it will be found to pay to give them. The proportion of attendants appears to be much lower in the States than in England, and this no doubt is a point possessing all the importance the writer of the article attaches to it. Thoroughly trained nurses are said to be a rarity.

The paper closes after glancing at the relation of the asylum to the public, to its own officers, and to the advances of science, with accentuating the position that greater freedom altogether is wanted in our asylums. "To-day perpetual enchainment in a living tomb is no longer tolerated, but fetters of the Spirit are equally odious to our age, and the philanthropy of the time will not rest until it sees the asylum for the insane deprived of its many remaining imperfections." The whole paper is characterised by good sense.

The "Neurological Correspondence" contains several interesting notes. At the Medico-Legal Society of New York, Dr. Finnell insisted that medical men should be much more strictly dealt with than they are in fatal cases of chloroform and other anæsthetic administrations. Anæsthetics are not sufficiently watched. Many lives are recklessly sacrificed by employing too young men to administer them. He said that ere long actions would be brought against physicians for malpractice. A law ought to be enacted, he held, which would take them to task for culpable negligence. Dr. Finnell's own conscience smote him for "the damage and mischief" he had done in younger days in the administration of ether.

Dr. Mann, of New York, in a paper read before the same Society, on "Mental Responsibility," speaks strongly in favour of admitting "moral insanity." It is "an unquestionable form of insanity."

He relates the case of a man who had been suffering from sunstroke, and took a small quantity of alcohol, and then went out for a walk. He met a friend with whom he had been familiar for years, and a discussion arose as to the respective merits of certain politicians, when the discussion becoming excited, the man pulled out a revolver, and shot his friend. He then went in a confused and dozed state, and sat for some hours on a dock near a river, and subsequently went home and burst into tears, and informed his wife of the sad occurrence, and gave himself up at the police-station. There was a total blank in the prisoner's mind respecting the events immediately pre-

ceding the pistol shot, which seemed to have aroused his attention at the time, and he had no recollection of the fact that he had sat on the dock for some time afterwards. Dr. Mann gave it as his opinion that there had "existed for months previous to the occurrence a profound moral or affective derangement, which from its marked periodicity was evidently epileptiform in character, and that the sudden homicidal outburst supplied the interpretation of the previously obscure attacks of recurrent derangement. These had evidently been induced by sunstroke in this case, an epileptiform neurosis, which had been manifesting itself for months, chiefly by irritability, suspicion, moroseness, and perversion of character, with periodic exacerbations of excitement, all foreign to the man previous to the attack of sunstroke. The epileptic neurosis often exists for a long time in an undeveloped or masked form, and is moreover connected with both homicidal and suicidal mania. Such attacks are often noticed to occur periodically for some time before the access of genuine epilepsy. Epileptic vertigo is a recognised disease. There is abundant testimony to show that during such seizures persons may perform actions, and even speak and answer questions, automatically. . . . Such patients may entertain delusions of fear and persecution, and commit criminal deeds as a result of such delusions. When such cases, in their terror or distress of mind, commit such violent deeds, they either experience immediate relief, as was the case with one patient under my care, who was only relieved by suddenly breaking out a pane of glass, when his paroxysm would subside, or they continued in a state of excitement, unconscious, or very imperfectly conscious, of the gravity of their acts. When they become conscious again, their memory is apt to be very uncertain as to preceding events."

Mr. Brainard (lawyer), of New York, read a paper in which he discussed the use of alcohol in relation to the effect it may have (1) on testamentary capacity, (2) as to fitness to give evidence, (3) as to competency to contract obligations of a binding character, (4) as to general capacity for wise business management, (5) as to criminal tendencies, (6) as to responsibility for acts of a criminal character, (7) as productive of poverty and pauperism. They are suggestive headings, but they are not pursued in the paper; and the only outcome of it appears to be to support the view that to lessen drunkenness the State should confer the right of action in favour of the person injured by the acts or neglects of the drunkard against the seller of the liquor used by him; and that the same legislation should be applied to the sale of liquor in the common bar-room as to that of prussic acid at the drug-store.

At the Neurological Society various cases of interest were reported—bulbar paralysis, &c., by Dr. Seguin; and specimens illustrative of general paralysis, by Dr. Spitzka. A somewhat elaborate description is given of the microscopic appearances. From a patho-

logical point of view he terms it "a progressive periencephalitis with an inconstant factor of diffuse leptomeningitis and an unessential one of pachymeningitis—a process characterised by a series of fluxionary hyperæmias, occurring at intervals, becoming more and more aggravated, until arterial and capillary stases of an intense degree were produced at each attack, until at length this vascular change reached a degree comparable to a capillary apoplexy, which usually terminated the history of the case, unless intercurrent affections intervened. Furthermore, as this hyperæmia was provoked by a paralysis of the muscular coat of the vessel, however evanescent, he would term it a vaso-motor affection. Specimens were exhibited from a patient who had died at the height of a maniacal attack in incipient paresis. The vessels were filled to distention with blood discs. The adventitia and contiguous neuroglia were infiltrated with a material, whose exact chemical nature was not ascertained, but which stained with a beautiful pink flush in carmine; the infiltration was diffuse and not sharply demarcated; protogon spheres were found in the adventitia, and the diffuse infiltration was probably a diffusion of protogon, or of a derivative." Descriptions follow of specimens of patients with general paralysis dying at a later stage.

In the "Archives of Medicine," ably edited by Dr. Seguin, are frequently to be found valuable papers bearing on insanity more or less directly. Thus, an article by Dr. Andrew H. Smith, on "Supplementary Rectal Alimentation, and especially by defibrinated blood, as applicable to a large range of cases in which nutritive enemata have not hitherto been employed," is worthy of consideration in some cases of mental disease, both with and without refusal to take food. "What is the best material to be employed? Milk, raw eggs, animal broths, &c., are usually employed. Since the publication of Prof. Leube's paper on rectal alimentation, in 1872, the preparation which he recommended has come largely into use, and to this Dr. Flint gives the preference. It consists of the muscle of beef, partly digested by an artificial process, and brought to a sufficiently fluid condition to be administered by means of a syringe. Life has been sustained for periods of two or three weeks or longer with this preparation alone, and there can be no doubt that a considerable proportion of it is absorbed, yet it is very imperfectly dissolved and semi-liquid flesh, containing a great deal of innutritious fibre, and as such appears to me to be greatly inferior to the perfectly fluid and wholly absorbed flesh which nature has prepared in the form of blood. . . . . In many persons an enema of 90 to 120 grams (3-4 oz.) of blood administered at night is so absorbed in the course of eight or ten hours that no trace of it can be found in the morning evacuation. . . . In order to retain the blood in a fluid state, it is necessary to have it defibrinated at the moment it is drawn. The process is understood at all slaughter-houses, where the blood so prepared is known as 'stirred

blood.' . . . I fully believe that blood absorbed from the rectum nourishes the system more directly and more efficiently than if the same blood was swallowed and digested in the stomach." In urgent cases, and especially when the stomach cannot be called upon to perform its office, defibrinated blood may be injected into the rectum in quantities of from 30 to 90 grams every two or three hours. In chronic cases, in which it is designed merely to aid stomach nutrition, from 90 to 180 grams may be given once or twice a day. Given at bedtime, it usually causes no discomfort during the night, and there is only the customary evacuation after breakfast the next morning. If thought desirable another injection may then be given, the recumbent position being maintained for a few minutes, after which, as a rule, there is no consciousness of anything unusual in the bowel, and the patient may go about his daily occupation. An ordinary syringe may be employed, care being taken to cleanse it thoroughly each time without delay. It is not necessary that the blood should be warmed in all cases. Many can bear it perfectly well without. But if the rectum is at all irritable, it is best to put the quantity of blood required into a small tin vessel, and set it in warm water, until it has acquired about the temperature of the body." If colic is caused, a little tincture of opium may be added. Two or three times out of eighty cases the irritability of the rectum caused the injections to be immediately returned. In some cases constipation is induced. As "fluid beef's blood" is employed, there is not the difficulty of obtaining a ready supply which presents itself in injecting human blood into the vessels.

Dr. Landon C. Gray reports a case of extraordinary Heredity in Epilepsy, exhibited in infantile convulsions.

A. C., female, æt. 40, married. At 12, began to have paroxysms about every three weeks, in which faces of demons were seen with the right eye. At 23, epileptic fits set in.

Has had nine children :—1, girl, died on fourth day in convulsions ; 2, boy, died æt. 11 months, in convulsions ; 3, girl, æt. 13 months, died after convulsions ; 4, boy, died soon after birth in convulsions. Mother had convulsions very often during this pregnancy. 5, girl, died soon after birth in convulsions ; 6, boy, æt. 5 months, had convulsions almost continually during life ; 7, girl, died soon after birth in convulsions ; 8, boy, died a few hours after birth in coma ; 9, same as the last.

There was no family neurotic history—no history of any specific taint.

Dr. Seguin gives examples of "Folie à deux," resembling those given by Lasègue and Falret ("Annales Médico-Psychologiques," November, 1877).

The patients were sisters, whose mother had been insane ; the form of mental disorder was melancholia. They had been addicted to self-abuse, and suffered great self-reproach ; the mental symptoms arising

almost simultaneously. It would be better, we think, not to speak of "contagion" in such a case as this; there were causes in common, namely, heredity and vicious habits. The mental condition of one was aggravated by the reflection that she had been to blame for the consequences which followed, but there hardly seems to have been that action of the mental disorder of one sister upon the illness of the other which should be understood to constitute contagion. It cannot be said fully to correspond to the cases described by the French authors above mentioned.

Isolation of Persons in Hospitals for the Insane.—Read before the Philadelphia Social Science Association, October 23, 1879.

There are many excellent observations in this paper by Dr. Ray. He holds up to just ridicule the fallacies of public opinion in regard to mental experts, as for instance, that "the man who for many years has spent his days and nights surrounded by the insane is less qualified to give an opinion as to the existence of insanity in a given case than those whose knowledge of the disease is confined to a few general impressions respecting it." Thus in their wisdom the Legislature of Massachusetts has enacted "that no superintendent of an asylum shall give a certificate of insanity!"

Of the annoyance to physicians from actions at law for their certificates, Dr. Ray says: "Leading physicians in this community, to avoid the peril of a suit at law, have concluded to sign no more certificates of insanity."

Dr. Ray has also published a paper on "Recoveries from Mental Disease," read before the College of Physicians of Philadelphia, called forth by Dr. Earle's now well-known pamphlet on the "Curability of Insanity," upon which we have expressed an opinion in previous Retrospects in this Journal. We will not therefore enter again upon the subject here, but content ourselves for the present with referring our readers to this article, and to Dr. Earle's reply, "Studies Relative to the Curability of Insanity." Out of this friendly debate between these veteran alienists, the truth will doubtless be evolved.

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2. *English Retrospect.*

English and Scotch Asylum Reports for 1878.

(*Continued from July*, 1879.)

Fife and Kinross District Asylum.—Judging from the excellence of this Report, the interests of the Institution would seem to be in no danger of suffering from the change of Superintendents. Dr. Brown evidently considers that the saying, "What is worth doing is worth doing well," refers to the preparation of Asylum Reports.

Notwithstanding the various means resorted to—such as removal of

all private patients and admission of those only who are paupers—to keep the number of the population within the limits of their accommodation, the complaint of overcrowding has still to be made. Two remedies are suggested to meet this evil—the enlargement of the Asylum, or the opening of lunatic wards in poorhouses for the reception of harmless chronic cases. We think both methods might be adopted with benefit to the institution and its inhabitants.*

The number of admissions for the year is 75, which is below the average for the past 10 years. Fifty patients have been discharged, a less average number than in former years. The percentage of recoveries on admission is 44, which is somewhat higher than that in all the Scotch Asylums during 1876, viz., 41.

We have to congratulate Dr. Brown on the extremely low rate of mortality during his first year of office. Out of an average number resident during the year of 286, there have been only six deaths—four males and two females.

The percentage of deaths on the total number under care is only 1·7, the smallest since the opening of the Asylum.

Killarney District Asylum.—The New Buildings opened this year for the reception of patients guarantee sufficient provision for the gradual increase of the Asylum population for many years to come. The present accommodation is for 356 patients, while the number resident at the end of the year was 287.

The increase in the population for the year has been 10. Dr. Wood is of opinion that this annual increase in Asylum populations is due, not to an increase of insanity, but to the large number of harmless idiots and imbeciles who are now sent to Asylums, and who formerly were allowed to be at large.

Amongst the admissions there is one whose treatment by her friends shows that in that "Eden of the West" there lingers an amount of ignorance and superstition which one would not have expected in this age of enlightenment.

This unfortunate subject of friendly attention was first bound with a rope and then dragged out to sea behind a boat, in order, they said, to calm her excitement. Her excitement was certainly calmed, for on being brought to the Asylum she was found to be in a state of extreme exhaustion, and to be suffering from acute pneumonia. Strange to say, she recovered, and has since been discharged.

Deaths number 32, and of these 13 are assigned to phthisis pulmonalis. The reason of this high mortality from lung disease is said to have been the low temperature in the day-rooms and corridors, which, however, might have been remedied, and the extremely monotonous and sedentary life which many of the patients lead, rendering them especially liable to this form of disease.

The want of a sufficient water-supply is subject of grave complaint,

*The Board have since adopted the first method, and considerable additions have been made to the Asylum.

there being not enough for ordinary purposes, not to speak of provision in case of fire. It is to be hoped that some plan will be adopted soon, and several are recommended, for procuring an abundant supply for all purposes.

Many important improvements, both in the house and grounds, have been made during the year.

Nottingham Lunatic Hospital.—This is a small Asylum, and the Report issued this year is a very short one, and contains matter of little interest.

Restraint or seclusion has not been employed during the year, nor has there been any suicide. "Tell-tale clocks" for the night attendants have been introduced.

We cannot find any reason why, to show the causes of two deaths, a table containing between twenty and thirty different forms of disease should have been made. Nor do we consider it at all scientific that one of the deaths should be set down to such a vague cause as "maniacal and melancholic exhaustion or decay;" or the other to so very comprehensive a list as "inflammation and other diseases of the brain, softening, tumours, &c."

Parkside Asylum, Macclesfield.—Here the accommodation is so much in excess of the population that the Board has been able to make arrangements to receive a certain number of patients from other Asylums.

Dry-rot appearing in the wood-work has rendered extensive repairs necessary.

Recoveries have been at a higher rate than in any previous year, and the death-rate has been low.

The number of admissions is the lowest on record since the opening of the Asylum. The number of relapsed cases, however, has been increased.

Dr. Deas is of opinion that this diminution of "new," and increase of "relapsed," cases "has more than an accidental connection with the great depression of trade." The compulsory frugality and temperance, due to diminished wages, would account for the diminution of "new" cases, while "the 'pinch' in regard to finding employment, and obtaining the necessaries of life, would tell sooner on those who had had former attacks of insanity." The periods of residence outside the Asylum of those relapsed, range from two months to five years.

The number of discharges is 66, the comparative smallness of it being accounted for by the great diminution in the number of foreign patients, who in former years swelled both the admissions and discharges.

The number of deaths is 57, a rate of eight per cent. on the total number under treatment. One general paralytic died during a congestive paralytic seizure, from food lodging in the trachea. The amount of sickness has been small.

The Assistant Medical Officer left during the year.

The "self-supporting" principle is applied to means of recreation, almost all the entertainments having been given by those connected with the Asylum. The weekly cost of maintenance per patient has been 10s. 8½d.

Lancaster County Asylum.—An epidemic of typhoid fever occurred during August and September. Four deaths resulted. The cause of the outbreak is doubtful.

A special dormitory has been set apart for epileptics, with an attendant constantly present. This has been rendered necessary by several of these patients having been suffocated, while in a fit, by turning over upon their faces. One of these had been in the habit of keeping in his mouth any small article which he could conveniently retain, and at the *post-mortem*, two plugs of blanket were found wedged into the larynx.

Deaths were at the rate of 7·6 per cent. on the total number under treatment.

No suicides or fatal accidents occurred, although one man made five attempts during a month to kill himself.

There were two cases of parturition, the mother in each suffering from acute mania.

Short pathological notes on each case of death, on which a *post-mortem* was held, are given by the Assistant Medical Officers.

Rainhill Asylum.—Complaint is made of the number of old and infirm patients sent from Workhouses. They simply swell the mortality list.

An inmate of the Asylum for upwards of 15 years has been discharged recovered. This is a very rare occurrence. The subsequent history of those discharged is, as far as possible, traced, and a useful table is formed from this.

The death-rate was 9·18 per cent. on the average number resident. One death by suicide is reported. It is five years since a like fatality occurred. Three patients have died of suffocation from food entering the larynx, one of them from food regurgitating from the stomach during an epileptic fit. In Table 18 many of the causes of death given are rather indefinite.

The Assistant Medical Officer, after four years' service, has resigned to go into private practice.

Three Counties Asylum.—The nineteenth annual report is a favourable one.

Great progress has been made in the new buildings, which have been rendered necessary on account of overcrowding. By the end of next summer it is expected that they will be completed.

Admissions for the year have been 183, a large number of these being cases of an incurable nature.

The discharges were 60, 49 only being classed as "recovered," a small percentage on the number of admissions, due, it is said, to the bad class of cases admitted.

Eighty-four patients died during the year. It is very unusual, in reports of Asylums, that the number of deaths exceeds that of discharges, and we should have wished that some explanation had been made of this abnormality.

One inquest was held on the death of an old man who had fallen down and fractured his thigh. The verdict given was—"Shock to system, consequent on accident." In Table 5 we object to the term, "Disease of Brain," as a cause of death, on account of its indefiniteness.

A *post-mortem* has been made on only a small number of cases, because of insufficient accommodation.

Dr. Swain objects, and quite properly, to criminal lunatics being sent to County Asylums. They must, to a certain extent, demoralize the other patients with whom they associate. It is to be hoped that Government, in its new zeal for home legislation, will turn its attention to this abuse.

A new fire-engine of thirty-two manual power has been obtained.

We notice with pleasure that an attendant, retiring on account of bad health, after many years' service, has been granted a pension of 12s a week. It is by such means as this that attendants should be encouraged to remain in Asylums, constant changing, we need hardly remark, being very hurtful to the interests of the patients.

The net cost of each patient per week has been 8s. $10\frac{1}{2}$d., which is below the average in most County Asylums.

Chester County Asylum.—Here also we find that the Asylum population has undergone an increase during the year. There are now 27 more patients in the House than at the beginning of the year, and this notwithstanding that the number of admissions for the present has been 22 less than for the last year. There are now 512 inmates.

Admissions were 140, 16 being re-admissions.

The percentage of recoveries on admissions is large, being 42·2, which is 12 per cent. above the average of County and Borough Asylums.

Attention is drawn to the fact that the greatest number of recoveries took place amongst those brought to the Asylum in the earlier stages of the disease, and Dr. Davidson urges "upon all interested the importance of placing patients under proper scientific treatment at the earliest possible opportunity." It would be well were both the medical and lay world to bear this in mind.

The death-rate is small, the percentage on the total number under treatment being 7·9. There were 17 deaths from general paralysis—a very good opportunity for studying the pathology of this disease.

Four inquests have been held.

Amongst the class of cases remaining in the Asylum, we notice that the number of general paralytics is given as 54, a much higher number than is usually found.

Here is an item for teetotallers—"In 29 per cent. of the year's admissions, the exciting cause was *clearly* traceable to intemperance in drink."

Many important improvements, notably the execution of works for the utilization of the Asylum sewage on the farm, have been carried out. The patients have given valuable assistance in these improvements, the whole of the painting and plastering work having been done by them.

Scottish National Institution for the Education of Imbecile Children.—Dr. Ireland's reports are always good, and this year's forms no exception. His remarks on the influence of the rule excluding imbeciles above 18 years of age from Training Institutions are worthy of being reproduced—"Owing to the removal, from legal difficulties, of a number of adults, the check upon the admission of older pupils, and the increased rarity of re-elections, a very important change is being accomplished in our little community. There is now a much larger proportion of young children, and it is advisable to point out the necessary result of this alteration. As the children are more helpless, and require a great deal more attendance, and as we can no longer count upon the assistance of the older pupils in watching and taking care of them, the necessary expenses of the house are increased; the pupils in general are more tender and delicate, require more protection from the weather, and take disease more easily. Thus there is always a larger proportion of cases in the Hospital, and it may be considered satisfactory that the mortality has been no greater. The labour of the teachers is also much increased. It is more difficult to divide the pupils into classes, and fewer can be put to trades. Imbeciles in general are of weakly constitutions and slow of growth; few of them can be sent to work before fifteen or sixteen years of age, even in a covered workshop, much less endure exposure to the weather in learning outdoor labour. Hence it is easy to see, if our pupils go out at eighteen years of age, they can hardly learn to make their bread in their short apprenticeship of three or four years, and, in any case, that we are labouring under disadvantages greater than any other training school of the kind."

The subject of training imbeciles at home is here discussed, and a conclusion unfavourable to this method is come to. No doubt, as Dr. Ireland remarks, those who devote themselves to a special art can do it better than beginners or amateurs; but the principal reason, we think, why imbecile children should be sent to Training Institutions is the same as why sane children should be sent to public schools—the influence they bring to bear upon each other, those higher in the scale of intelligence inciting those of a lower grade to increased efforts to succeed.

The cases elected by the subscribers do not seem to have been chosen judiciously, because a large proportion of them were uneducable. These only keep out others who might be benefited. It is

urged that pupils should be sent at an early age, so that the process of education may be commenced before the intellectual development has proceeded too far in a wrong direction.

Brush and mat making form the chief employment of the patients.

The new buildings are completed and occupied.

There is still a deficiency of water, but steps are being taken to remedy this.

The number of patients in the House is 101.

There have been 35 admissions, 32 discharges, and three deaths during the year.

Bethlem Hospital.—Dr. Geo. H. Savage is the writer of the Report before us, having succeeded Dr. Rhys Williams, who had been in connection with the Hospital for 15 years.

The patients' hours of rising and going to bed have each been made an hour later, and consequent on this, supper has been introduced. This, it is thought, will banish the sleeplessness so often arising from want of supper in those who have been accustomed to this meal. The amount of stimulants used, especially wine, has been much reduced. There has been no suicide, and no death requiring an inquest during the year.

The Convalescent Hospital at Witley continues to do much good. Dr. Savage says :—"It is an immense boon to the class of patients we admit, as the majority of them, as soon as they leave, have at once to enter upon the duties of life again, and a change into the country, with greater freedom and more variety in their surroundings, enables them to gain confidence in themselves, and gives their friends trust in them ; a most important point to secure recovery."

Whittingham Asylum.—In this report we have been obliged to have recourse to the Commissioners in Lunacy and the Committee of Visitors for any information regarding the Asylum and its work. The Medical Superintendent's report occupies exactly a page and a half, and consists of only a few bare statements of facts. We think that, with a total number of patients under care and treatment of 1,458, something more interesting might have been said concerning them than that "those who are able and willing to work have been encouraged to do so," which is really the only sentence having any reference to the means of treatment used.

Two fires have occurred during the year, both of them arising from the same cause—from burning soot, or other burning substance, falling from one of the chimneys into the gutter on the roof. Neither of them caused much damage, and they were speedily got under and prevented from spreading.

On account of overcrowding, many harmless and chronic cases have been removed to Workhouses, a step, we think, in the right direction.

More land has been obtained for farming purposes. An addition capable of accommodating 600 patients is about to be built.

Two inquests have been held—one on a case of suffocation while

being fed (spoon or stomach pump ?) and the other on a suicide. 375 patients have been admitted.

The percentage of recoveries on admissions is 35·73 ; of deaths on the number under treatment, 9·88.

In the table showing causes of death we again enter our protest to such indefinite terms as "brain disease," "disease of liver," &c., and we think that "childbirth" is not a cause of death at all. Women die during childbirth from some complication connected with it, but not from it.

Colonial Reports.

London Asylum (Ontario).—The chief part of this report is devoted to considerations of a merely local interest.

Many improvements have been introduced, among which we notice the laying of the floors of the dormitories with oak, the introduction of the telephone throughout the Asylum, and the thorough drainage of the basement of the institution. Among the improvements recommended to be made, we may mention the laying of the whole of the Asylum with oak flooring, the building of a chapel, the introduction of a set of electric clocks, and the procuring of a steam force-pump in case of fire.

The use of alcoholic stimulants, except in very exceptional cases, has been given up, and with good results.

We question the propriety of allowing the general public to be shown through Asylums to such an extent and in such numbers as seems to be the case in this Asylum. During four days of a fair upwards of two thousand people were shown through. It is right to add, that no complaint of these visits has been made by the patients, an experience which few Superintendents can boast of, even with a very much smaller number of visitors.

Nova Scotia Hospital for Insane.—This report goes largely into the subject of the "Care of the Insane." The conclusions come to are that patients should be sent to Asylums in the early stages of their disease, that there should be separate institutions for recent and chronic cases, and, with especial reference to Nova Scotia, that there should be erected throughout the Province "Cottage Asylums" capable of accommodating 50 to 100 persons, to which patients might be taken at first, before being required to undertake a long journey to the central Asylum.

Many important alterations and repairs have been made.

There has been a change of Superintendent.

The "protective" bed is used for violent, acutely excited cases, and it is said to have the result of making them sleep during the greatest part of the night. Sleeping draughts are rarely given.

Provincial Asylum, St. John, N.B.—A novelty in statistics is introduced in this report. The colour of the patients' hair is set down, and, contrary to all preconceived notions, we find red represented by a very small number.

In the table showing the occupation of patients admitted, labourers and farmers largely preponderate, due, it is said, to this class of people forming a large proportion of the population of the district. With regard to labourers, intemperance is a prolific cause of insanity.

One case is reported which shows the great determination there is in some patients to commit suicide. This man first made an unsuccessful attempt by cutting his throat with a piece of glass, obtained by breaking a window. After this he was put under restraint, and constantly watched, but in spite of these precautions he managed to accomplish his object. By some unexplained means, he had obtained possession of a small piece of glass, with which, while pretending to be asleep, he scratched a hole through the abdominal wall, and died from the peritonitis which was set up.

The additions being made to the main building are well advanced, and are expected to be ready soon.

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3. *Retrospect of Mental Philosophy (Periodical Literature.)*

By B. F. C. Costelloe, B. Sc. and M.A., Glasgow.

Mind: A Quarterly Review of Psychology and Philosophy. January, 1880.

The first number for the year is not remarkable for any paper of striking value. Readers of the Journal will be chiefly attracted by the long and clearly written *resumé* of Dr. Hughlings Jackson's recent studies "On Affections of Speech from Disease of the Brain," which is contributed by Mr. James Sully. He remarks on the great value of Dr. Jackson's attempts to classify the different forms of aphasia under the three main heads or stages of—(1) *Defect of Speech*, in which the patient has a full vocabulary, but confuses words; (2) *Loss of Speech*, in which the patient is practically speechless, and his pantomimic power is impaired as well; and (3) *Loss of Language*, in which, besides being speechless, he has altogether lost the power of pantomime, and even his faculty of emotional language is deeply involved in the wreck. All these states or stages again are, properly speaking, to be distinguished altogether from affections of speech in the way of *loss of articulation* (owing to paralysis of the tongue, &c.), or *loss of vocalisation* (owing to disease of the larynx); whereas the three degrees or stages of aphasia proper are due to a deep-seated and severe disorganisation of the brain. The main interest of the theory lies in the ingenious and carefully-argued analysis of the symptoms, by which Dr. Jackson arrives at the theory that as the process of destruction goes on, the superior "layers" or strata of speech fail first—those namely which involve the ordinary power of adapting sounds to the circumstances of the moment as they arise; after them fail the "more

highly organized utterances" those, namely, which have in any way become automatic, such as "come on," "wo! wo!" and even "yes" and "no," which stand on the border-line between emotional and intellectual language; next fails the power of adapting other than vocal signs to convey an intended meaning, which is called, rather clumsily, "pantomimic propositionising;" and last of all dies out the power of uttering sounds or making signs expressive merely of emotion—a power which, of course, is not true speech at all.

There is also, as Mr. Sully particularly notes, a valuable and ingenious hint, based on the occasional appearance of certain "Recurring Utterances" in aphasia, which are evidently repetitions of the last thing that was being said, or about to be said, when the break-down sets in. The theory is that, whenever we utter, or whenever we formulate for utterance any proposition, the nerve arrangements so set up remain "organized" for a time as a distinct and independent total; or, in other words, that the group of nerve-modifications which arises on the formation of each of our propositions, *persists* for at least some short time, as a fixed and strongly-marked state. This persistence will, on the one hand, explain how a speaker can recollect what he has just been saying, at the same moment that he is engaged in watching the phrase he is in the act of uttering, and perhaps also preparing for the next. Everyone who has had occasion to speak in public must have noticed this apparent necessity for attending to past, present, and future all at once; but the key to it lies in this temporary persistence in vigorous and striking continuance of the just formulated and even of the penultimate utterance in their respective groups of nerve-modification. So also, with the unfortunate catalogue clerk, whose brain broke down into the state of aphasia the moment his work was done, the utterance that was on his tongue repeated itself constantly when he had lost all other speech. He kept on saying, "List complete," because that group of nerve-modification was just formed, and was still "persistent" when the stoppage came; and thereby what would have been only a temporary prominence became fossilized. But this whole subject of "barrel-organism" or irrational recurrence is full of instructive suggestions.

The first essay in the number is one which, if it were written in an intelligible language, would be both interesting and valuable. It is named "The Dependence of Quality on Specific Energies," by E. Montgomery. To say that the writer does not make his meaning clear, is to put the case very mildly. Take the following section, with which he closes his paper :—

"The current of knowledge has hitherto been from the inorganic to the organic. The cultivation of the science of inanimate nature has led to a more complete understanding of the phenomena of vitality. In future the current will be reversed. Inorganic nature will receive a deeper significance through the application of laws derived from the study of organic nature. The specific energies of

nerve-centres, the existence of a substratum of compound sensation, and the essential identity of sensation and motion are biological and philosophical truths sufficiently definite and decisive in themselves: but they admit of a still more profound elucidation from a standpoint embracing the totality of animal organization—a standpoint from which the unity of the organic individual and the substantiality of life will become evident actualities."

No language would be too strong to condemn the absurdity of writing a jargon so unintelligible—the more that it is not the least necessary. The English language has compass enough to express any psychological theory if the author will only take the trouble first to make clear to himself what he wants to say, and then to choose a simple form of words to say it. Still, it would be equally foolish to assume that a paper contained nothing but absurdity because it was written absurdly.

Briefly stated, the writer's point is this. Hitherto biological science has proceeded far in the endeavour to demonstrate that "Quality is Quantity," *i.e.*, that all the qualitative differences in the world are reducible to different combinations of quantities of motion. According to this view, therefore, there could be no essential difference between the function of the sensory and the motor half of the nerve system. The nerve unit would be a cord beginning at one end with filaments to which a certain impulse could be communicated, running up into a centre (which would be merely connective tissue) where the sensory character of the vibration would pass over into another phase of the same thing manifested as motor energy—and so terminating again in filaments communicating movement to an organ. Mr. Montgomery combats all this. He maintains that quality and difference of function depends on "specific energies" in the matter to which the functions attach. He denies the theory of functional indifference, and discusses the experiments adduced to prove it. And he finally proclaims his conviction that neuroglia is anything but a mere mass of connective fibres, for he desires to find in it a third and highest form of nerve-matter in which the sensory elements are combined into a higher sort of knowledge, not by any mere adding together of sensory items, but by a synthesis that alters their character from sense to reason, and makes it possible for them to manifest themselves in turn as will. This view of a third kind of nerve-matter he conceives to carry the solution of a great crux, and he supports it by some amount of physiological proof, though he confesses that we are quite ignorant as yet of the intimate structure of neuroglia. On the whole, as we have said, the paper is of value, and would have been of great interest had it been written in a less hideous style.

There are, among the other papers in this number, besides a somewhat severe criticism by Mr. Lingard, of Prof. Calderwood's "Relations of Mind and Brain," a brace of essays on the eternal subject of Free-will. The first is an illogical and rather vaporous paper by Miss

Bevington, on "Determinism and Duty." The other is an interesting answer by Prof. Bain to some of the positions taken up on the same subject, by Dr. Ward, in the "Dublin Review." Mr. Sidgwick also contributes a short notice of Fouillée's notable book, "L'Idée Moderne du Droit," and Prof. Bain concludes his notes on the life and labours of J. S. Mill—expressing, as he does so, his very frank astonishment at the religious conclusions of Mill's latest years. "The *destructive* part," he says, "is in accordance with all his antecedents; it is the *constructive* part that we were not prepared for."

Révue Philosophique. Janvier, 1880.

The first paper is a very important and readable dissertation by M. Espinas, entitled, "Le Sens de la couleur: Son origine et son développement." It is in reality a study founded on the recent works of Mr. Grant Allen, relating to the colour-sense, and, in general, to the explanation of all artistic phenomena on the basis of the evolution theory. It is too soon to form a judgment as to whether the attempt can be called successful; but the whole matter is full of suggestion, and it has never been as fully worked out as, from its popular interest, we might have expected it to be. A main part of the article of M. Espinas deals with the theory of Mr. Gladstone and Hugo Magnus, who hold, as is well known, that the colour-sense in its present development is not 3,000 years old, and that in the heroic times, as pictured in the Vedas and in Homer, men knew of very few distinctions of colour, and had an equally small number of colour-names. They describe to us four phases of development—the first, in which we barely distinguish red from black, as in the Rig-Veda—the second, in which red and yellow and their congeners are recognised, as in Homer—the third, in which greens begin to be perceived as distinct from the dark colours; and the fourth, which is our own, in which we distinguish, though imperfectly, blue shades from green. M. Espinas and his master are indignant at the idea that such developments could take place in a few centuries—"it is by millions of years that we must count." They adduce also the facts of modern savage life, in which, according to them, as full a sense of colour is found as among ourselves. As to the arguments drawn from Homeric and Vedic language, they contend that the colour-language is always far behind the practical artistic aptitudes. The Highland Scotch have only one word for the colour of the sky and that of the leaves, and yet they can perfectly distinguish greens and blues in practice, and use them in art—as in their tartans, for example. So the bricks of Nineveh and Babylon, and the mummy-cases of Egypt, testify to a developed practical power of distinguishing colours, even as to blue and green, at an age long anterior to Homer. Even in the Lacustrine remains of the "Bronze Age," in the Swiss lakes, objects have been found enamelled with lines of blue and yellow on a fond of red.

The "Révue" reproduces, in a very prominent position, for the

benefit of the French psychological "public," the notes "On the History of My Parrot," with reference to the nature of language, which Dr. Samuel Wilks published some time ago in the "Journal of Mental Science." The selection and translation are excellently done, and we do not doubt they will prove well worth the study of the numerous workers in the same field in France and elsewhere.

Among the "Analyses et Comptes Rendus," there is a notice of Mr. Herbert Spencer's "Data of Ethics," and a review of M. Fouillée's "L'Idée du Droit." We are glad also to see reprinted the Programme of the courses of philosophical and psychological lectures for the year 1879-80, provided by the "enseignement supérieur" of France. We are sorry to note, however, that, with the exception of one course by M. Compayré, at Toulouse, upon "Les états anormaux de l'esprit," there is nothing done for that branch of mental science in which this Journal is specially interested. The only other papers in this number are a sketch of the teaching of M. Vacherot, by M. Séailles, who is writing a series of vignettes of "Philosophes Contemporains;" and a contribution of some interest by M. Boriac, entitled "Les problémes de l'education," a subject which naturally excites much controversy in France at the present juncture.

Révue Philosophique. Fevrier, 1880.

In this number there are again many things of great interest. M. Espinas concludes his paper on the development of the colour-sense, following, as before, and amplifying upon the labours of Mr. Grant Allen. There is a short and very unfavourable notice of a new anti-materialistic "History of Psychology," by M. Amedée Simonin; and there is a description of a new philosophical class-book, which the well-known M. Paul Janet is now bringing out, and of which the first volume ("Psychology") has already appeared. The notable point about this new school-book is that it prefaces the consideration of psychology by a "Description sommaire du corps humain," accompanied by excellent anatomical diagrams, for M. Janet, without prejudging the relations of mind and body, protests against their needless separation.

But the paper which our readers will find most interesting is that which stands first, the third of M. Delboeuf's admirable series of essays on Sleep and Dreams. In this he specially discusses their relation to memory. In the earlier papers, which appeared in the "Révue" for Oct. and Nov., 1879, he had established wo points in the theory of dreams and of memory—first, that the dreamer believes he is awake, as the madman believes he is sane, and that the basis of this illusion lies in certain characters of order, permanence and *éclat* which attach to his "internal images;" and second, that there must be found some certain criterion of the state of wakefulness and sanity, and that this criterion lies in the possibility of speculative doubt. He now proceeds to deal with the contents of our actual

dreams ; and after criticising the six heads under which Dr. Maudsley classes the determinant causes of dreams (in his " Pathology of Mind," as quoted by M. Delboeuf in the " Révue " for Oct., 1879), he limits his view to those causes which are psychological, and especially to those which concern the previous experiences of the individual. He then relates as his text a remarkable dream of his own, the origin of which he was able to trace, with a curious minuteness, to various striking survivals of things otherwise forgotten, but here seen to be somehow preserved. From this text he proceeds to argue, in a most able and interesting way, that the principle of the conservation of force, the axiom that nothing is lost in nature, is subject to a grand modification. The past, he says, is lost—what has been *cannot* repeat itself. Mechanical conditions may be constructed which seem to give us perfect retransformation of effect to cause, but they are fallacious. By an ingenious line of reasoning, derived from considering the action of time and the dissipation of heat, he concludes that some day the differences of the universe will be done away, and movement and force will cease. This may seem away from the subject, but it is closely allied to the question of memory as he conceives it. For he proceeds to base on them what he calls the principle of " Fixation de Force,"—as Force, in the actual universe at least, has to overcome resistances, and comes out of the contest weaker than before. The lost force is lost in the sense that it cannot reproduce the prior state—but it has its effects. To all eternity it imprints upon the resisting medium a definite impress and effect of the once-experienced impact. The formula therefore arises, that there is an eternal dissipation of energy by reason of forces, which were free, becoming fixed. Memory, he holds, is an instance of force thus fixed, and organized matter is a vast storehouse of the accumulated impulses of the past which cannot come again, but which in reality are never again undone. In the course of generations the minds of men have therefore taken upon themselves, through memory and through heredity (which is the memory of the race), a kind of vague photography of the whole history of human experience—" as the crust of the earth records in its strata all the changes of the history of our planet." This conception the writer proceeds to work out, in special connection with the nutritive and generative functions, with an originality and a clearness of statement which is as welcome on such a subject as it is rare.

Zeitschrift für Philosophie. 1879. Heft. 1 and 2.

The later number contains nothing which would attract our readers. In the first, however, there are two contributions of serious value. A lecture delivered at Zurich by Herr G. Glogau, " On Psychical Mechanics," in which he sketches his theory of a reconstruction of psychology with special reference to philological discoveries, and to the science of language ; and an elaborate notice by the same writer of a new work by Lazarus, on the kindred subject of " Mind and

Language," the divisions of which will indicate its drift:—Ch. 1. Reciprocal action of Mind and Body; 2. Origin of Language; 3. Acquisition and Development of Language; 4. Influence of Language on Mind; 5. Relation of Language to Thought.

Vierteljahrsschrift für Wissenschaftliche Philosophie. 1879. Heft. 3 and 4.

The most interesting paper in these numbers is the opening article of No. 4, a favourable but exhaustive criticism by Benns Erdmann, of M. Ribot's recent book on "Psychologie Allemande Contemporaine." No. 3 contains a curious debate between Wundt and Herwicz, concerning their respective theories as to the bearing of the physiology of sensations and of the nerve-system generally on the psychological explanation of knowledge. There is likewise a review of an interesting work by Lexis on Social Statistics, with particular reference to the difference between men's action when alone and their action in larger masses; and the last of a set of papers by Schneider on the Development of Will in the Animal Kingdom.

PART IV.—NOTES AND NEWS.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Quarterly Meeting of the Association was held February 25th, 1880, at the Rooms of the Medico-Chirurgical Society, 53, Berners Street, W.

In the absence, through serious indisposition, of the President, Dr. Lush, M.P., the chair was taken by Mr. Mould.

The election of four new ordinary members* was then proceeded with, viz.:—

James Shaw, M.D. (Queen's Univ., Ire.), Haydock Lodge.

Charles E. H. Warren, M.B. (Edin.), Barnwood House, near Gloucester.

George E. J. Crallan, B.A. (Cantab.), Northumberland County Asylum, Morpeth.

James Neil, M.B., C.M. (Aberd.), Parkside, Macclesfield.

Dr. SAVAGE exhibited two pillows, designed for the use of epileptics, in the place of the usual cocoa-nut fibre ones. These samples had been transmitted to him by Mr. Cassidy, of the County Asylum, Lancaster, with an explanatory note, stating that they had been tried at that asylum for several months, and that the patients seemed to like them as well, at least, as the fibre pillows. Mr. Cassidy thought there would be little risk of suffocation by turning upon the face in a fit. The deeper pillow was intended to be fixed to the bed bottom, the mattress merely coming up to, but not under it, thus affording a larger air space. Previously they could be screwed to the bed, and there was a screw arrangement of the internal strap for keeping the ends taut.

Dr. RAYNER stated that he had had pillows made of similar material to those exhibited in use for the last five or six years, and found them most useful. With that kind of pillow any patient who had the habit of turning upon his face in

* The Subscription of Members elected at the Quarterly Meetings, under the new Rules, dates from the preceding first of July.

his fits would be quite safe. He thought that a little padding against the wood at the end would be an improvement.

The next business on the Agenda was the resumption of the discussion of the paper read at the last meeting by Dr Wilkie Burman on "The Separate Care and Special Medical Treatment of Acute and Curable Cases in Asylums."

The General Secretary, Dr. RAYNER, stated that he regretted to say that Dr. Burman was not able to be present, and no further remarks upon the subject being offered by any of the members present,

Dr. HACK TUKE read a paper "On Mental Experts and Criminal Responsibility." He said that in cases of alleged insanity in criminal cases the first object was to adopt the most scientific, and therefore most efficient means of ascertaining the mental condition—the criminal responsibility—of the accused ; the second to protect him from punishment if he is irresponsible; the third to protect society from the injury done by admitting the plea of insanity when the act committed is really criminal ; lastly, to avoid discharging those found not guilty on this plea, until mental health is restored, or as long as is needful for the safety of the community. Dr. Tuke complained of the utter uncertainty as to what course would be pursued when the prisoner first came before the magistrates, the period when it was all important to discover the condition of his mind. He maintained that this ought not to be left to chance ; but that the magistrate, when insanity was suspected, should be obliged to obtain the opinion of at least one expert, in addition to that of the gaol surgeon, full powers being given to them to carry out a full examination of the prisoner, and the temporary removal to an asylum for this purpose being allowed. If committed to trial, the opinion formed by these experts should be drawn up and presented to the Court, by whom, and not by the contending parties, they would be called. They should be subject to cross-examination by the Court on the written report. Dr. Tuke did not propose to take away from the defence and prosecution the right to call medical witnesses ; but he thought the plan he proposed would practically act in lessening the crying evil of so many being called ; and if it could be carried out he should be glad to see the cross-examination conducted by the Court ; but this was not a necessary part of his scheme. He referred to the several Acts which bore upon criminal responsibility—the 39 and 40 Geo. III., c 94, s 4 ; the 1 and 2 Vict., c 14, s. 2 ; the 3 and 4 Vict., c. 54, s. 3 ; the 16 and 17 Vict., c. 97, s. 68 ; and the 27 and 28 Vict., c. 29, s. 2. None of these contemplated the prisoner when brought before the magistrate, fresh from the commission of the crime. The last mentioned Act was the most important, and he thought that it was in the direction of an extension of the provisions of this Statute, that additional legislation might be carried out ; the leading provisions being a skilled examination of the prisoner at the earliest possible period, a continuous observation conducted between the committal and the trial, and a written report of the result sent into the Court.

The CHAIRMAN, in inviting discussion, remarked that the paper they had just listened to was a very able and comprehensive one. Dr. Hack Tuke had pointed out a very serious defect in the law, and had suggested a remedy. If members present could add the weight of their authority to the ripe experience of the author of the paper, not only would great good be done to those unfortunate people who had the misfortune to lie under the stigma of insanity, but their legal dignitaries would be helped out of a very serious dilemma.

Dr. SAVAGE said that he had not much to say upon the subject. A paper of this kind required to be read leisurely at home, and thought over. They had before them the opinions of Dr. Tuke, and they had to consider with them those of the lawyers. For instance a barrister had said that all witnesses were either liars, or worse—or experts, and that the removal of judgment from the one class to the other would not be a benefit. It was said by them that if an expert's evidence was worth anything, he ought to be able to convince the majority of the truth ; that they (the lawyers) thrashed out the truth, one beating one way, and one another, till in the end the

husks were got rid of, and the truth attained. Theoretically this should be so, but it had frequently been seen that the opposite had resulted, and that the cause might be lost through that sleight of hand to which the barristers were so well accustomed.

Dr. HACK TUKE remarked that this would refer to oral and not to written evidence.

Dr. SAVAGE Certainly. Then as to juries. He should be very glad to see experts assisting, because of the unsatisfactory way in which juries arrived at decisions. Juries of matrons were bad enough. Ordinary jurymen were still worse. At all events if they must have juries to decide these matters, they should be on the same principle as a jury of matrons. In that kind of jury the members were supposed to have been in the family way; and if the juries, who had to try the question of a man's sanity, had been in asylums, some definite good might be attained; it would be an immense benefit if a system were instituted somewhat like the French system, if not exactly like it. It seemed very strange that amongst all the agitation about the domestic relations of lunacy, the questions of proving a man criminal or insane were left out altogether, and he hoped that if any legal measures were proposed by the present government, or during the present Session, some such clauses as those now brought before them would be considered.

Dr. MAUDSLEY was afraid that our legal dignitaries had not the least desire to be helped out of their dilemma. From his own earliest recollections of this Association they had been hammering away at this subject, and in 1868 a Committee of the Association was appointed expressly for the purpose of considering this matter, and applying to the Government for a Royal Commission to enquire into it. In fact, he had just found a Report which had at that time been drawn up, and extracts from which he would read to them. It dealt with the whole subject of criminal insanity, first of all with regard to that very absurd legal criterion of responsibility—the knowledge of the difference between right and wrong, but principally with the manner in which scientific evidence was taken in courts of justice. The Report stated, "The incompetency of a jury to weigh and apply in a satisfactory manner evidence of a scientific character can hardly admit of doubt; and when such evidence is presented to them, not with studied impartiality and completeness, but as evidence specially retained for the prosecution or the defence, they have no means of forming a correct judgment on the points at issue" And it goes on in that way to point out several defects which Dr. Tuke has pointed out. It says, "There are many scientific and technical matters, for a knowledge of which a special and protracted education is required, and it is impossible to believe that a jury can, even under the guidance of the best judge, who has not special knowledge, be instructed to the requisite point within the short period of the trial." Then it goes on to suggest the following, by way of suggesting a remedy—"The incompetency of a Court as ordinarily constituted is, indeed, practically recognised in a class of cases known as Admiralty cases"—(those are the "running-down" cases at sea)—"where the judge is assisted by assessors of competent skill and knowledge in the technical matters under consideration." That was one of the means suggested, that in trials in which questions of insanity arise the system should be adopted which prevails in Admiralty cases—the judge should be assisted by competent assessors, as in the Admiralty cases, where one or two of the Trinity brethren, who are mariners, sit with the judge as assessors. He could not help thinking this would be better than the means adopted in France, which did not lead to such satisfactory results. It would be quite opposed to the whole genius of the English law to shut out the power of cross-examining witnesses. That would not be permitted. The expert would not be allowed to shelter himself behind his report; he would be obliged to go into the witness-box, and submit himself to severe cross-examination. And then they could not shut out from the other side the power of calling counter evidence. They would be allowed to have their own experts, and there would be the present conflict going on in

even a more unsatisfactory form than at present. It seemed to him (the speaker) that it would be far better to adopt the system for which they had a precedent in the Admiralty Court, and recommend that the competent scientific experts, appointed by the Crown or by the judge himself, should sit with the judge as assessors, and aid him with their advice. The Association did make an application in this matter. "We respecfully, but earnestly endorse that recommendation" (that was the recommedation of the Capital Punishment Commissioners), "being deeply convinced of the advantages that would accrue from a searching enquiry, by means of a Royal Commission, into the relations of mental science to the administration of justice, with a view to a revision of the existing system of criminal jurisprudence in its relations to insanity." The reply was that they did not see the necessity for a Royal Commission, and they did not even consent to receive a deputation.

Dr. RAYNER thought that although they were then unsuccessful in producing any effect on the Government, that should be no reason why they should not strive again to obtain their point, more especially as at the present time the Criminal Code was under consideration. In connection with this subject there were many points remaining to be considered. One was the want of care which was often shown by magistrates in ascertaining whether the criminals brought before them were of sound mind. He (Dr. Rayner) received year after year patients suffering from general paralysis, who had committed offences of the general paralytic type, which would have attracted the attention of anyone who possessed the least experience in insanity. Such cases had been convicted and sent to prison for periods of, say, six weeks or three months, and in one instance they had been discharged without their insanity having been detected. This important matter should be brought to a practical issue, either by reference to a committee or in some other way.

Dr. NICOLSON referred to cases sent to Broadmoor simply upon the verdict of the jury, or the award of the jury that they were to be detained during Her Majesty's pleasure,and which were there found to be clearly cases of unsound mind, although the prison surgeon had appended his remark that there were no indications of insanity. No doubt hitherto the great bugbear of cross-examination stuck very much in the throats of the surgeons. They did not like to raise the question of a man's insanity, knowing that they might be had up and pestered with all sorts of questions for which they were not prepared ; so they preferred to go on quietly till the end of the sentence, and then let the man be discharged in the usual way. He hoped, however, that under the present system of concentration under Government, the attention of medical men appointed to prisons would be better directed to this point. The difficulty immediately occurred when the prison surgeon made some sort of suggestion or statement, or distinctly announced that the prisoner was a lunatic. As soon as he said anything, the governor, who might or might not take an interest in the question, would tell the medical officer (not perhaps directly, but indirectly), that he did not want all these questions raised. The medical officer would be given to understand in a general way that, if he was going to make out that all the people there were insane, the sooner he was out of that the better. In the Government prisons some of the governors were quite ready to see when a prisoner was of a defective type of mind, and in that case immediately to refer to the medical officer to ascertain whether they should award him any prolonged punishment, and the question was then settled by the medical officer ; but other governors would not do this, and perhaps matters would be allowed to go on until, after repeated punishment, the medical officer was compelled, by the state of the man's health, to take him under his more immediate care.

The CHAIRMAN said that certainly they were much indebted to Dr. Hack Tuke for his paper, and he should call upon him to reply. He thought also that Dr. Maudsley should be asked to give up to Dr. Tuke for consideration when the matter came before any committee, the valuable Report from which he had quoted extracts. It was the outcome of many able minds. No doubt barristers

did not want assessors any more than experts, because they would find that they knew too much for them. When they read of a recent trial which had gone on for days, but which was settled by an ordinary jury in a short time, it did seem to him a very serious anomaly that it should have been allowed to last so long.

Dr. HACK TUKE, in reply, said that, as regards Dr. Maudsley's observations, he had found, in talking to barristers, that there was exactly the same objection in their minds to assessors as to experts giving written reports on which they were not to be cross-examined by themselves. He did not therefore see that they would stand any better chance of attaining what they wanted by proposing assessors.

Dr. MAUDSLEY—Both are suggested.

Dr. TUKE said that, at all events the attempt at reform made in 1868 entirely failed. Dr. Maudsley had a great sense of the genius of English jurisprudence. In this he could scarcely agree. Upon comparison with the Austrian and French codes, one was struck with the great superiority of either over our own on this subject. Taking the Austrian code, with its recognitions of emotional as well as intellectual states of mind, this could not fail to be acknowledged, and he himself certainly preferred, in regard to forensic medicine, the genius of Continental law. The appointment of assessors would leave entirely unremedied the evils arising from there being no provision made for the proper examination of the prisoner when apprehended and brought before the magistrates or magistrate. With regard to Dr. Rayner's desire that the subject should take some practical form, nothing occurred to him but to refer it to their Parliamentary Committee, and if it were understood that it might be brought before that Committee with the weight of the opinion of the present meeting, he for one should be very glad.

This course was determined upon.

Dr. RAYNER read a paper on "Insanity from Lead Poisoning." He observed that although his attention had been directed for some years to the subject, the number of cases coming under his observation was inconsiderable, and that he brought them forward in the hope of inducing others to place on record their experiences, rather than with the idea of formulating any definite conclusion. [These Cases will appear in the next number of the Journal, with additional ones by Dr. Savage]. Dr. Rayner concluded by stating the three principal modes in which lead-poisoning may produce insanity. 1. That of coarse lead-poisoning producing attacks of acute mania and conditions closely resembling general paralysis, such as Tanquerel describes under the term lead encephalopathy. 2. Cases of minute and protracted lead intoxication, producing slowly developing sensory hallucinations, noticeable by the absence of the feeling of persecution, and by the persistence of the hallucinations of vision. 3. Cases in which somewhat coarse toxæmia in the first instance developes gout, and then acting in conjunction with the gouty poison, produces a form of mental disorder, closely resembling general paralysis.

The CHAIRMAN said that the paper just read was the result of much close observation. The cases were certainly of a very persistent nature, for he understood that none of them recovered except a very doubtful case. It would seem that the lead itself must be a very potent poison to the cerebral tissues, or else there must be some other cause. In one case which had come under his own observation, he made a very careful examination. The patient assured him that it occurred from pump water. Further enquiry proved that the man had never drunk much pump water in his life, except mixed with gin. Perhaps some of Dr. Rayner's cases might be of a somewhat similar nature.

Dr. SAVAGE stated that he had himself been trying to collect information about these cases of lead poisoning, but he had not received a single reply to the enquiries he had made in his circulars. He had seen at least four distinct cases, and, had time permitted, he would have given them. Perhaps they would form a useful addendum to Dr. Rayner's paper. In one case the patient's friends thought it impossible that lead should have been the cause. The man came in with spongy gums, and other characteristic symptoms, and got well. He said

that it was lead. He had been a clerk in lead works for nearly 20 years, but had never handled it up to three months before he broke down. There was a temporary deficiency in the staff, and he was put on as a tester, and part of his duty was to test the samples of white lead to see if it were fine enough. Another case was that of a woman under Dr. Moxon, of Guy's, who suffered from acute mania—hallucinations associated with sight and hearing. She had an affection of the vagina, and she had used very strong lead lotions on her own account, and she was poisoned in that way. There was another case about a fortnight ago in Guy's. A man who was admitted was supposed to be suffering from delirium tremens. He turned out to be a very sober man indeed, and it proved to be due to lead poisoning. In this type of disease there were three phases—acute mania, a mental condition associated with hallucinations, and another condition hardly to be separated from general paralysis. He was inclined to think that true general paralysis might be produced by chronic lead poisoning.

Dr. McDowall said that if Dr. Savage would apply to Newcastle, where there were many lead works, he would probably gain much information upon the subject. He had heard of very bad cases of dementia caused by lead-poisoning, and they had found at Newcastle that if they adopted the treatment recommended in books, the patient would be poisoned outright. If iodide of potassium were given in very severe cases, the patient would pass into a state of coma and die quickly.

The Chairman—Did the Guy's Hospital patients recover upon the elimination of the lead poisoning?

Dr. Savage—The first did.

Dr. Rayner, in reply, said that as regarded the Chairman's observation, as to the unhopefulness of these cases, and his remark as to the similar case developed from alcohol, the explanation would probably be found in the prolonged action of the causes. The patients having probably been under the influence of the poison for many years, a form of insanity was produced which very closely resembled insanity resulting from equally protracted poisoning by alcohol. In the first class of case quoted, the encephalopathic, that was obviously due to very coarse lead poisoning In the third class of case in which gout was produced, and then in conjunction it acted upon the nervous system, there could be no doubt about the action of the lead. There seemed to be a special proneness in gouty patients to be affected by lead-poisoning, Dr. Garrod pointed that out, and also that although lead-poisoning was very common in England, it was not common in Scotland or France, and it was ascribed to the fact that in England people used beer and fermented liquors, and that in France and Scotland they were not so extensively used.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

A Quarterly Meeting of the Medico-Psychological Association was held at the Royal College of Physicians, Edinburgh, on Friday, 11th November, 1879. Among those present were Drs. Jamieson, Johnston, Batty Tuke, Ireland, Yellowlees, Clouston, McDowall, Philip, McLaren, Inglis, Clark, Rutherford, &c.

On the motion of Dr. Clouston, Dr. Jamieson was called to the chair.

Dr. Ireland read a paper on "Left-handedness in Idiots."

The Chairman said that the subject was a curious and very interesting one, and Dr. Ireland had evidently devoted much attention to it. There was one point, however, on which he would have liked to have had a more definite expression of Dr. Ireland's views, viz., the final cause of right and left-handedness. He himself had not specially studied the subject, but he had the idea that the heart being on the left side might be an element in the tendency of man, considered as a fighting and working animal, to use the right side, thereby shielding the great centre of vitality. Woman, again, as a producing and nursing animal, carried her child on the left side, in the region of the heart; but these

are mere fanciful ideas. He had observed that left-handed people were sometimes very *dexterous*.

Dr. McDowall said it was an interesting circumstance that in the Roman army there was a tribe of slingers who were very dexterous, and who all used the left arm. It was also well-known that soldiers were taught to advance with the left foot, but military men could give no very good reason for it.

Dr. Ireland mentioned the opinion of a French anatomist that the left side of the brain was earlier developed, and in the new-born child was three grains heavier than the right, but it seemed to him that very young children used both hands indiscriminately, and that probably after all the use of the right hand was very much a matter of education and habit.

NOTES OF A VISIT TO PROFESSOR CHARCOT'S WARDS.

Dr. Yellowlees said: When in Paris, in October last, I visited Professor Charcot's Wards in the Salpêtrière, and saw several cases of so-called Hystero-Epilepsy, which were most curious and interesting. My visit was fortunately made on a day when several of these patients chanced to be taking fits, and although I have prepared no paper on the subject, the members may be interested in a few notes made just after the visit. The first case which I saw exactly illustrated the three stages of the attack, as shown in the photographs, and in large, most accurate drawings on the walls of one of the rooms. The patient was a stout, round-faced girl about twenty years of age; she had attacks once a month or so, lasting often twenty-four hours, the seizures rapidly recurring all that time. When we entered the ward she had just come out a fit, but another very soon supervened. The attack began by epileptiform spasms, quivering of the limbs, and heaving of the abdomen, then there followed, in a few minutes, most violent movements of the body, in which she flung herself about wildly, and arched the body as in tetanus. The movements were restrained by various straps fastened to the canvas jacket she wore, and such restraint was most needful. These violent periods lasting two or three minutes were followed by an emotional period, or period of ecstasy, in which the countenance, movements, and words expressed pleasure, love, fear, hatred in turns, and most graphically. The words she used, and their mode of utterance, expressed exactly and vividly the emotion of the moment. Then she began to push away some invisible object, or brush off imaginary beasts from the bed. This attack, in this sequence, had not well passed away before another exactly like it supervened, and the same course was gone through. During the attack she heard and felt nothing; was insensible to pinching, and the ecstasy was not in the least disturbed—not even to the extent of winking—by a loud blow on a gong close behind her. The marvel was, that, at any period of the attack, it was at once and entirely suspended by strong pressure over the ovaries, and the patient said rationally and instantly, "Ah! vous me faites mal." While we were observing this case another girl in the same ward fell into a cataleptic state, the body and limbs remaining statue-like in any position in which they were placed. This condition was said always to precede the fits in her case. The nurses were told to place her in bed, and one, without being instructed, was pressing firmly over her ovaries. This seemed to be the recognized and habitual mode of arresting an attack, and to be adopted as a matter of course. The cataleptic state soon passed into an epileptiform attack; then came the extremely violent movements; and then, though less evident and prolonged than in the first case, the emotional condition. This attack seemed to me to have been induced by the state of the first patient, and the sudden noise of the gong, and, as in the other case, it was readily arrested at any point by pressure over the ovaries. After the attack there was, and there always is in this case, anæsthesia of the left side, and contraction of the left arm. This girl was seen again subsequently. The left

arm was, and is habitually, analgetic, except at the tip of the middle finger, corresponding with the tip which is covered by the metallic thimble on the other hand; while on the right side, which is habitually sensitive throughout, the part covered by the thimble was alone insensible to pricking. It was this thimble which taught Dr. Charcot the phenomena of transference. A magnet placed near this hand caused, in two or three minutes, a transference of the analgesia to the opposite hand, which became rigid and analgetic. The magnet placed at the right hand sent the sensibility again over to the other as before. The power of recognizing different colours was also transferred from side to side in a corresponding manner. A piece of iron, exactly like the magnet, or a piece of wood painted like it, produced no effect. They were indistinguishable by a patient from the magnet, hence, says Dr. Charcot, these phenomena cannot be the result of "expectant attention." A third case (aged about 22 years; menstruation irregular; fits recurring several times weekly) was found in another ward upstairs. The attacks were of exactly the same character, and the opisthotonos the most complete and violent I ever saw, the body sometimes resting only on the head and heels, and sometimes forming a like curve while lying on the side. As in the other cases the seizure was arrested at any moment by pressure over the ovaries. I did this with my own hands repeatedly, the effect being immediate and most remarkable, and the patient becoming at once conscious and reasonable. This patient had been using an apparatus expressly designed to exert and maintain pressure on the ovaries. A flat metal arch or bow, properly padded, passes beneath the body of the patient as laid in bed on her back. Another metal arch passes across the body in front, and to the latter a metal upright with a horse shoe-like padded extremity is attached, the pressure being adjusted and maintained by means of a screw. The patient herself arranged and adjusted the apparatus in our presence. She had worn it the greater part of the previous night, and had removed it that morning, she said, thinking the attack had passed away. When pressure was made by the apparatus, or by the hand, the patient continued free from the attack, and seemed perfectly well. One of the assistants in this ward had been herself similarly affected, and equally severely. This person, now twenty years of age, and apparently quite well, had been thus affected at the age of ten years, and therefore before menstruation, and what is deemed the active life of the ovary, had begun. Dr. Charcot said that he had repeatedly seen exactly similar cases both before and after the menstrual period of life. This woman continued very sensitive to mesmerism or braidism, and exhibited very strikingly the peculiarities of that condition. She was very quickly thrown into the sleep, merely by Dr. Charcot's fixing his eyes on her, and she went over again with equal readiness subsequently when I regarded her in the same way. At the moment of falling over there was invariably, as Dr. Charcot pointed out, a slight spasm of the glottis, and often a very slight moistening of the lips, suggesting the faintest possible approach to an epileptoid seizure. While asleep she was quite unconscious, and any muscle, when excited to action by rubbing, contracted readily and strongly, so that by this means any contortion, such as extreme flexion or extension of the arm could be produced; and by irritating the facial nerve at the front of the ear, the angle of the mouth was twitched and retracted. If awakened by blowing sharply in her face, or by a sharp, sudden push over the ovaries, she recovered consciousness at once, but the arm remained contorted, and she could not straighten it. When again put into the sleep the arm remained rigid until the eyelid of the corresponding side was raised, and the eyeball exposed to the light, when with another scarcely observable spasm of the glottis, such as occurred when she went over, the contracted muscles relaxed at once, and the arm regained its usual mobility. This result was, of course, also obtainable by excitation of the opposing muscles so as to cause them to act, and to undo the contortion or rigidity. But the mere opening of the eye, as above, seemed at

once to relax the rigid muscles; they no longer acted when rubbed, nor did the angle of the mouth respond to irritation of the facial nerve. Dr. Charcot does not know, nor profess to know, why the raising of the eyelid should have this singular effect. The fact is certain, whatever the explanation. Another girl showed subsequently precisely the same phenomena under artificial sleep, except the movements from irritation of the facial nerve. These attacks of hystero-epilepsy, or whatever they be called, Dr. Charcot has often seen in private practice, as well as in hospital patients. If taken at its commencement it is a curable disease, but the cure usually requires a year. The treatment is mainly moral, and consists in removal from home and friends, the care of an intelligent nurse, the very frequent use of baths (mainly, it would seem, for their moral effect, as they are given after each fit), and only such medical care as is needful for the general health. Bromide of potassium, which has generally some effect, more or less decided, on ordinary epilepsy is useless in such cases; so are other sedative and neurotic medicines. Dr. Charcot does not think sexual excess a frequent cause of these fits, nor would marriage be a proper remedy, though it might be advisable after recovery. Epilepsy in the parents he regards as the most frequent cause. The remarkable effect of pressure over the ovaries he learned from a patient who had found it out for herself, and who, while forcibly exerting it on her own person, said to him, "This cures me." Several other patients were then seen, illustrating analgesia, and one of them illustrating also the loss of muscular sense, so that when she closed her eyes, she swayed unsteadily, and would have fallen to the ground. This patient was completely analgetic in every part of the body. The singular fact about these patients was that they were not aware of this condition—analgesia—until it was discovered by their physician; and that they were, and still are, able to do all kinds of ordinary work. They knit, sew, and perform all kinds of domestic duty just like their neighbours; and even their physician did not discover this derangement of sensibility until he carefully looked for it. Altogether the facts, seen with my own eyes that morning, were such as I could scarcely have credited on the testimony of another. I merely tell you what I saw, without professing to understand, or attempting to explain it. I must not omit to add that I was received with the most courteous kindness by Dr. Charcot, my questions were answered with entire candour, and I was freely invited to examine the cases in any way I pleased.

Dr. TUKE said that he had visited Dr. Charcot's wards on several occasions, and felt quite convinced of the reality of the manifestations, and of the results obtained; he saw the fits stopped, and transference of sensibility effected, as described by Dr. Yellowlees. Although at first he felt sceptical, yet, after repeating his visit, he had no doubt of the reality of the phenomena.

Dr. CLOUSTON said that he had great distrust of the whole of Dr. Charcot's conclusions. He regarded the motor phenomena as the best examples yet described in medicine of suggested motor action in hysterical subjects with unstable brains, diminished voluntary inhibition, and a morbid craving for notoriety. He looked on the sensory symptoms, the hyperæsthesia, the anæsthesia and the transference of sensibility, as phenomena to be studied from the subjective side as regards the patient, like delusions and hallucinations, It was well known that diminished sensibility was very common amongst the insane.

Dr. YELLOWLEES thought there was far less diminution of sensibility amongst our demented patients than was generally supposed. Where the patient retained sufficient intelligence to describe his sensations, his common sensibility was generally unaffected.

Dr. MCDOWALL said that he had been frequently astonished at the way in which insane persons retained common sensibility. In his opinion so long as they were rational enough to express their sensations, they felt as well as anyone.

Dr. IRELAND said that he had tried to discover whether sensibility was diminished in idiots. He had found cases where it was diminished, but they were quite exceptional.

Dr. YELLOWLEES said that he thought it was a striking circumstance that these patients had not previously been aware of their analgetic condition, and that they had been able to go about the ordinary business of life unconscious of any diminution of sensation.

The CHAIRMAN then called attention to the case of Nowell *versus* Williams, which had just been concluded in the Court of Common Pleas, and in doing so expressed his surprise that such a case should have become the subject of litigation.

Dr. CLOUSTON thought it worthy of remark that the question of the insanity of the patient was not the point on which the judge or counsel seemed to lay most stress. The witnesses were certainly questioned about the insanity of the patient, but the point that was desired to be elicited was whether he was dangerous to himself or others. The jury also stated, as a sort of rider to their verdict, that they considered it irregular to write the two medical certificates on the same sheet of paper. Lord Coleridge, too, considered it to be the duty of the certifying medical men to state *all* the facts indicating insanity that were known to them.

After a conversation on this subject, a vote of thanks was given to the CHAIRMAN, and to the College of Physicians for the use of their hall, and the proceedings terminated.

PRIVATE LUNATIC ASYLUMS.

A Meeting of members of the South London District of the Metropolitan Counties branch of the British Medical Association was held January 21st, at Bethlem Royal Hospital, Dr. Alfred Carpenter presiding.

Dr. BUCKNILL read a paper on private asylums. The operation, he remarked, of the laws under which such asylums existed had tended in the past, and still more and more tended, to sequester the insane from the care and treatment of the medical profession at large; to render more and more perplexing, dangerous, and difficult the treatment of any single case of lunacy; to herd lunatics together in special institutions, where they could be more easily visited and accounted for by the authorities; and to create a class of men whom those authorities could make responsible to themselves for the confinement and detention of the insane according to certain regulations, but whom they did not, and could not, make responsible for their proper medical treatment. There were 98 private asylums in England and Wales, and of these 49, being just one half, were licensed to medical men alone—the remaining half being licensed to laymen or women, or to medical men in partnership for this purpose with laymen or with women. He desired to put aside any word which might be construed to have a personal reference; but he asked the opinion of those whom he addressed on the broad ground of principle, whether it was right that diseased and helpless persons should be detained and confined in asylums for the profit of private individuals, the amount of that profit depending upon what those individuals chose to expend upon the comfort and enjoyment of their inmates, and its continuance upon the duration of the disease, or what they might choose to think its duration. Might he not fairly ask what could possibly justify the existence of these institutions for private imprisonment, owned and kept by private people—lay and medical, male and female? There was nothing like a parallel instance in which the liberty of Englishmen was submitted to such control. What good reasons could be given by medical men for sending patients to such asylums? They knew pretty well what the motives of relatives were for so doing—the safe guarding of the patient; secrecy, and perhaps the hope

of cure. But had they, as medical men, any clear knowledge of the treatment carried on for purposes of cure in these places? Had they any assurance that secrecy would be observed when it was right, and not attempted when it was wrong? Above all, had they any confidence that when, with or without medical treatment, their patients had recovered in those asylums, they should be permitted to know the fact; or, if they should be so bold as to think they had observed it for themselves, were they sure that they should not be contradicted and deceived? Were they sure that their recovered patients would not be indefinitely detained, under the supposition that they only appeared to be recovered, and might, perhaps, have a relapse? What ought to be done? In the first place, he might broadly state his opinion that no change in the law could be satisfactory which did not contemplate the eventual abolition of all private lunatic asylums. The deprivation of the personal liberty of any of the Queen's subjects was an affair of the State, and must only be undertaken by the State. From that axiom there must be no flinching. It might be very convenient for Commissioners that the insane should be gathered together in large herds or groups; but it was not to the advantage of any one except the custodians, and the Commissioners must eventually conform to the requirements of the age. The discussion of the large question of certification might well be postponed to another opportunity; but he might observe that no mere tinkering of the present certificate system would suffice to make it safe to the practitioner or satisfactory to the public. The medical man ought to be put firmly upon his right footing, as the exponent of scientific opinion, and the action taken upon evidence of that opinion in so grave a matter as that of depriving a person of his liberty ought to be no less than that of the civil power, whatever might be determined for the best, as to the judge, the court, or the form of inquiry. Moreover great changes were needful among the administrators of the Lunacy Laws. There ought to be only two authorities to administer the Lunacy Laws, and two laws for them to administer, as they severally regarded two distinct classes of the insane. The present division of authority between the Lord Chancellor's officers in Lunacy, the Commissioners in Lunacy, the Local Government Board, and the Boards of Guardians, the visiting Justices, &c., Visitors of Asylums, &c., was intricate, confused, and mischievous. Instead of this the Local Government Board ought to be placed in authority over all subordinate authorities, having control over the care and maintenance of all destitute lunatics; and the Lord Chancellor's officers in Lunacy—or, to speak with more technical accuracy, the Lord Chancellor with all his subordinate officers in lunacy under the Royal Prerogative—ought to have authority over all other lunatics and persons charged with their care and control. The change would leave no sphere of action for the present Board of Commissioners in Lunacy, the members of which might well be distributed between the two new and enlarged authorities—half of them going to the Local Government Board and half of them to the Lord Chancellor. Upon this broad basis the details of lunacy law reform could be built up with symmetry and effect; but without some broad basis of the kind, founded upon a logical principle, any reform which they might expect would but be some tinkering of the old pot. They might be assured, however, that the longer reform was delayed the more comprehensive it would be when it did come; for the history of social politics was the opposite of that of the Sibylline leaves, and generally the longer they waited for reform the larger it became. In the meanwhile it was their duty, both collectively and individually, to strive that the pitiable and helpless class of diseased persons from whom the profits of private lunatic asylums were derived should not suffer longer than could be helped under the disadvantage of a worn-out old law. Sequestered as such persons had been from the professional care of those for whom he spoke, they were still, as diseased persons, proper objects of interest and regard, and medical men owed it to themselves and their profession, to see that the law which governed their care and treatment should be conceived and executed in the spirit of benevolence, of a scientific knowledge of disease,

and of the true relations which the ethics of the profession taught as being consistent with the dignity and welfare of both medical practitioner and patient.—*Standard*, Jan. 22.

Mr. NELSON HARDY, honorary district secretary, read a letter from Dr. Lush M.P., in favour of the abolition of private asylums.

The CHAIRMAN said that he protested strongly against any of the work referred to being thrown upon the Local Government Board. There ought to be a Minister of Health in this country, on whom should devolve the care of all institutions connected with the health of the people. He did not think that it was a matter that the Local Government Board could possibly deal with in a proper spirit. The medical profession should themselves take the matter in hand, and should press strongly upon the Government the views that were put forward lately by Mr. Powell in his address on Public Health, so as to obtain from the Government a recognition of the rights of the medical profession and the appointment of a Minister of Health. One of the things that should be placed under his care was the management of the insane.

Mr. HAYES NEWINGTON said that the question was not whether proprietors of private asylums had honesty of purpose, but whether they were obliged by law to have honesty of action—whether there was not a sufficient guarantee for their honesty. Several charges had been made against them. One was made some years ago, and it originated in some terrible facts. It was said, first, that sane people were shut up, and secondly, that they were ill-treated by those who had charge of them. No doubt, previously to Mr. Warburton's Bill (he believed in 1828), there was a vast amount of wrong done. But since then there had been various Select Committees, and those charges were practically abandoned by all, who had any right to speak in the matter, including Dr. Bucknill himself, the Visitors, and also the Commissioners. Even the philanthropists did not state that there was now anything like shutting up of sane people, or cruelty to those who were shut up. A third charge was, that the patients were detained after they were cured. If that had been true for many years, one absurd effect would be that the asylums would be blocked up. He would put before the meeting a few figures extending over ten years, which he thought would put the case rather the other way. The average yearly residence in county asylums was in round numbers 32,000, and the admissions were 10,000—a proportion of $3\frac{1}{5}$. In the hospitals there were 785 admissions, and an average residence of 1,874; showing a proportion of $2\frac{3}{8}$. In private asylums there was an average residence of 4,445, the yearly admissions being 1,835; giving a proportion $2\frac{3}{7}$. Thus, in county asylums the proportion was $3\frac{1}{5}$, and in hospitals and private asylums together, $2\frac{3}{8}$. In other words, supposing the various classes of asylums were absolutely empty, and there were no deaths or removals, it would take 3^1 years to fill the county asylums; $2\frac{3}{8}$ years to fill the hospitals; and $2\frac{3}{7}$ years to fill the private asylums. Another view was still more convincing. The average residence in the county asylums was 32,231; the discharges and deaths together amounted to 8,893. The average residence in hospitals was 1,887; discharges and deaths, 786. In private asylums, the average residence was 4,445; discharges and deaths, 1,856. These proportions showed that, supposing no more admissions took place for a certain time, it would take three years and seven months to empty county asylums; two years and five months to empty hospitals; and two years and four months to empty private asylums. He found also that there were nearly 12,000 more in county asylums than there were ten years ago, in hospitals there were five fewer patients than there were ten years ago, in private asylums they were fewer now than there were ten years ago by 237. That showed that there was neither a stagnation nor a tendency to block up. It had been said that proprietors of private asylums did not wish to cure their patients, because it was better to keep them as patients. The average rate of yearly cure was calculated by dividing the admissions by the cures; that was supposing an asylum admitted one hundred patients in a year, and discharged forty-two, the rate of cure was put down as forty-two. The average rate of the

cure of lunatic patients was between 38 and 40 per cent.; in private asylums it was 32 per cent. Those figures, however, must not be taken alone Dr. Thurnam brought out some tables, and Dr. Needham had followed, taking twenty-six or twenty-eight years of the more recent results. On the Select Committee, of 1877, Mr. Wilkes, in his evidence, produced some figures which he had elaborated from reports of thirteen county asylums; and it was shown that 54 per cent. of the patients taken into asylums within one year of the seizure should be cured, and that between 5 and 7 per cent. was all that could be expected to be cured after the first year. To compare with these figures, he had not any extended returns from private asylums, as these did not publish printed reports; and he had therefore been obliged to take one hundred cases from his asylum at Ticehurst. Of these patients, 31 were already cured, and six were patients that were curable; if four were cured, there could be 35 cured out of 100. That would answer the objection that there was not a wish to cure the patients. If the figures were read in a proper way, the private asylum proprietors did as much work towards recovery as their colleagues did in the public asylums or hospitals. As to the question of self-interest, the great fallacy in all this argument was that, because a man's interest might lead him to do wrong, he was bound to do it. He did not see why private asylum proprietors should be necessarily wanting in honesty. A man's interest might lie one way, but there was no necessity for him to follow it. It was assuming that he had no moral integrity whatever. As to private patients, there were only about 3,000 really private patients; a considerable number ought not to be placed in that category. For instance, at Grove Hall, there were 452 soldiers paid for by the Government, and who therefore ought not to be regarded as private patients. With regard to single patients, it appeared that the cures were nine per cent. With regard to the originators of the charges, there were patients who always had grievances against the private asylum proprietors, and a few of these had lately abused them; but against their statements could be put the kindness shown by other patients. As to the lay newspaper writers, their experience must be borrowed, and their information came through the narrow channel of a few people. The journalistic profession must depend for most of their knowledge on what they were told by other people. A writer in a medical paper had started weighted with an old editorial tradition; but he (Mr. Newington) believed he had not had any practical knowledge of insanity to back up his theoretical opinions. He would answer Dr. Bucknill by quoting his opinions given before the Select Committee. He had expressed in his paper a wish to abolish private asylums. In answer to Question 1,910 before the Select Committee, "Would it not be desirable to get rid of private houses by degrees?" he observed, "I should be very sorry to see them got rid of."

Dr. Bodington (Kingswinford) said that he desired to bear testimony to the endeavour which Dr. Bucknill had made to treat the subject in a moderate and temperate manner. A great deal of heat had been imported into the controversy, not by the private proprietors of asylums, but by agitators against them. It was very desirable that members of the same profession, occupying different callings, should treat one another with temper, moderation, and forbearance. Dr. Bucknill did not quite bear out his argument with regard to the analogy between private asylum proprietors and their profits and ordinary practitioners and their profits. In all callings there were some dishonourable men, but it was hoped many more honourable ones. Dr Bucknill first stated that a number of charges might be made against proprietors, and then he took as exceptions a certain number of honourable men whom he had known. If private asylums were to be defended, they must be defended upon the ground of the medical proprietors being equally honourable with the rest of the profession It seemed to him hard that, because the present private asylum proprietors happened to be the incumbents of offices which had been handed down to them from time immemorial they should be attacked as if they were a special race of pariahs not worthy to be associated with ordinary decent people. In the last report of the

Commissioners, there was some excellent testimony that medical proprietors of asylums were men of at least equal honour and equal sensitiveness to their honour with any other body of men.

Dr. HICKS said that he was one of the proprietors to whom Dr. Bucknill had referred. He was not prepared to hear all he had heard ; but he was not surprised. He was anxious to hear what statements Dr. Bucknill was going to make, and what facts he was going to bring forward to support those statements. Dr. Bucknill had brought forward cases in support of the system of private patients. If Dr. Bucknill had any facts to bring forward, he ought to have done so ; but he had not. Two years ago, he (Dr. Hicks) appeared with Dr. Bucknill to prosecute a medical man for keeping a single case. It was a case under the care of a private medical man, and Dr. Bucknill's report proved that it was a most detestable one, such as could not possibly have occurred in any private asylum in this country, and such as he would venture to say had never been reported in this country. He believed Dr. Bucknill had appeared on other occasions to prosecute cases of this kind ; and yet he now stated that private asylums were most destestable places ; that the proprietors were the black sheep of the profession ; and that their patients should be scattered far and wide, leaving them without government, protection, or anything else. The private cases were not, perhaps, visited once a year, while the private asylums were visited six times in a year, and every possible contingency had to be reported to the Commissioners. Dr. Bucknill had told him, on the occasion referred to, that he would like to have a private asylum in the suburbs of London, but that the Commissioners would not sanction it. [Dr. BUCKNILL denied that he had said this.] Dr. Hicks said that he was a proprietor, and he did his utmost to act honourably, and had never given cause of complaint. There were also other proprietors who had had no complaint brought against them ; and yet Dr. Bucknill charged them with keeping patients longer than they ought to do, that they did it from personal motives, and that the proprietors had not attempted to discharge cases when they were cured.

Mr. W. G. BALFOUR did not think that the argument for and against private asylums was likely to do much good. Last session, Mr Dillwyn introduced into Parliament a Bill containing every one of the things which Dr. Bucknill had proposed as remedies for existing evils. He did not see what was the use of keeping up this sort of warfare. He would rather bring before the meeting a resolution that it accepted Mr Dillwyn's Bill as a measure of reform in lunacy laws, and that they should proceed to consider its clauses.

Dr. WOOD moved the adjournment of the discussion.

Dr. BODINGTON seconded the motion for the adjournment. He believed that the great majority of medical asylum proprietors were in favour of abolition. In that he quite agreed with Dr. Bucknill.

Dr. BUCKNILL entirely concurred in what the Chairman had said with regard to the Minister of Health. He had only mentioned the Local Government Board as the authority in possession. As regarded Dr. Hicks's statement, if he had thought fit to apply for a license, the Commissioners in Lunacy would have been most willing to give him one.

The resolution for the adjournment was carried unanimously.

At an adjourned Meeting of the South London District of the Metropolitan Counties Branch on Wednesday, February 4th, the discussion on this subject was resumed by Mr. W. G. BALFOUR, who read a paper on Private Asylums.

Dr. WILLIAM WOOD had moved the adjournment of the discussion because he thought that Dr. Bucknill had not been sufficiently understood. His paper had been read, not as a voluntary communication, but in response to a request from the secretary of the district. The paper must then be looked on as the production of a literary athlete rather than of an eminent physician attacking his professional brethren. With regard to the proposed abolition of private asylums, he would ask, Who are those who wish that private asylums should be

abolished? It would scarcely be said that the patients themselves would wish it as a rule. No doubt there would be exceptions; but these would abolish asylums altogether. It certainly would not be the friends of patients, because they were under no kind of compulsion to make use of the asylums; and, as regarded the public generally, it could not be pretended that any case had been made out to rouse them to action. It must, then, be the generally philanthropic desire of the literary profession to protect the oppressed, which in fact personated public opinion and asked for the abolition of private asylums, not because they had disregarded the claims of the public, but lest they might be tempted to take unfair advantage of the powers entrusted to them. He contended that private asylums, far from being deserving of obloquy, were entitled to the gratitude of the public, for they had rendered an important service in the providing the means of treating the insane of the upper and middle classes. Dr. Bucknill had expressed the opinion that "the deprivation of the liberty of any of the Queen's subjects was an affair of the State alone;" this observation, however, applied with precisely the same force to public asylums, whose authority to receive patients was identical with that of private asylums. He admitted that the deprivation of the liberty of any of the Queen's subjects was an affair of the State alone. The State had availed itself of the services of private individuals, and by legislative enactment had directly authorised them to take care of insane persons, for whose safety and treatment there was no other provision. It had also the aid of private individuals in such part of the duty of maintaining the safety and integrity of the empire, as the Government thought could be better carried out by such means. All governments had availed themselves of private assistance, even in the most important of their functions; and so in the case of insanity they had availed themselves of the assistance of private asylums, and in fact directly so until recently, in the charge of what were called criminal lunatics in Dr. Lush's asylum at Salisbury, and up to the present time in the charge of insane soldiers in Dr. Mickle's asylum at Bow. The proprietors of private asylums were not so foolish as to expect that they would be maintained for their own personal benefit if the Government had reason to believe that the work would be better done under some different system; but they would ask that, if any such good reason could be shown why in the best interest of the public they should be abolished, their past services should be fairly considered.

Dr. HACK TUKE said the most salient feature in Dr. Bucknill's paper was, that the time had come for abolishing private asylums. He supposed that, in the abstract, the State had the right to interfere to abolish them, and therefore it became a question of expediency; and this would depend on whether there was a very great abuse or any strong public feeling against them; and on the feeling of private proprietors themselves. He thought the time had come for some radical change, such as transfer to the State; but it should not be on the ground of proved abuse. It must be on that which really lay at the bottom of public feeling on the subject—the undesirableness of helpless persons being confined against their will by those who derived profit for keeping them. However little this could be proved to end in abuse, it had become expedient to contemplate a change; and this was greatly facilitated by the readiness of the proprietors themselves to yield to public opinion, provided proper compensation were made. He thought Mr. Dillwyn's Bill, if modified, might possibly prove satisfactory both to them and to the public.

Dr. RAYNER said Dr. Bucknill had spoken of lunatics being "herded together," but this happened more in public than in private asylums, and was due to want of a sufficient number of medical officers.

Dr. BODINGTON advocated the abolition of private asylums on the ground that it would be beneficial both to the public and the proprietors, who, of course, must be fairly treated.

Dr. L. FORBES WINSLOW said that he approached the consideration of the subject in no unfriendly spirit towards Dr. Bucknill, for whose opinion he had always entertained great respect and esteem. He found himself, however, on

this occasion, diametrically opposed to his views. The question of the abolition of private asylums had from time to time cropped up, generally, as a rule, after some sensational case of lunacy which had occupied the attention of the law-courts. It was an extraordinary fact, however, that in all the recent great lunacy trials private asylums had come out of the attack without a single impeachment against them, whilst their proprietors remained unspotted and unscathed. Notwithstanding this, the cry was still for their abolition. For many years since 1816, Committees of the Houses of Parliament had sat at various intervals to discuss private asylums and their management. The late Committee, which sat two years ago, after various allegations and accusations had been brought against proprietors of private asylums, and the evidence had been heard on both sides, arrived at the conclusion that no *mala fides* had been proved against the medical proprietors of private asylums. In 1859, Lord Shaftesbury gave evidence before the then sitting Lunacy Committee, which was condemnatory of private asylums; but, at the recent investigation by the Lunacy Committee, he said in reply to a question as to the present state of private asylums, "At present, from a variety of causes, the licensed houses are in a far better condition in every sense of the word More is expended on them by the proprietors, and I must do them the justice to say that the change is very great; and, so far as the evidence I gave in 1859 is correct, I should not give it now. I can speak in high terms of many licensed houses and their proprietors; but I will add, that if you relax your vigilance ever so little, whether it be of licensed houses or of hospitals, or of county asylums, the whole thing will speedily go back to its former level." His (Dr. Winslow's) object was not to defend the Act of Parliament, but to endeavour to show that the asylum proprietors performed their duties in a right spirit. He therefore protested against their being held up to public opprobrium. There was no justification for the aspersions which had been freely vented against a large body of the medical profession. If it could be proved that they had detained patients in the asylums longer than was absolutely necessary for their welfare and cure, or had received them when they ought not to have done so, then let them be repudiated by the medical profession. Any one who so insulted medical proprietors of private asylums insulted the whole of the medical profession. They were all members of a noble profession, which was not likely to disgrace itself as was alleged. To legislate in lunacy was doubtless a most difficult and intricate subject. He had not wish or desire to attempt to suggest legislative measures for private asylums; but he would hail with pleasure any clause in the new Act which should be of itself sufficient to protect proprietors from a possibility of accusation.

Dr. BUCKNILL, in reply, read extracts from the evidence of Mr. Balfour before the Select Committee of 1877, before he became the proprietor of a private asylum. Mr. Balfour said: "Private asylums are the property of individuals who derive large incomes from keeping them; it is the interest of the proprietor to have as many good paying patients as possible in his house; it is not his interest to get rid of patients who pay well; and, as the law is, it is as nearly as possible impossible for any person to get out of a private asylum without the sanction of the person who signed the application, should the person who signed the application be unwilling to apply for the discharge. There are thus two things against the person getting out; the one is the desire of the medical officer so to keep him in the house, the other is the unwillingness of the relative or the person who applied for the admission to take him out." Mr. Balfour's account of that element of asylum-life upon which the good or ill treatment of the patients most depended was even more instructive. After telling the Committee that "the language of attendants is often coarse and rough, and the patients get pushed about in a rough way," Mr. Balfour replied to a question as to whether the proprietors of asylums are generally willing to give such pay as will secure them good attendants, "They take men as cheaply as they can get them; the cheaper they can get attendants into the asylum the better for them, because it is so much more gain." Much had been said of the advantage which the

superior secrecy of private asylums offered to the upper classes. There was no more privacy in private asylums than in hospitals for the insane, if so much. On the other hand, there was such a thing as improper secrecy. And if private asylums had no advantage over hospitals in respect of secrecy, they were under every disadvantage in respect to the temptations to detain patients unduly, to neglect corrective treatment, and to exact the uttermost farthing which the patients or their friends could pay. He was extremely sorry for those professional men who, having sensitive feelings as to professional honour, were engaged in keeping private asylums; and he heartily wished them success in any attempts they might make to escape from their embarrassing position. He had made no attack upon professional honour or professional duties, but simply upon the business of keeping lunatics for profit; and that it was a business was proved by the disreputable discount business which existed until it was stopped by law, and by the still existing system of letting out attendants on job, and taking half their wages, and also by the system of requiring long notice before a patient could be removed from an asylum. He knew of a patient at the present time in a private asylum, the proprietor of which had demanded six months' notice before the patient could be removed, although such removal had been recommended by the authorities. It was quite a mistake to say that Lord Shaftesbury had changed his opinion about private asylums. What he had said was, that the present generation of asylum-keepers was better than the last. It was also an inaccuracy to state that the verdict of the Select Committee of 1877 had been in favour of the private asylums. The Committee, in their report, recommended that legislative facilities should be afforded by enlargement of the powers of magistrates or otherwise for the extension of the system of public institutions for all classes of the insane, by which means they considered that the demand for licensed houses for the upper and middle classes would cease. The meaning of the Committee was clearly that, in their opinion, it was not desirable to abolish private lunatic asylums immediately; but that public asylums for the upper and middle classes should be established, by the operation of which, through the spontaneous selection of the public, private lunatic asylums would be starved out of existence. Dr. Bucknill, in conclusion, thanked the members for the patience with which they had listened to opinions which he would willingly have made more agreeable to them had it been possible to do so. Some one had said in the meeting that there was really no public opinion on the matter; but, in May last, Mr. Cross, the Home Secretary, said to a deputation on the Drunkards' Bill that "there was a great feeling at the present moment throughout the country against private lunatic asylums altogether."

THE PRESENT PUBLIC AND CHARITABLE PROVISION FOR IMBECILES, COMPARED WITH THE EXISTING LEGISLATION RESPECTING THEM. By W. M. Wilkinson, Esq.*

In January, 1877, the number of imbeciles requiring the benefits of public administration was calculated to be 28,348, of whom 10,599 were under 20 years, and 17,749 were above that age—the equality of the sexes being remarkable. Of these only 1,210, or 3 per cent. of the whole, are in charitable institutions. Of the rest there were at that date in the Metropolitan District Asylums 4,205, all excellently cared for, and the young separated from adults, and educated, trained and improved, whilst the country cases were neglected in workhouses, misplaced in lunatic asylums, or living as out-door paupers weighing down the energies of poor families, and merely kept alive without teaching or training of any kind.

* Mr. Wilkinson's legal knowledge, and his large acquaintance with public institutions and their needs, in connection with the Charity Organization Society, of which he has long been an active member, entitle his views to consideration, and are of interest in connection with the discussion on Dr. Burman's paper, but their insertion must not be taken to imply assent. Mr. Wilkinson was a member of the Committee on Imbeciles and Harmless Lunatics. [Eds.]

It is only within the last few years that the distinction between the feeble-minded and lunatics has been appreciated, but their cases really are totally different. The latter are suffering under disease of the brain—the former only under want of development, or from loss of mental power, arising from illness or accident. When properly cared for, educated and trained, the feeble-minded are capable of great and continued improvement. Imbeciles who were unmanageable, mischievous and self-willed at home, become orderly and obedient in the asylum, but from their peculiar propensities, their excitability, or their inertness, they require constant supervision and intelligent companionship to guide and control them. Many are dumb or have very imperfect speech—some are of uncleanly habits—many cannot dress themselves, but the improvement effected by instruction and industrial training is marked and encouraging. Elementary school lessons are given, and the more advanced cases are taught trades.

There are large numbers of the adult imbeciles, and of adult harmless lunatics, who are proper to be taken care of together in custodial institutions, and these combined classes of adults in the Metropolitan area form the residents in the great asylums provided by the Metropolitan Asylum Board at Leavesden and Caterham. The cost of the buildings and staff is paid for out of the common fund of the Metropolis, the cost of the buildings being thrown over 60 years, and the maintenance charges are paid by the Guardians of the respective unions. These custodial asylums are built each to accommodate 2,000 inmates, which is found to be the number to be most cheaply dealt with as to staff and management. One very beneficial effect is to relieve the county asylums of all but the acute cases, whilst they take out of the workhouses, and treat in the most kind and scientific way cases which the Guardians have none of the appliances for dealing with. This classification is found to allow a great saving of funds, as well as much greater comfort to the inmates, who are trained and usefully employed, and amused and made as happy as is possible. One half the staff necessary in lunatic asylums is sufficient for these easily managed custodial institutions. In fact, within the Metropolitan area the feeble-minded adults are treated in the best possible manner, and the institutions are models of excellence and cheapness, which should be followed throughout the country.

Economy in management can only be obtained in properly constructed buildings on the pavilion or block system, which save greatly in room, management, and supervision. One administrative block, and one or more pavilions built on either side, attached by a corridor, will admit of cheap extension as fresh accommodation is required. At Leavesden and Caterham the weekly cost is 8s. 6d. against 18s. in private asylums. Disused workhouses and prisons are, from their construction, unsuitable, and would be much more costly in management; but to relieve the present urgent want of room, some of these buildings might be used till proper buildings can be erected, and, under the Act of last Session, any number of unions in the country may combine to make use of these.

As to the imbecile children within the Metropolitan area, the Asylum Board has built an asylum at Darenth, near Dartford, capable of holding 500, which is found to be the cheapest number for the young, and here such of the children as are capable are taught trades and useful occupations, and their education is carried on so as to fit the best of them to earn, at all events, a part of their living when adult; and, whilst nearly all are improved, they are taught to employ and amuse themselves, and to be less burdensome to their friends.

Outside the charmed circle ruled over by the Metropolitan Board there are no such public institutions—there is no separation of children and adults—there are no public efficient schools; but imbeciles, young and old, are either mixed up with the lunatics in county asylums, to the great injury of both, or they are shut up in workhouses where there are no means of treating them

properly or improving them, or they are living outside on out-door relief, or with friends who don't know what to do with them, from their not having been educated and trained when young.

The only institutions outside the Metropolis where the children can be educated and properly trained are the subscription charities, and they contain altogether only about 1,210. These are the Earlswood Asylum, containing 580 cases; the Royal Albert Asylum, at Lancaster, for the seven northern counties, containing 420; the Essex Hall Asylum, at Colchester, containing 99; the Western Counties' Asylum, at Starcross, containing 70; and the Midland Counties' Asylum, at Knowle, near Birmingham, containing 40. Admission to these can only be obtained through the voting system or upon rates of payment beyond the means of the poorer classes, and the Northern Counties and the Starcross Asylums alone admit pauper cases, that is, none of the others take payment from the Guardians for such cases as they admit, though properly belonging to the poor law. The proportion of pauper cases taken at the Royal Albert Asylum, at Lancaster, is limited to one-tenth of the total number in the asylum; but these pauper cases must belong to one of the seven northern counties, and they are charged according to the rate in the lunatic asylum for the county from which they come, with three guineas more for clothing, and the Guardians receive back the Government allowance of 4s. per week towards the cost. Only trainable cases are eligible, and the election cases are taken for one year on probation, and then continued for six years longer. There is room for 180 more in this asylum.

Such, however, is the rush to get children into the charity institutions, that at Earlswood there are always long lists of candidates both from town and country, of whom, after great expense and anxiety, only a small percentage is admitted half-yearly, and then only for 5 years, excepting a small number elected annually of life cases, to the extent of 100 cases altogether. Of those now in the asylums, the large proportion of four-fifths consists of cases from all parts of the country properly belonging to the Poor Law, only they are not paid for by the Guardians, but get in free at the expense of the Charity. Of late Earlswood has placed on a separate list those candidates whose parents can contribute a part towards their support, but these also have to undergo the voting system with a constituency of 12,000 subscribers. There is room in the asylum for about 50 additional cases. Education and training should be begun at an early age, and yet recently at Earlswood only 35 were between 7 and 10 years of age, and 122 between 10 and 15, making together only one-fourth of the total number in the asylum. Amongst those in the charity institutions there are more than 100 cases whose payments range from £50 to 200 guineas per annum, and who evidently to that extent fill up the asylums, and prevent really poor cases being admitted. There is also no reason whatever why the Earlswood Asylum should take in any poor Metropolitan cases, since they can all be treated for nothing at Darenth, and thus more room would be made for other suitable outside cases.

The effect of all this chaos is that only the Metropolitan children and those in the charity institutions are being educated and trained at all. There are numberless cases in which the children are kept at home, weighing down the energies of a poor family, which cannot afford to run the gauntlet of the voting system, and does not know how to invoke the aid of the Guardians to get the child even into any of the county lunatic asylums, which though not adapted for imbeciles, are better than keeping bad cases of children at home.

It is desirable therefore that the public and the subscribers to charities should know what is the outcome of the system as it now stands; and that it should be made widely known what are the legislative provisions in the Metropolis and throughout the provinces, which already exist for getting imbeciles into institutions through the aid of the Guardians, and for new buildings.

The aim of this legislation, whether successful or not, appears to be that the

Guardians, with the consent of the Local Government Board, have the power to send imbeciles at the cost of the rates to any suitable institution, in which there may be room for patients. The legislation, enlarged as it is by the Act of last Session, is all that is wanted to give powers to Guardians, but the crowning defect is that there are no proper public imbecile asylums to which to send the cases, and meantime the county lunatic asylums and the workhouses, unfitted as they are for imbeciles, are the only public places to which they can be sent.

The magistrates have always had power to build asylums for lunatics, under which name imbeciles are included, but being permissive only, they have not been built, and the needs are now so imperative, that it should be made compulsory to erect custodial institutions to hold 2,000 adults, and school asylums for the young on the scale of that at Darenth, to contain 500 each, to be used irrespective of county boundaries.

Until this is done, if all pauper cases are left to the Guardians, there will be so much the more room in the charity institutions for those cases where parents can pay a larger or smaller portion according to their means, of the cost. Private charity is obviously insufficient to the task of caring for all, and public administration only is adequate to deal with the number who require assistance.

The present modes of payment for these classes in public institutions also show clearly the patchwork system under which they are governed.

(*a*) In the Metropolitan area the cost of buildings and staff is paid out of the common fund, and the maintenance and clothing by the respective unions, and no allowance is made from the Treasury.

(*b*) In county asylums the buildings and staff are paid out of the county rates, whilst the maintenance and clothing are paid by the unions, which receive the Treasury allowance of 4s. per week.

(*c*) As to those kept in union-houses the whole cost is paid by the unions, who have thus the direct inducement improperly to send the harmless cases to the county asylums, where they get back the 4s. from the Treasury.

The county asylums are under the Home Office, whilst all the others are under the Local Government Board.

In proposing a new system of large institutions, to fill which several counties would have to furnish the cases, it appears to be most suitable to make the whole of the cost payable out of the county rates, with the aid of a Treasury grant of say 6s. per week for the education and training of those under twenty, and of 4s. per week for adults.

The area of taxation should be the whole of the country, and the total cost of all the institutions should be returned to the Local Government Board, who would divide the amount rateably amongst the counties according to population, and require each to pay its quota out of the county rate, in the same way as the Metropolitan Asylum Board now sends its precepts to the unions within the Metropolitan area.

Though not in accordance with the present incidence of taxation, either in the Metropolis or the counties, that the whole cost of buildings, staff and maintenance should be thus paid by a county rate, supplemented by the above Treasury allowances, it seems better that it should be, than by a division between county and union rates, which would greatly increase the difficulty in apportioning and collecting from a vast number of unions; and no injustice would be done, inasmuch as the ratio of imbeciles is nearly the same throughout the kingdom. Considering how desirable it is for educational and economical reasons to have training schools of 500, and custodial institutions of 2,000, it would be highly inconvenient to make any arbitrary division of the county into unions of counties, but the institutions should be placed wherever needed, under the local management of Boards to be constituted.

LEGISLATION AS TO IMBECILE AND OTHER AFFLICTED CHILDREN AND ADULTS AFFECTING THE WHOLE COUNTRY.

[25 *and* 26 *Vict.*, *c.* 43, 1862.]

SEC. 1.—"The Guardians of any parish or union may send any poor child to any school certified as hereinafter mentioned, and supported wholly or partially by voluntary subscriptions, the managers of which shall be willing to receive such child, and may pay out of the funds in their possession the expenses incurred in the maintenance, clothing and education of such child during the time such child shall remain at such school (not exceeding the total sum which would have been charged for the maintenance of such child if relieved in the workhouse during the same period), and in the conveyance of such child to and from the same, and in the case of death, the expenses of his or her burial."

SEC. 10.—"The word 'school' shall extend to any institution established for the instruction of blind, deaf, dumb, lame, deformed, *or idiotic persons*, but shall not apply to any certified reformatory school."

[31 *and* 32 *Vict.*, *c.* 122, 1868.]

SEC. 13.—"The Guardians of any union or parish may, with the consent of the Poor Law Board, send *an idiotic pauper* to an asylum or establishment for the reception and relief of idiots maintained at the charge of the county rate or by private subscription, and they may with the like consent send any idiotic, imbecile or insane pauper who may lawfully be detained in a workhouse to the workhouse of any other union or parish, and pay the cost of the maintenance, clothing and lodging of such pauper in the asylum, establishment or workhouse, as well as the cost of his conveyance thereto or his removal therefrom, and the expenses of his burial when necessary."

[12 *and* 13 *Vict.*, *c.* 103, 1849.]

SEC. 14.—"Where the workhouse of any union or parish shall be governed and regulated by rules, orders or regulations of the Poor Law Board, the Guardians of the union or parish to which such workhouse belongs, in case of the overcrowding of the workhouse of another union or parish, or the prevalence or reasonable apprehension of any epidemic or contagious disease, or in or towards the carrying out any legal resolution for the emigration of poor persons, may, with the consent of the Poor Law Board, receive, lodge and maintain in the first mentioned workhouse, upon such terms as shall be mutually agreed upon by the respective Boards of Guardians, any poor person belonging to such other parish or union; and such poor person so received into such first mentioned workhouse shall while therein be treated in all respects in like manner, and be subject to the same regulations and liabilities as other poor persons therein, and shall be deemed to be chargeable in the first instance to the common fund of the union, or to the parish in the workhouse whereof such poor person shall be received. Provided always that the abiding of any such poor person in such workhouse shall in all other respects be attended with the same legal consequences as if such workhouse had been situated within the union or parish from which such poor person shall have been sent."

[14 *and* 15 *Vict.*, *c.* 105, 1851.]

SEC. 4.—"Whereas doubts have been entertained with regard to the legal authority of Guardians to subscribe towards the funds of any hospital or infirmary. Be it enacted that the Guardians of any union or parish may, with the consent of the Poor Law Board, pay out of the common fund of such union, or in the case of a parish, out of the funds in the hands of such Guardians, any sum of money as an annual subscription towards the support and maintenance of any public hospital or infirmary for the reception of the sick, diseased, disabled or wounded persons, or of persons suffering from any permanent or natural infirmity."

[39 *and* 40 *Vict.*, *c.* 61, 1876.]

Sec. 22.—"The provision in the 14th Section of the Poor Law Amendment Act, 1849, which enables Guardians of a union or parish to contract or receive in their workhouse certain paupers chargeable to some other union or parish, shall be extended to the managers of a district or other asylum for the reception of paupers, and to every case where the Local Government Board shall deem it expedient, and shall give their assent, until such consent shall be withdrawn."

[42 *and* 43 *Vict.*, *c.* 54, 1879.]

Sec. 10.—"Whereas by Section 4 of the Poor Law Amendment Act, 1851, Guardians are authorized, with such consent as is therein mentioned, to subscribe towards the support and maintenance of any public hospital or infirmary as therein mentioned, and it is expedient to extend the same section, be it therefore enacted as follows:—The provisions of the said section shall extend to authorize the Guardians, with such consent as is therein mentioned, to subscribe towards any asylum or institution for blind persons, or for deaf and dumb persons, or for persons suffering from any permanent or natural infirmity, or towards any association or society for aiding such persons, or for providing nurses, or for aiding girls or boys in service, or towards any other asylum or institution which appears to the Guardians, with such consent as aforesaid, to be calculated to render useful aid in the administration of the relief of the poor.

"Provided always that nothing herein contained shall authorize any subscription to any asylum or institution unless the Local Government Board be satisfied that the paupers under the Guardians have or could have assistance therein in case of necessity."

[42 *and* 43 *Vict.*, *c.* 54.]

Sec. 8.—"Where on any representation it appears to the Local Government Board that the combination of two or more unions not in the Metropolis for any purpose connected with the administration of the relief of the poor, would tend to diminish expense or would otherwise be of public or local advantage, the Board may with the consent of the Guardians of the unions to be combined, make an order for combining such unions for the purposes named therein, and for constituting for the execution of such purposes a joint Committee of the Guardians of each of the combined unions. The order shall define the powers, rights, duties, liabilities and obligations of the joint Committee, the mode of defraying the expenses of the joint Committee, and any other matter or thing (including the adjustment of present and future liabilities and property), which it appears necessary or proper to regulate for the better carrying into effect the order.

"The Guardians of a union included in such combination shall, save as otherwise provided by the order, cease to exercise any power and rights, and to be subject to any duties, liabilities and obligations, vested by the order in the joint Committee. All property required by the joint Committee shall be vested in the Boards of Guardians of the unions, included in the combination as tenants in common. An order may be made for amending, adding to, or revoking any order previously made under this section."

LEGISLATION AS TO IMBECILE AND OTHER AFFLICTED CHILDREN AND ADULTS WITHIN THE METROPOLITAN AREA.

[30 *Vict.*, *c.* 6, 1867.]

By the Act 30 Vict., cap. 6, called "The Metropolitan Poor Act, 1867, entitled an Act for the Establishment in the Metropolis of Asylums for the Sick, Insane, and other Classes of Poor, and of Dispensaries." And for the distribution over the Metropolis of portions of the charge for poor relief, it is provided that—

Sec. 5.—"Asylums to be supported and managed according to the provisions of this Act, may be provided under this Act for reception and relief of the sick, insane, or infirm, or other class or classes of the poor, chargeable in unions and parishes in the Metropolis, and in this Act the term asylum means an asylum provided under this Act."

Sec. 6.—"In order to the provision of asylums the Poor Law Board may from time to time, by order, combine into districts, unions, or parishes, or unions and parishes in the Metropolis, as they think fit, and may from time to time alter any such district by addition, sub-division, separation of part, or otherwise."

Sec. 61.—"The expenses to be provided out of the Metropolitan Common Poor Fund."

Sec. 15.—"The Poor Law Board may from time to time by order direct the managers to purchase or hire, or to build, and in either case to fit up a building or buildings for the asylum of such nature and size and according to such plan, and in such manner as the Poor Law Board think fit, and the managers shall carry such directions into execution."

Sec. 22.—"The managers shall have the like powers as Guardians for the relief, maintenance, and management of the inmates of the asylum, and shall from time to time provide such medicines, appliances, and requisites for the medical and surgical care and treatment of the inmates, and cause the same to be furnished and used according to such rules as the Poor Law Board from time to time by order direct."

[39 *and* 40 *Vict., c.* 61, 1876.]

Sec. 40.—"Whereas doubts have been entertained as to the extent of the powers given to the Poor Law Board by Sections 5 and 6 of the Metropolitan Poor Act, 1867. It is hereby enacted and declared that those powers may be exercised by the Local Government Board in order to the provision of asylums, workhouses, or other buildings for the reception of any class or classes of the poor in the Metropolis."—*Charity Reform Papers, No.* 2, *Jan.*, 1880.

AN ANTIQUARY'S GHOST STORY.

In the *Athenæum* for Jan. 17, 1880, there appeared a letter from Dr. Wilks explanatory of the narrative which, in a previous issue, had been communicated to that journal under the title of "An Antiquary's Ghost Story." As some of our readers may not have seen the narrative, we insert it, in order to render Dr. Wilks's letter intelligible. It is written by the Rev. Dr. Jessopp, Head Master of King Edward VI. School, at Norwich:—

"On the 10th October, 1879, I drove over from Norwich to Mannington Hall to spend the night at Lord Orford's. Though I was in perfect health and high spirits, it is fair to say that, for some weeks previously, I had had a great deal to think about, some little anxiety, and some considerable mental strain of one kind or another. I was not, however, conscious of anything approaching weariness, irritability, or 'fag' I arrived at four p.m., and was engaged in pleasant and animated conversation till it was time to dress for dinner. We dined at seven; our party numbered six persons. Of these four at least had been great travellers. I myself was rather a listener; the talk was general and discursive, and amused and interested me greatly. Not for a single moment did it turn upon the supernatural; and it was chiefly concerned with questions of art and the experiences of men who had seen a great deal of the world, and could describe intelligently what they had seen and comment upon it suggestively. I have very rarely been at a more pleasant party. After

dinner we played a rubber. We 'left off as we began,' and, as two of the guests had some distance to drive, we broke up at half-past ten.

"The main object of my going over to Mannington was to examine and take notes upon some very rare books in Lord Orford's library, which I had been anxiously wishing to get a sight of for some years, but had never been fortunate enough to meet with up to this time. I asked leave to sit up for some hours and make transcripts. His lordship at first wished me to let his valet remain in attendance to see all lights put out, but as this would have embarrassed and compelled me to go to bed earlier than I wished, and as it seemed likely that I should be occupied till two or three in the morning, it was agreed that I should be left to my own devices and the servants should be allowed to retire. By eleven o'clock I was the only person downstairs, and I was very soon busily at work and absorbed in my occupation.

"The room in which I was writing was a large one, with a huge fireplace and a grand old chimney; and it is needless to say that it is furnished with every comfort and luxury. The library opens into this room, and I had to pass out from where I was sitting into this library and get upon a chair to reach the volumes I wanted to examine. There were six small volumes in it. I took them down and placed them at my right hand in a little pile, and set to work—sometimes reading, sometimes writing. As I finished with a book I placed it in front of me. There were four silver candlesticks upon the table, the candles all burning, and, as I am a chilly person, I sat myself at one corner of the table with the fire at my left, and at intervals, as I had finished with a book, I rose, knocked the fire together, and stood up to warm my feet. I continued in this way at my task till nearly one o'clock. I had got on better than I expected, and I had only one more book to occupy me. I rose, wound up my watch, and opened a bottle of seltzer water, and I remember thinking to myself that I should get to bed by two after all. I set to work at the last little book. I had been engaged upon it about half-an-hour, and was just beginning to think that my work was drawing to a close, when, *as I was actually writing*, I saw a large white hand within a foot of my elbow. Turning my head, there sat a figure of a somewhat larger man, with his back to the fire, bending slightly over the table, and apparently examining the pile of books that I had been at work upon. The man's face was turned away from me, but I saw his closely-cut reddish brown hair, his ear and shaved cheek, the eye-brow, the corner of his right eye, the side of the forehead, and the large high cheek-bone. He was dressed in what I can only describe as a kind of ecclesiastical habit of thick corded silk or some such material, close up to the throat, and a narrow rim or edging, of about an inch broad, of satin or velvet, serving as a stand-up collar, and fitting close to the chin. The right hand, which at first attracted my attention, was clasping, without any great pressure, the left hand; both hands were in perfect repose, and the large blue veins of the right hand were conspicuous. I remember thinking that the hand was like the hand of Velasquez's magnificent 'Dead Knight' in the National Gallery. I looked at my visitor for some seconds, and was perfectly sure that he was not a reality. A thousand thoughts came crowding upon me, but not the least feeling of alarm, or even uneasiness; curiosity and a strong interest were uppermost. For an instant I felt eager to make a sketch of my friend, and I looked at a tray on my right for a pencil; then I thought, 'Upstairs I have a sketch-book—shall I fetch it?' There he sat, and I was fascinated; afraid, not of his staying, *but lest he should go*. Stopping at my writing, I lifted my left hand from the paper, stretched it out to the pile of books, and moved the top one. I cannot explain why I did this—my arm passed in front of the figure, and it vanished. I was simply disappointed, and nothing more. I went on with my writing as if nothing had happened, perhaps for another five minutes, and I had actually got to the last few words of what I had determined to extract when the figure appeared again, exactly in the same place and attitude as before. I saw the hands close to my own; I turned my head again, to examine

him more closely, and I was framing a sentence to address to him when I discovered that I did not dare to speak. *I was afraid of the sound of my own voice.* There he sat, and there sat I. I turned my head again to my work, and finished writing the two or three words I still had to write. The paper and my notes are at this moment before me, and exhibit not the slightest tremor or nervousness. I could point out the words I was writing when the phantom came and when he disappeared. Having finished my task, I shut the book and threw it on the table ; it made a slight noise as it fell—the figure vanished.

"Throwing myself back in my chair, I sat for some seconds looking at the fire with a curious mixture of feeling, and I remember wondering whether my friend would come again, and if he did whether he would hide the fire from me. Then, first there stole upon me a dread and a suspicion that I was beginning to lose my nerve ; I remember yawning ; then I rose, lit my bedroom candle, took my books into the inner library, mounted the chair as before, and replaced five of the volumes ; the sixth I brought back and laid upon the table where I had been writing when the phantom did me the honour to appear to me. By this time I had lost all my sense of uneasiness. I blew out the four candles, and marched off to bed, where I slept the sleep of the just or the guilty —I know not which—but I slept very soundly.

"This is a simple and unvarnished narrative of facts. Explanation, theory, or inference I leave to others."

Dr. Wilks's letter is as follows :—

"Putting aside the supposition of a trick, the story resolves itself into the question whether the appearance of the man beside him (Dr. Jessopp) was objective or subjective. Under ordinary circumstances when we see an object the latter is material, and forms an image on the retina ; this is mentally known through a perceptive part of the brain ; the mere retinal image is not enough to constitute vision, as pictures are constantly painted upon the retina which are never discerned. Now it is possible for this perceptive part of the brain to be thrown into an active condition quite independent of the normal stimulus conducted to it from the retina, and under these circumstances the person apparently sees an object which, by the law of our nature, is projected by him a certain distance before the eye. This is common enough in fever and in *delirium tremens*, where patients see people and animals around them whose reality is such that the memory of these becomes a part of the experience of their future lives. In mental derangements these hallucinations are also common, and patients see objects and hear voices which have no external existence. So it is in our dreams, from which we may be suddenly aroused by a great noise when all is still around, the auditory perceptive centre of the brain having been abnormally excited.

"In normal conditions, the sight of an object implies the painting of it on the retina, as the hearing a noise implies the vibration of the drum of the ear. If sight and hearing occur without these normal excitants of the nerve, the brain must have been stimulated from within, and the impressions are abnormal and subjective.

"At the present time we have no knowledge that anything in the likeness of a ghost or anything that has not a material basis can excite an image on the retina; whereas we do know that under abnormal conditions the brain may be stimulated so as to produce a visual impression independent of any such image on the retina. The probabilities are then immensely in favour of the appearance which the Doctor saw being subjective rather than objective. We have only to suppose that those very common abnormal conditions of brain which are observed in bad health may occur under exceptional circumstances in an otherwise healthy organ to account for the occasional appearance of ghosts.

"The probabilities are also in favour of this view from other considerations. First, there seems no reason why the spirits of another world should prefer

midnight for their visits, but the reasons are obvious why we should conjure them up at that time. Then, again, the want of individuality shown by this particular ghost; an ordinary mortal would find it very difficult to put himself 'in exactly the same place and attitude as before' on his appearance a second time, as this apparition did, and then so dependent was it upon the observer, that when the latter put his arm up it was gone, and the same occurred on the second occasion on another movement. How those movements of the Doctor could have affected a real object does not seem clear, nor why it could not be gazed at from a different point of view. It may be noticed, too, that its nearness corresponded with the focussing of the Doctor's eyes to objects close around him."

We may add in regard to Dr. Jessopp's communication that we are informed that a friend of Dr. Jessopp's had been staying with him a short time previously. He was a priest of the Roman Catholic Church, and resembled in dress and person the description given by Dr. Jessopp of the apparition. Again, the subject of Dr. Jessopp's study, we are told, had been, "A Generation of a Norfolk House," which described the sufferings of a Catholic family in the reign of Elizabeth—a thrilling story, calculated to induce a mental condition favourable to hallucinations.

Dr. Jessopp himself has been good enough to reply to some inquiries we addressed him, in the following terms:—

"The School House, Norwich,
"6, February, 1880.

"Sir,—I have been so closely occupied during the last few weeks that it has been quite impossible for me to reply to, or even read through, the hundreds of letters which I have received on the subject of the apparition which you ask me to enter upon more fully in your pages. At the present stage, and while my hands are so full as they are, I can only write very briefly.

"Dr. Wilks' theory is one which, to my mind, only required stating in his own lucid and forcible language to be at once accepted.

"As to goblins habitually squatting down beside visitors at Mannington, who sit up into the small hours, the notion is ridiculous.

"One tells me that he has done his best to conjure up my phantom, but the ghost will not come. How should it? It has its dwelling-place in my own skull—somewhere! Should it trouble me again, let the world be sure, I shall hold my tongue about the appearance, if for no other reason than because to a man of narrow means, 500 postage stamps are a consideration.

"For the rest, it may be well to let your readers know that I am very rarely troubled with dreams—that I am a hard matter-of-fact person—that I passed my climacteric some few years ago, and—possibly because a sinful generation and an ungrateful country have not awarded me that substantial recognition of my merits which would be grateful to my self-esteem to receive—that I am more prone to be cynical than sanguine, morosely critical than morbidly sympathetic—a railer sometimes, a ranter seldom.

"If at any future time some weird nocturnal personage—be he visible, tangible, or audible—be he in the body or out of the body—a carcase or a shadow—come to me with tidings of a liberal increase to my basket and my store, and give me reason to believe his message, I shall hail his advent with reverential joy; otherwise, I shall prefer his keeping out of my way. It is quite clear to me that there are hundreds of people in a fitter frame of mind to receive his revelations.

"Your obedient servant,
"Augustus Jessopp.

"D. Hack Tuke, M.D."

Dr. Wilks has placed at our disposal a letter which he received in consequence of his remarks in the *Athenæum*. It is worthy of record:—

"January 25, 1880.

"SIR,—I have read with much interest your letter to the *Athenæum* about Dr. Jessopp's case, because my father exhibits the same mental phenomena, but in a more remarkable way. He is at least 73 years of age, and leads a quiet, well-regulated life. His health is good, but he gets once nearly every year an attack of bronchitis. He is not at all imaginative. Nearly every night for the past two years, on awaking about three or four o'clock, he has distinctly seen one or more figures in different parts of the room, sometimes stationary, sometimes moving about. As long as he remains recumbent, there they remain, but when he sits up they disappear. He is not at all afraid of them, and has often grasped at them or thrown something at them. He does not recognise any of the apparitions, and they vary infinitely. I have had occasion sometimes to sleep in a separate bed in his room, and he has several times called me to see them, and has spoken to me while he looked at them, just as he speaks ordinarily. He has several times consulted his physician here about the matter, but he says he never met with a case of the kind, and could do nothing for him.

"Your obedient servant,

* * *

"Samuel Wilks, M.D."

We have received the following letter from a Physician, narrating two psychological experiences, in one of which another element enters, namely, an external event coincident with the subjective impression. Had our correspondent been expected by his family at the time, the explanation of "expectant attention" in an abnormal condition of the nervous system might have sufficed, if it be admitted that *two* persons can, through this cause, have optical allusions at the same moment. Whether in such cases mere coincidence is a sufficient solution, or whether the two circumstances stand in any causal relation must be decided by such an accumulation of evidence as would render the first hypothesis untenable :—

"February 12, 1880.

"MY DEAR DR. TUKE,—Although the following circumstance is not exactly similar in kind to that related by Dr. Jessopp, you may like to make use of it. At any rate it is at your service, and you may rely upon its being quite accurate.

"One day, some years ago, two of my female relations were looking out of a window in Greenwich just opposite the Hospital, and both thought they saw me pass and look in. One of them ran immediately to the door, but to her astonishment could see no one either up or down the street. At this time I was not expected, being, as all my family supposed, in Paris. But within a quarter of a hour I arrived at Greenwich. When I did enter I was called to account for the practical joke I was supposed to have played upon my relations by peeping in at the window and then concealing myself, and it was with some difficulty I convinced them that I had come straight to the house.

"Some years after this, my wife and daughter (not the relations referred to previously), were sitting in the dining-room, when they both saw an old lady enter at the gate and walk up to the steps leading to the front door of the house. My wife said to her daughter, 'What can bring old Mrs. C—— out in such a flood of rain? Run and open the door, that she may not have to wait for the servant to answer the bell.' On opening the door there was no one there, nor in the garden.

"Some other curious things of the same character have occurred, but as the illusion affected only *a single person*, I refrain from mentioning them, as they might arise from the physical condition of the parties concerned, which could hardly, I think, be the case with the others.

"Very sincerely yours,

"D. Hack Tuke, M.D. "M.D."

PROVISION FOR THE INSANE IN NEW ZEALAND.

In 1876 we recorded the fact that the Colony of New Zealand had appointed Dr. Fred. W. A. Skae as Inspector of Asylums for the Colony. In our Jan. number for 1878 we noticed shortly Dr. Skae's first Report. It laid bare a very shocking state of matters in regard to the provisions made for the care and cure of the mentally afflicted. We have now received the Reports of the Parliamentary Debates in the Legislative Council and House of Representatives of the Colony (Nos. 11, 12, and 13), in which there are three debates on the subject reported. It is creditable to our English race that Dr. Skae's reports have stirred a strong feeling of indignation in the Colony in regard to the abuses that exist, and aroused a sense of duty in the legislators in regard to the provision for the insane required in a modern Christian community. The reports of these debates show that our antipodian legislators are earnest, enlightened, and philanthropic on this matter. Dr. Skae's work was by almost every speaker referred to in the highest terms, and indeed his reports are acknowledged by them all to be the cause of the public interest now taken in the matter. A right feeling in regard to the wants of the insane having been roused now in the early days of the Colony, it will be spared those blots on our modern civilization presented in the early reports of our own Parliamentary Committees on Lunacy. Some of the speakers talked cheerfully of spending £300,000 on provision for the insane. This may be needed, but we have no doubt that Dr. Skae will save the New Zealand ratepayers from the mistake of providing palatial buildings for harmless incurable imbeciles, and will profit by our experience in seeing from the beginning that different classes of the insane need different kinds of accommodation, and will keep the hospital idea a distinct one from the receptacle idea. He will be exposed to the same temptation as were the English Commissioners when they began their labours, from the very badness of the present state of things, to remedy it as soon as possible, and as thoroughly as possible, without discriminating too finely as to the best means of meeting the real wants of the curable and the incurable, the dangerous, and the harmless, the idiotic and the acutely insane. No doubt he will have the more recent English and Scotch experience to guide him. A man is to be envied who is in a position to originate and shape a policy that will benefit thousands of his fellowmen in a country with such a future before it as New Zealand has.

F. NORTON MANNING, M.D.

Among the Appointments given in our last Number, that of Dr. Manning to the post of Inspector-General of the Insane, New South Wales, was recorded. We have since received his Address, delivered on resigning the charge of the Hospitals for the Insane at Gladesville and Callam Park, Sydney, and admire the spirit with which it is animated. He says he had intended to trust to the inspiration of the moment, but on reflection, the fear lest the fulness of his feelings should not only impede his utterance, but disarrange his thoughts, induced him to commit his address to writing. He says:—

"I have not spent ten of the best years of my life—shall I say the best ten years of my life?—at Gladesville, without becoming deeply attached to the place and to the people. I have not seen the place grow and brighten under my hand without learning to love and feel a pride in it. I have not seen, and almost lived with the patients day after day, without regarding many of them as friends, whose faces I shall sorely miss. I have not worked with you all these years, attended you in sickness, visited your homes, and watched your children spring up without a large growth of kindly feeling, so that the severance of relation touches me deeply. This severance is not of my seeking. I shall be no gainer

pecuniarily, or otherwise, by the change of position. Had I my own choice, I would still remain the Medical Superintendent of Gladesville; but circumstances have forced me into a new position, and I accepted it as a matter of duty."

Dr. Manning traces the history of Gladesville since his appointment ten years ago, and describes the improvements that have been introduced. We believe that he has strenuously endeavoured in his management, as he says he has, to be "so merciful as not to be too remiss, and so to administer discipline as to forget not mercy." During the ten years—during which nearly 4,000 patients have passed through the wards—no accident attended with loss of life, or with serious impairment of usefulness has occurred, though Dr. Manning has on more than one occasion been in danger of personal injury. In enumerating the qualities necessary for those who have to nurse the mentally sick, Dr. Manning observes, "Speaking of patience, it is the one quality which is, it seems to me, absolutely necessary for success in every one dealing with the insane. Many other gifts are useful, and among them I should, if asked, particularize tact, a due sense of order and a keen appreciation of the ridiculous; but patience, which is the grandest of the Christian virtues, which embodies in itself faith and hope as well as the charity which suffereth long and is kind, is the one thing needful."

We congratulate Dr. Manning on the success which has attended his superintendency of the Gladesville Hospital, and also upon his well merited appointment to a higher sphere, where the large experience and the extensive acquaintance with similar institutions in other parts of the world, possessed by the author of the excellent "Report on Lunatic Asylums" (issued by the New South Wales Government in 1868), will be applied with the greatest advantage to those who come within the range of his official visitation. He may be assured that the good wishes of his English friends attend him in his new vocation.

M. BROCA.

As in M. Broca, cerebral physiology, no less than anthropology, recognises one of her most distinguished sons, it is gratifying to witness his elevation to the Senate. The *Figaro*, which, on political grounds is opposed to him, thus delivers itself:—"M. Broca triomphe et la gauche avec lui. Voilà le grand évenement du jour. M. Broca a eu 140 voix contre 132 à M. Bétolaud. La proclamation du vote a été saluée par les chaleureux applaudissements de la gauche. La droite semblait consternée. En politique, le nouveau sénateur est républicain avancé; en science il est positiviste; en religion, c'est un libre-penseur. Causeur aimable, du reste, et professeur éminent, il ne compte guère que des amis, même dans les camps les plus opposés. Le Docteur Paul Broca est fils d'un très modeste et très obscur médecin de campagne. Au physique c'est un homme de 56 ans, il est né à Sainte-Foy-la-Grande (Gerénde) en 1824—les cheveux grisonnants et longs, surtout par derrière, l'œil vif, la figure expressive, très alerte, très remuant, petit de taille, carré d'épaules, sa grande passion, son délassement favori, est la musique—la bonne—celle que le merveilleux orchestre du Conservatoire exécute dans ses concerts, et dont le Docteur Broca est l'un des plus fidèles et des plus enthousiastes habitués. Successivement professeur de pathologie chirurgicale à la Faculté de Médecine de Paris; puis chirurgien des hôpitaux de Saint-Antoine et de la Pitié, il fut élu membre de l'Académie de Médecine le 26 Juillet, 1866, et décoré à cette occasion de la Croix de la Légion d'honneur.

"Plutôt professeur que praticien le chirurgien s'est peu à peu effacé en lui pour faire place à l'anthropologiste. Il a même publié sur la matière toute une série d'ouvrages qui font autorité.

"Au demeurant, un caractere franc, un esprit droit, un estomac solide, ne

dedaignant ni la plaisanterie ni la bonne chère, et s'inquiétant huit jours à l'avance, du menu qu'il offrira à ses invités, quand il doit donner un dîner.

" C'est un des convives habituels du fameux dîner Renan, qui a lieu tous les mois chez Brébant, et où il a pris la place devenue libre par la mort de Théophile Gautier. Pendant le siège, ce dîner se répétait tous les quinze jours et Brébant conserve précieusement une médaille d'or dont les convives lui firent present après la paix. Sur l'une des faces, on lit : ' Pendant le siége de Paris, quelques personnes ayant accoutumé de se réunir chez M. Brébant, tous les quinze jours, ne se sont pas une fois aperçues qu'elles dînaient dans une Ville de deux millions d'âmes assiégée, 1870-1871.' Et sur l'autre: ' Ernest Renan, P. de Saint-Victor, Berthelot, Ch. Blanc, Scherer, Dumesnil, A. Nefftzer, Ch. Edmond, Thénot, I. Bertrand, Marey, Ed. de Goncourt, Th. Gautier, A. Hébrard.' Maintenant que le voilà sénateur le docteur Broca pratiquera moins encore qu'il ne pratiqua. La politique dont il s'occupe volontiers va l'accaparer tout entier. [We trust not.—Eds]. C'est égal, le fils de l'obscur médicin de campagne a fait son chemin." *Figaro*, 6 Février, 1880.

INDEX MEDICO-PSYCHOLOGICUS.*

JOURNALS AND TRANSACTIONS.

ENGLISH.

The Journal of Mental Science. London. Quarterly.

The Journal of Psychological Medicine and Mental Pathology. London. Semi-Annual.

Brain. A Journal of Neurology. London. Quarterly.

Mind. A Quarterly Review of Psychology and Pathology. London.

AMERICAN.

The American Journal of Insanity. Utica, N.Y. Quarterly.

The Journal of Nervous and Mental Disease. Chicago. Quarterly.

Proceedings of the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons. Philadelphia. Annual.

Neurological Contributions. New York. Quarterly.

The Quarterly Journal of Inebriety. Hartford. Conn.

Alienist and Neurologist. St. Louis. Misso.

FRENCH.

Annales Médico-Psychologiques. Paris. Bi-Monthly.

Annales d'Hygiène Publique et de Médécine Légale. Paris. Quarterly.

BELGIAN.

Bulletin de la Société de Médécine Mentale de Belgique. Gand. Quarterly.

GERMAN.

Archiv für Psychiatrie u. Nervenkrankheiten. Berlin. Irregular. 3 Hefte p. vol.

Allgemeine Zeitschrift für Psychiatrie u. psychish-gerichtliche Medicin. Berlin. Irregular. 3 Hefte p. vol.

* We have adopted the plan of making the reference to the subject of the works whose Titles are given, instead of to the name of the Author, as being more convenient.

Centralblatt für Nervenheilkunde, Psychiatrie u. gerichtliche Psychopathologie. Leipzig. Fortnightly.

Der Irrenfreund. Heilbronn. Monthly.

AUSTRIAN.

Psychiatrisches Centralblatt. Wien. Bi-Monthly.

Jahrbücher für Psychiatrie. Wien.

ITALIAN.

Archivio Italiano per le Malatie Nervose e |più particolarmente per le Alienazioni Mentali. Milano. Bi-Monthly.

Gazzetta Sicula di Freniatria e Scienze Affini, organo del Manicomio di Palermo. Quarterly.

Rivista Sperimentale di Freniatria e di Medicina Legale in relazione con l'Antropologia e le Scienze giuridiche e Sociali. Reggio—Emilia. Quarterly.

WORKS AND ARTICLES IN JOURNALS.

ACCIDENTAL DISEASES IN THE INSANE. Malatie accidentali degli alienati. Tassi, H. Archiv. Ital. per le Malat. Nerv. e le Alien. Ment., 1879, p. 190.

ADMISSION. Statistische Untersuchungen über Geistesstörungen auf Grund der Krankeitsdauer vor der Aufnahme. Claus Allg. Ztschr. f. Psychiat. Berlin, 1879, xxxvi., p. 324.

AFTER CARE OF INSANE CONVALESCENTS. Journ. of Ment. Science, 1880, n.s., No. 76, vol. xxv, p. 601.

ALCOHOLISM. Relations of Alcoholism to other forms of disease. Chenery, E. Quarterly Journ. of Inebriety. Hartford, 1879, iii., p. 158.

Pauperism and drink, with some remarks on the medicinal value of alcoholic beverages and the mortality from alcohol in workhouses. Dolan., F. M. Med. Press and Circ. London, 1879, n.s., xxviii., p. 411.

Faradisation in cases of chronic alcoholism. Lush, J. A. Lancet. London, Nov. 29, 1879.

Les troubles visuels de l'alcoholism. Lasègue, C. Arch. Gén. de Méd. de Paris, 1879, cxliv., p. 342.

Rapports cliniques et anatomo-pathologiques de l'alcoolisme avec la paralysie générale. Bélières, L. Paris, 1879, in 8°.

AMNESIA. De l'amnésie temporaire. Motet, A. Union Méd. de Paris, 1879, 3 s., xxviii., p. 950.

APHASIA. Aphasie dans la paralysie générale. Magnan. Progrès. Méd. Paris, 1879, vii., p. 903.

ASYLUMS. Private Lunatic Asylums. Med. Press. and Circ., 1880, vol. xxix., n.s. No. 2, 128, p. 62.

Private Asylums for the Insane. Med. Times and Gaz., 1880, vol. i., No. 1542, p. 62.

Private Lunatic Asylums. Bucknill. Brit. Med. Journ., 1880, No. 997, p. 220.

Three Australian Asylums. Urquhart, A. R. Journ. of Ment. Science, 1880, vol. xxv., p. 480.

Notes sur quelques asiles d'aliénés de l'Amérique du Sud, du Portugal, et de l'Espagne. Rey, P. Ann. Méd. Psych. Paris, 1879, 6 s. ii., p. 263.

Der Stand der Irrenpflege in Steiermark. Krafft—Ebing. Graz., 1879, in 8°.

Il manicomio e la famiglia. Verga, A. Arch. Ital. per le Malat Nerv., 1879, xvi., p. 157.

ATAXIA. Rapports de l'Ataxie locomotrice progressive avec la paralysie générale. Christian, J. Ann. Méd, Psych. Paris, 1879, 6 s. ii., p. 46.

AUTOMATISM. A remarkable case of semiconscious epileptic automatism. Hughes, C. H. Medical Record. New York, 1879, xvi., p. 116.

BRAIN. The re-education of the adult brain. Sharpey, W. Brain. Journ. of Neur., 1879, ii., p. 1.

Notes on the physiological pathology of the brain. Davey, J. G. Journ. Psych. Med. London, 1879, n.s. v., p. 172.

Notes on certain lesions of the nervous tissue of frequent occurrence in the brain of the insane. Lewis, B. Brain. Journ of Neur., 1879, ii., p. 364.

An analysis of three hundred and sixteen cases in which foreign bodies were lodged in the brain. Wharton, H. R. Phila. Med. Times, 1879, ix., p. 493.

On some of the Pathological and Physiological relations of Brain, Mind, and higher nerve functions. Robertson, Alexander. Glasgow. Med. Journ., 1879, vol. xii., No. 12, p. 401.

The Brain as an organ of Mind. Bastian, J. C. Charlton. London, 1879, in 8°.

Etude sur le dédoublement des opérations cérébrales et sur le role isolé de chaque hemisphère dans les phénomènes de la pathologie mentale. Luys. Bull. de l'Acad de Méd. Paris, 1879, 2 s. viii., p. 515.

Dédoublement des opérations cérébrales et doublement de la vie; un singulier cas psychopathique. Azam. Praticien. Paris, 1879, iii., p. 269.

De la localisation des maladies cérébrales. Trad. de l'Anglais par Varigny, H. C. de. Suivi d'un mémoire sur les localisations motrices dans l'écorce des hemisphères du cerveau ; par Charcot, J. M., et Pitres, H. Paris, 1879, in 8°.

Nouvelle contribution à l'Etude des localisations motrices dans l'écorce des hemisphères du cerveau. Charcot, J. M., et Pitres, A. (Extrait de la Revue Mensuelle de Médecine et de Chirurgie). Paris, 1879, in 8°.

Etudes topographiques sur les lésions corticales des hemisphères cérébraux. Boyer, H. C. Paris, 1879, in 8°.

CASTRATION. Oöphorectomy performed successfully for menstrual epilepsy Tait, L. Brit. Med. Journal, 1879, ii., p. 730.

La castration criminelle et maniaque. Gaz. Obst. Paris, 1879, viii., p. 273.

Een geval vau auto-castratie. W. Mees. Nederl. Fijdschr. v. Geneesk. Amst., 1879. xv., p. 449.

Castration beider ovarien wegen Hystero-Epilepsie. Welponer, E. Allg. Wien. Med. Ztg., 1879, xxiv., p. 245.

CEREBRAL CONVOLUTIONS. Physiology and histology of the cerebral convolutions, also poisons of the intellect. Richet, C. Translated by Edward P. Fowler. New York, 1879, in 8°.

CEREBRAL DISEASE. On the Pathology and treatment of Cerebral Disease. Semple, R. H. Journ. Psych. Med. London, 1879, n.s. vi., p. 98.

Zur Diagnostik der Hirnerkrankungen. Senator. Berlin, Klin. Wochschr., 1879, No. 4.

Differential-diagnostiche Bedeutung der Bewegungsstörungen bei Erkrankungen des Vorderhirns. Meynert, T. Wien. Med. Bl., 1879, ii., p. 690.

Topische Diagnostik der Gehirnkrankheiten, Eine Klinische Studie. Hermann Nothnagel. Berlin, 1879.

CIRCULAR INSANITY. La folie circulaire ou folie à formes alternes. Falret, J. Arch. Gén. de Méd. Paris, 1879, i., p. 52.

CHLORAL. Du chloral, propriétés et applications au traitement des maladies mentales. André, C. Nancy, 1879, in 8°.

CHRONIC LUNATICS. Accommodation for, Med. Press. and Circ., 1880, n.s. vol. xxix., p. 25.

CLAUSTROPHOBIA. De la Claustrophobie. Ball B., Ann. Med. Psych. Paris, 1879, 6 s. ii., p. 378.

CONGRESS. Der internationale irrenärztliche Congress zu Paris, im August, 1878. Brosius, Allg. Ztschr., f. Psychiat. Berlin, 1879, xxxvi., p. 50, 1 pt.

CONTAGION. "Folie à deux." An instance of apparent contagion of insanity (melancholia). Seguin, E. C. Arch. Med., New York, 1879, i., p. 334.

CONVULSIONAIRE. La Convulsionaria di Ampezzo. Tebaldi, G. Arch. Ital., per le Malat. nerv. e le Alien. Ment., 1879, p. 38.

CREDIBILITY of the testimony of those who have recovered from insanity to occurrences which took place during its existence. Judge Shipman, of the Circuit Court of the State of Michigan. American Journ. of Insanity, 1880, vol. xxxvi., p. 378.

Pathologia mendacitatis: or the pathology of lying as illustrated by the untruthfulness of the insane. Kellogg, A. O. Bull. Med. Leg. Soc. New York, 1878-9, i., p. 91.

CRIMINALS in Lunatic Asylums. Petition to the House of Lords. Lancet, 1879 ii, p. 34.

What can be done with criminal lunatics? Journ. Psych. Med. London, 1879, n.s. v., p. 128.

Anatomische Studien an Verbrecher-Gehirnen, für Anthropologen, Mediciner, Juristen, und Psychologen bearbeitet. Moritz Benedikt. Wien, 1879, in 8°.

Des mesures à prendre à l'égard des aliénés, dits criminels. Motet, A., Ann. d'Higiène Pub. et de Méd. Lég. Paris, 1879, 3 s., i., p. 207.

Criminal Impulse. Sull impulso irresistibile ai deliti. Tommasi, S. Morgagni. Napoli, 1879, xxi, p. 1.

Impulso irresistibile à delinquere, libertà morale, coscienza. Miraglia, B. Boll, di priv. manic. Fleurent, Napoli, 1879, v., p. 53.

CURABILITY OF INSANITY, The. Pliny Earle. Boston, 1880, in 8°.

DANGEROUS LUNATICS. Les aliénés dangereux. Demange. Bull. Soc. de Méd. Lég. de France, 1879, v., p. 162.

Les aliénés dangereux au point de vue légal et administratif. Picard, E. Nancy, 1879, in 8°.

DELIRIUM. Du Délire malicieux. Dally. Bull. et Mém. Soc. de Thérap. Paris, 1879, 2 s. v., p. 74.

DELIRIOUS MANIA. Case of acute delirious mania; with remarks on diagnosis and treatment. Carswell, J. Glasgow Med. Journ., 1879, xii, p. 350.

DELIRIUM TREMENS. Clinical Lectures on the treatment of Delirium Tremens. Balfour, G. W. Lancet, London, 1879, i., p. 146.

DELUSION. Ueber Characteristik der Wahnideen. Stricker. Ausz. d. K. K. Gesellsch d. Aerzte in Wien, 1879, g., p. 12.

DIPSOMANIA, its medical and legal aspects. Barton, J. K. Quart. Journ. Inebriety. Hartford, 1879, iii., p. 202.

Un cas curieux de dipsomanie chez une mélancolique impulsive. Briand, M. Mouvement Méd. Paris, 1879, xvii., p. 494.

DISEASES OF THE NERVOUS SYSTEM. Clinical Treatise. M. Rosenthal, with a preface by Prof. Charcot, translated by Putzel, L. New York, 1879, in 8°.

DYNAMIE. De la dynamie ou exaltation fonctionnelle au début de la paralysie générale. Régis, E. (Prix Esquirol pour l'anneè 1879). Ann. Med. Psych., 1879, 6 s., ii., p. 5.

DRUNKARDS. The Habitual Drunkards Act of 1879. Stephen Shute Alford. Med. Press and Circ. 1880, n.s. vol. xxix., No. 2,130, pp. 99 and 113.

Retreat for Habitual Drunkards. Med. Press and Circ., 1880, vol. xxix., No. 2125, p. 9.

INSANE DRUNKARDS. Fisher, T. W. Med. Commun. Mass. Med. Soc. Boston 1879, n.s. viii., p. 313.

EMOTIONAL INSANITY in its medico-legal relations. Bannister, H. M. Journ. Nerv. and Ment. Diseases. Chicago, 1880, vol. v., p. 79.

EPILEPSY. Analysis of one hundred cases of epilepsy. Bennett, A. H. Brit. Med. Journ , 1879, i., p. 846.

Somatic or nocturnal epilepsy. Lush, W. J. H. Med. Times and Gaz. London, 1879, ii., p. 234.

Epilepsy cured by trephining. West, J. Birming. Med. Rev., 1879, viii., p. 200.

Decrease in bodily weight after epileptic attacks. P. Kowalewski. Journ. of Nerv. and Ment. Dis. Chicago, 1880, vol. v., p. 154. (Abst. from St. Petersb. Med. Wochenschr.)

Beobachtungen über Schrumpfung und Sclerose des Ammonshornes bei Epilepsie. L. Pfleger. Allg. Ztschr. f. Psychiat. Berlin, 1879, xxxvi., p. 359.

Fall von Epilepsie mit letalem Ausgange. Gauster. Mitth. d. Ver d. Aerzte in Med. Oest. Wien, 1879, v., p. 67.

Marriage des Epileptiques. Delasiauve. Journ. d'Hygiène. Paris, 1879, iv., p. 339.

De la simulation de l'Epilepsie. Philippart. Arch. Méd. Belges. Bruxelles, 1879, 3 s., p. 117.

La diagnosi differenziale fra l'epilessia vera e la simulata. L. Gottardi. Lo Speriment. Giorn. Ital. di Sc. Med., 1879, xliv., p. 624.

Sulla patogenesi della epilessia. Luciani, Riv. Sper. di freniat. Reggio Emilia, 1878, iv., p. 617.

Contributo alla patogenesi de l'epilessia. Albertoni, P. Ann. Univ. di Med. e Chir. Milano., 1879, ccxlix., p. 215.

Religiosità degli epiletici. Toselle. Arch. Ital. per le Malat. Nerv. et le Alien Ment., 1879, p. 69.

Mania epilettica ; atrofia della prima porzione della circonvoluzione frontale superiore e frontale interna in seguito ad ostruzione embolica. De Paoli, G. Ann. Univ. di Med. e Chirurg. Milano, 1879, ccxlix., p. 205.

(See *Automatism*, *Heredity*, and *Syphilis*.)

FEIGNED INSANITY. Brush, E. N. American Journ. of Insanity, 1879, xxxv., p. 534.

Un cas de simulation. Marandon de Montyel. Ann. Méd. Psych. Paris, 1879, 6 s., ii., p. 270.

Dissimulation der Geisteskrankheit bei einer Diebin. Marten. Vrtljschr. f. gerichtl. Med. Berlin, 1879, n.f., xxxi., p. 190.

FEVER AND INSANITY. Febbre e Pazzia. Verga, G. B. Arch. Ital. per le Malat. Nerv. e le Alien. Ment. 1879, p. 394.

FEVER IN ACCIDENTAL DISEASES OF THE INSANE. Mancanza della febbre nelle malatie accidentali degli alienati. Ibid, p. 27.

GHEEL, The insane colony at. Shew, A. M. American Journ. of Insanity, 1879, xxxvi., p. 18.

HALLUCINATION. On the occurrence of hallucinations in general paralysis of the insane. Claus. London Med. Record, 1879, n. s., No. 43, p. 11, and (Allg. Ztschr. f. Psychiat., b. xxxv., Heft 5).

Hallucinationem aller Sinne ohne Abusus Spirituosorum. Fraenkel, M. Irrenfreund, Heilbr., 1879, xxi, p. 60.

HEREDITY and crime in epileptic criminals. Henry Clarke, Brain. Journ. of Neur. 1880, part viii., p. 491.

HYPOCHONDRIASIS, Sexual. Bumstead, F. J. American Practitioner. Louisville, 1879, xx., p. 19.

Ueber Hypochondrie. E. H. Kisch. Wien Med. Presse, 1879, xx., p. 512.

HYSTERIA. Cases of hysteria with paralysis treated by Metallotherapy. Franz Müller. Translated by William Samuel Tuke. Journ. Ment. Science, 1880, n. s. vol. xxv., p. 520.

Cases of hysteria in boys. Roberts, W. Practitioner. London, 1879, xxiii., p 339.

Hystérie: applications metallothérapiques. Schiffer. Ann. Soc. Med. Chir. Liège, 1879, xviii., p. 183.

Sur un cas d'hystérie avec somnambulisme. Chambard, E. Rev. Mens. de Méd. et de Chir. Paris, 1879, iii., p. 273.

HYSTERO-DEMONIACALS. L'epidemie di ossesse (istero-demonopatie) in Verzegnis. G. Chiap e F. Franzolini. Riv. Sper. di freniat. Reggio.-Emilia, 1879, v., p. 89.

HYSTERO-EPILEPSY. Ueber Hystero-Epilepsie. G. Scholz. Arch. f. Psychiat. Berlin, 1879, ix., p. 636.

IDIOTS. Proceedings of the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons. Sessions: Syracuse, June 8-12, 1878; Lincoln, May 27-30, 1879; Philadelphia, 1879, in 8°.

Beobachtungen über Idioten-und Cretinen-Anstalten und deren Resultate, Knapp, B. Graz., 1879, in 8°.

IDIOTIC HAND. Psycho-physiological training of an idiotic hand. Seguin, E. Arch. Med. New York, 1879, ii., p. 149.

IDIOCY. Zur Casuistik der Idiotie. Hollander. Jahrb. f. Psychiat. Wien, 1879, i., p. 60.

IMBECILITY. Mord; zweifelhafter Geisteszustand (Imbecillität) Facultätsgutachten der medicinischen Facultät in Graz. Krafft-Ebing. Allg. Ztschr. f. Psychiat. Berlin, 1879, xxxvi., p. 77.

INSANITY, associated with an abscess connected with the ear, cured by opening of the abscess. Williams, W. R. Journ. of Ment. Science, 1879, n. s. xxv., p. 59.

Some uncured cases of insanity. Savage, Geo. H. Guy's Hosp. Reports. 1879, 3 s., xxxiv., p. 191.

The prevention of insanity. Brit. Med. Journ. London, 1879, ii., p. 371.

Cases of insanity following acute diseases. Ayer, J. B., Med. Comm., Mass., Med. Society. Boston, 1879, 2 s. viii., p. 301.

A glance at insanity and the management of the insane in the American States. Pliny Earle. Boston, 1879, in 8vo.

Insanity of malarial origin. Hammond, W. A., Neurol. Contrib. New York, 1879, i., p. 55.

Zur Frage der primären Verrücktheit. J. Fritsch. Jahrb. f. Psychiat. Wien 1879, i., p. 35.

Beiträge sur Lehre von der primären Verrücktheit. J. L. A. Koch. Allg. Ztsch. f. Psych. Berlin, 1879, B. 36, p. 543.

La pazzia nell' antichità, studi storici. Funaioli, P. Cron. del Man. di Siena, 1879, v., p. 66.

Intorno alle cagioni della pazzia. Bini, F. Arch. Ital. per le Malat. nerv., 1879, xvi., p. 310.

INTEMPERANCE IN STUDY. D. Hack Tuke. Journ. Ment. Science, 1880, n. s., xxv., p. 495.

LACTIC ACID. Valore ipnotico dell' acido lattico negli alienati. Maragliano. Riv. Sper. di Freniat, 1879, p. 168.

LEAD-POISONING. Zur pathologischen Anatomie der Bleilähmung und der Saturninen Encephalopathie. C. Monakow. Arch. f. Psychiat. und Nervk., 1879, Band 2 H., p. 287.

LUNACY LAW REFORM. Brit. Med. Journ., 1879, i., pp. 404, 566, 603, 677.
Amendment of the Lunacy Laws. Bodington, G. F. Lancet. London, 1879, ii., p. 501.
Lunacy Law Reform. Lancet, 1880, vol. i., p. 99.
The Lunacy Inquiry Commission. Med. Press and Circ., 1880, vol. xxix., No. 2,128, p. 62.
English Lunacy Laws. American Journ. of Insanity, 1880, xxxvi., p. 294.

MAD POETS. Journ. Psych. Med. London, n. s. iv., p. 177 ; v., p. 30.

MANIA (CONGESTIVE). Manie congestive : influence des grandes suppurations sur la guérison des manies congestives. Foville, A. Ann. Méd. Psych. Paris, 1879, 6 s. i., p. 235.

MANIA TRANSITORIA. Beiträge zur Casuistik der Psychosen ; ein Fall von Mania transitoria. Pick, A. Prag. Med. Wchnschr, 1879, iv., p. 411.
Mania transitoria. Essenbeck. Memorabilien, Heilbr., 1879, xxiv., p. 112.

MARRIAGES. On consanguineous marriages. Lathrop, W. H. Boston Med. and Surg. Journ., 1879, c., p. 837.

MASTURBATION, as a cause of insanity. Hagenbach, A. W. Journ. Nerv. and Ment. Dis. Chicago, 1879, n s., iv., p. 603.

MEDICINE (LEGAL). Manuel Complet de Médecine Légale. J. Briand, E. Claudé et J. Bouis. Paris, 1879, 10 edit., tome i., in 8v°.

MELANCHOLIA. Zur Differential-Diagnose der Melancholie. J. Fritsch. Jahrb. f. Psych. Wien, 1879, v., p. 66.

MENTAL MEDICINE. The history of Mental Medicine. Ball, B. Lancet London, 1880, vol. i., p. 7.

METALLOSCOPY. Birming. Med. Rev., 1879, viii., p. 113.
Contribution à l'étude des aimants au point de vue thérapeutique. Burq, V. Gaz. des Hôp. Paris, 1879, lii., p. 805.
La métalloscopie et la métallothérapie. Dumontpallier. Rev. de Thérapeutique Méd. Chir. Paris, 1879, xlvi., p. 449. Union Méd. Paris, 1879, 3 s., xxviii., p, 333. Journ. de Thérapeutique. Paris, 1879, p. 613.
Sur la Métalloscopie. Dumontpallier. Union Méd. Paris, 1879, 3 s., xxviii., pp. 657, 673, 726. Also Rev. de Thérap. Med. Chir. Paris, 1879, xlvi., pp. 533, 561. Also Translation in Brit. Med. Journ. London, 1879, ii., p. 765.
Vorläufige Mittheilung über Metalloscopie und Metallotherapie. Müller, F. Centralbl. f. Nervenh. Coblenz, 1879, ii., p. 27.
Ueber Metalloscopie, Metallotherapie und Transfert. Memorabilien. Heilbr., 1879, xxxiv., p. 585.
Ueber Metalloskopie und Metallotherapie. Schiff. Centralb. f. Nervenh. Coblenz, 1879, ii., p. 464.
(See *Hysteria*).

MICROCEPHALIC BRAIN. Microcéphalie et Idiotie. Gaucher, E. Progrès Medical. Paris, 1879, ii., p. 485.

MIND, in the lower animals in health and disease. Lindsay, W. Lander. 2 v. London, 1879, in 8°.
The relations of Mind and Brain. Henry Calderwood. London, 1879, in 8°.
Mind, Insanity, and Criminality. J. L. Teed. Journ. Nerv. and Ment. Dis. Chicago, 1880, vol. v., p. 62.

MORAL INSANITY. Sulla questione della pazzia morale. Palmerini, U. Riv. Sper. di freniat. Reggio-Emilia, 1879, v., fasc. 2, p. 28.
Ulteriori considerazioni sull' argomento della cosidetta pazzia morale. Bonfigli, C. *Ibid.*, p. 41.
La follia ragionante, il medico ed il magistrato. Miraglia, B. Boll. di priv. manic. Flourent, Napoli., 1879, v., p. 77.

MORTALITY of the insane. Olmstead, J. Proc. Connect. Med. Soc. Hartford, 1879, lxxxviii., p. 122.

Statistisches über der Einfluss der Beköstigung und der Paralyse auf die Sterblichkeit der Irren. Frankael, M. Allg. Ztschr. f. Psych. Berlin, 1879, xxxvii., p. 1.

MYXŒDEMA and its Nervous Symptoms. Geo. H. Savage. Journ. of Ment. Science, 1880, n. s., xxv., p. 517.

NERVOUS EXHAUSTION, or neurasthenia in its bodily and mental relations. Jewell, J. S. Journ. Nerv. and Ment. Diseases. Chicago, 1879, n. s. iv., p. 449.

NERVOUS SYSTEM. Weitere Beiträge zur Pathologie und pathologischen Anatomie des Centralnervensystems. Otto Kahler und Arnold Pick. Archiv. f. Psychiat. und Nervenkrankheiten, 1879, x. Band, 2, Heft., p. 287.

NIGHTMARE, the physiology of. E. Wooton. Journ. Psych. Med. London, 1879, n. s., v., p. 111.

"Night Terrors." Das Nächtliches Aufschrecken (pavor nocturnus) der Kinder A. Wertheimber. Wien, Med. Bl., 1879, ii., p. 575.

NITROUS OXIDE, to facilitate examination and treatment of insane patients. A. G. C. Skene. Amer. Journ. Obs. New York, 1879, p. 616.

NOWELL *v.* WILLIAMS. Journ. of Ment. Science, 1880, n. s., xxv., p. 525. *Ibid.* Summing up of Lord Coleridge. *Ibid.* p. 592.

OPHTHALMOSCOPE. Remarks on its routine use in cerebral disease. Hughlings Jackson. J. Med. Press and Circ. London, 1879, xxvii., p. 459.

OVARIOTOMY. Deux cas d' ovariotomie suivie de délire. Voisin, A. Ann. Méd. Psych. Paris, 1879, 6 s., p. 41.

PARALYSIS. Case of general paralysis with aphasia and diminished weight of left frontal lobe. Birt, E. Med. Times and Gaz. London, 1879, ii , p. 85.

Notes of a case resembling general paresis of the insane, following direct solar influence, with hereditary taint. F. B. Christie. Lancet. London, 1879, ii., p 160.

The psychological and pathological nature and significance of general paralysis and its treatment. Mann, E. C. Boston Med. and Surg. Journ., 1879, ci., p. 11.

General paralysis among negroes. Bryce. American Journ. of Insanity, 1879, xxxvi., p. 214.

Note sur la marche de la paralysie générale chez les héréditaires. Doutrebente. Ann. Med. Psych. Paris, 1879, 6 s. i., p., 225.

Nouvelle recherches sur la nature de la paralysie générale des aliénés. Christian, J. Ann. Méd. Psych. Paris, 1879, 6 s., i. p. 402.

Atrophie de la circonvolution pariétale ascendante gauche, consécutive à la compression par une tumeur ; pas de paralysie du côté droit ; convulsions unilatérales gauches chez une femme atteinte de paralysie générale (meningo-encéphalite chronique interstitielle diffuse et sarcome angiolitique). Magnan. Gaz. Méd de Paris, 1879, 6 s.i., p. 319.

Die Eigenwärme in der allgemeinen progressiven Paralyse der Irren. C. Reinhard. Arch. f. Psychiat. und Nervknkheiten, 1879, x Band, 2 Heft. p. 366.

Die Heilung allgemeiner progressiver Paralyse. M. Gauster. Jahrb. f. Psych. Wien, 1879, i., p. 3.

(See *Alcoholism*, *Aphasia, Ataxia, Hallucinations and Syphilis.)*

PASSANNANTE. Considerazioni sul processo Passannante. C. Lombroso. Giorn. Internaz. di Sc. Met. Napoli., 1879, n. s. i., p. 377.

Sullo stato di mente di Giovanni Passannante (tentativo di regicidio). Perizia Medico-legale. Tamburini (et al). Riv. Sperim. di freniat. Reggio-Emilia, 1879, v., fasc 2, p 170.

PERSPIRATION. Zur Perspiration Psychisch-Kranker. Laehr. Allg, Ztschr. f. Psychiat. 1879, xxxvi , p. 43.

PSYCHOLOGY and the nervous system. J. Hughlings-Jackson. Med Press and Circ. London, 1879, No. xxviii., p. 199.

The importance of the study of Psychology. J. A. Eames. Brit. Med. Journ. London, 1879, ii., p. 250.

Ueber Psychalgieen. O. Müller. Allg. Ztschr. f. Psychiat. Berlin, 1879, xxxvi., p. 33.

PSYCHO-MOTOR CENTRES. Case of old nodule in left hemisphere. F. Neelsen (" Arch. für Klinische Medicin, Bd. xxiv., p. 483). Contributed by Edward G. Geoghegan. Journ. of Ment. Science, 1880, n. s., xxv., p. 524.

PSYCHOSE. Ueber Psychose beim Militär. Fröhlich. Allg. Ztschr. f. Psychiat. Berlin, 1879, xxxvi., p. 303.

PSYCHIATRY. Bemerkungen zur psychiatrischen Formenlehre, Schäfer Allg. Ztschr. f. Psychiat. Berlin, 1879, xxxvi., p. 214.

Lerbuch der Psychiatrie auf Klinischer Grundlage für praktische Aerzte und Studirnde. 2 Bl. Die Specielle Pathologie und Therapie des Irrenseins. R. Krafft-Ebing. Stuttgart, 1879, in 8°.

Zur Grundlegung der Psychophysik. Kritische Beiträge, 2. Ausg, Müller, G. E. Berlin, 1879, in 8°.

PUBESCENT INSANITY. Ueber psychische Störungen im Pubertätsalter. Ein Beitrag zur Lehre von der " Hebephrenie." H. Sterz. Jahrb. f. Psych. Wien, 1879, p. 94.

Pubertätspsychose. Kelp. Irrenfreund, Heilbr, 1879, xxi. p. 150.

PUERPERAL INSANITY. Sudden death, thrombosis of pulmonary artery, and of the right heart and venæ cavæ. W. H. Parish. Am. Journ. of Obst., 1880, p. 154.

Schwangerschafts-und Puerperal-Psychosen Erscheinungen nach Weber. (Jahresbericht der Gesellsch für Natur, und Heilkunde in Dresden, Irrenfreund, 1879, u. f.)

RECOVERIES from mental disease. I. Ray. Transactions of the College of Physicians of Philadelphia, 1879, third series, vol. iv., p. 217.

RESPONSIBILITY and irresponsibility in crime and insanity. Howard H. Canada Med. and Surg. Journ. Montreal, 1879, vii., p. 347.

RESPONSIBILITY of Asylum Superintendents. Amer, Journ. of Insanity, 1880, vol. xxxvi., p. 259.

RESTRAINT. Mechanical Restraint. Shew, A. W. American Journ. of Insanity, 1879. xxxv., p. 556.

Mechanical Restraint in English Asylums. Lindsay. W. L. *Ibid.*, p. 543.

RETROSPECT. Psychological. Med. Press and Circ., 1879, xxviii., No. 2,124, p. 565.

SARCOMA of the dura mater. Report of a case with illustrations. Edward N. Brush. American Journ. of Insanity, 1880, vol. xxxvi., p. 342.

SCLEROSIS. Diffused cerebral sclerosis. F. W. McDowall. Journ. of Ment. Science, 1880, n. s., xxv., p. 490.

SKULL. On the balance of pressure within the skull. J. Cappie. Brain. Journ. Neurol. London, ii., p. 373.

Etude anthropologique sur une série de crânes d'assasins. Bordier, A. Rev. d'Anthropologique. Paris, 1879, 2 s., ii., p. 210.

Des differences de volume du crâne suivant les races, les individus et les sexes. (Extr. from the Memoir crowned by the Soc. d'Anthropologie de Paris, with the first prize). Gaz. des Hôp. Paris, lii., p. 1,044.

Sur la fausseté des résultats céphalométriques obtenus à l'aide du conformateur des chapeliers. Broca, P. Bull. de la Soc. d'Anthropologie de Paris, 1879, 3 s., ii., p. 101.

Ueber progenee Schädelformen bei Geisteskranken. Fraenkel. Allg. Ztschr. f. Psychiat. Berlin, 1879, xxxvi., p. 279.

Kraniologische Beiträge zur Lehre von der psychopathischen Veranlagung. Meynert, T. Jahrb. f. Psychiat. Wien, 1879, p. 69.
Ueber Kraniometrie. Benedikt, M. Centralbl. f. Nervenh. Leipzig, 1879, ii., p. 434.

SUICIDE. On the prevention of, W. F. Wade. Brit. Med. Journ. London, 1879, p 533.
Le suicide et l'aliénation mentale dans les prisons cellulaires de la Seine. Motet, A. Ann. d'Hygiène Pub et de Méd. Lég. Paris, 1879, 3 s. ii., p. 219.
Les morts accidentelles et les suicides en France. Motet, A. *Ibid.*, 1880, 3 s., p. 97.

SYMPATHETIC. Gunshot wound of the neck; paralysis of the cervical sympathetic, followed by insanity. Bannister, H. M., Journ. Nerv. and Ment. Diseases. Chicago, 1879, n. s., v., p. 689.

SYPHILIS. Nervous inherited. Glasgow, R. B. Phila. Med. Times, 1879, ix. p. 453.
Some phases of cerebral syphilis. Atkinson, T. E. Virginia Medical Monthly. Richmond, 1879, vi., p. 673.
Rupture of a basilar artery, etc., in a case of syphilitic insanity. Macleod, M. D. Journ. of Ment. Science, 1879, n. s., xxiv., p. 617.
On the relation between Syphilis and General Paralysis from certain syphilitic changes of the Brain. Achille Foville. (Translated and condensed by F W. McDowall). *Ibid.*, 1880 n. s., xxv , p. 455.
Syphilis and mental alienation, further cases illustrative of their relationships. W. Julius Mickle. *Ibid.*, p. 505.
De la pseudo-paralysie générale syphilitique. Beauregard. Journ. de Conn. Méd Pract. Paris, 1879, 3 s. i., p. 336.
Contributions à l'étude des rapports entre la syphilis et la paralysie générale. A. Foville. Ann. Med. Psych. de Paris, 1879, 6 s., i., p. 353.
Folie congestive d'origine syphilitique. Existe-t-il des vésanies simples d'origine syphilitique? Baillarger. Ann. Méd. Psych. Paris, 1879, 6 s. ii., p. 48.
De l'épilepsie syphilitique secondaire. Fournier, A. Ann. de Dermatologie et de Syphilographie. Paris, 1880, 2 s. i., p. 16.
La Syphilis du Cerveau. Leçons Cliniques. Alfred Fournier. Paris, 1879, in 8°.
Syphilis und Geisteskrankheiten in Strasburg. Wasserfuhr. Veröffentl. d. k. deutschen Gsndhtsamtes. Berlin, 1879, iii., p. 119.

TEMPERATURE. Die Temperaturveränderungen bei Geiteskranken. Mierzejewski. St Petersb. Med. Wchnschr, 1879, iv., p. 297.
Temperaturbeobachtungen bei paralytischen Geisteskranken. Kroemer. Allg. Ztschr. f. Psychiat. Berlin, 1879, xxxvi., p. 137.
Studii di termometria cerebrale negli alienati. Maragliano, D. e Seppilli, G. Riv. Sperim. di freniat. Reggio-Emilia. 1879. v. fasc. 1, p. 94.
Ricerche sperimentali e cliniche sulla temperatura cerebrale. Maragliano, E. Riv. Clinic di Boulogna, 1879, 2 s. ix., p. 112.

TENDON REFLEX in the insane. Shaw, J. C. Arch. Med. New York, 1879, ii., p. 46.

THEFT. Le vol aux étalages (esquisse médico-légale). Lasègue, C. Arch. Gén. de Mèd. Paris, 1880, p. 158.

TRAUMATIC INSANITY. Drei Fälle traumatischen Irreseins. Pick, A. Prag. Med. Wchnschr, 1879, iv., p. 411.

TREATMENT. Some practical hints on the general treatment of the insane. Howard, H. Canada Med. and Surg. Journ. Montreal, 1879, viii., p. 433.
Des sorties provisoires comme moyen de traitement de la folie. Taquet, H. Ann. Méd. Psych. de Paris, 1879, 6 s. ii., p. 252.

TROPHO-NEUROSIS. Remarkable sympathetic disturbance. Mental alienation in association with a sympathetic tropho-neurosis. Spitzka. Journ. Nerv. and Ment. Diseases. Chicago, 1879, n. s. iv., p. 677.

VESSELS OF THE NERVOUS CENTRES Structure of the vessels of the nervous centres in Health, and their changes in Disease. Theodore Deeke. American Journ. of Insanity, 1880, xxxvi., p. 328.

WILLS Etude Médico-légale sur les testaments contestés pour cause de folie. Legrand du Saulle. Paris, 1879, in 8°.

Dr. YELLOWLEES has been appointed Lecturer on Mental Diseases in the University of Glasgow.

Appointments.

COBBOLD, C. S. W., M.D., M.R.C.S., L.R.C.P.Ed., Assistant Medical Officer to the Middlesex County Asylum, Colney Hatch (Female Department), vice Dyer, appointed Medical Superintendent of Darenth Asylum.

ELLIOT, G.S., M.R.C.P.Ed., F.R.C.S.Ed., Medical Superintendent of the Metropolitan Asylum District Asylum, Caterham, vice Adam.

GIBSON, WM. R., M.B. and C.M. Edin., Assistant Physician to the Perth District Asylum, Murthly.

JONES, D. J., M.D., Junior Assistant Medical Officer to the Kent Lunatic Asylum, Barming-heath.

POWELL, E., M.R.C.S., Medical Superintendent of the New Borough Lunatic Asylum, Nottingham.

PYLE, T. T., M.D., M.R.C.S., L.S.A.L., Visiting Physician to the Dinsdale Park Retreat Lunatic Asylum, Durham.

WADE, A. L., M.D., Senior Assistant Medical Officer to the Kent Lunatic Asylum, vice Powell.

WALMSLEY, F. H., M.D., M.R.C.S.Ed., Assistant and Medical Officer to the Leavesden Asylum for Imbeciles.

ERRATUM.—In the last Number, the Plate inserted at p. 515 should have been placed opposite p. 494, and the Plate (subsequently forwarded to every subscriber) illustrating Dr. Savage's Paper on Myxædema should have been inserted at p. 515.

THE JOURNAL OF MENTAL SCIENCE.

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

No. 114. NEW SERIES, No. 78. JULY, 1880. VOL. XXVI.

PART 1.—ORIGINAL ARTICLES.

On Syphilitic Epilepsy. By M. G. ECHEVERRIA, M.D., late Physician in Chief to the Hospital for Epileptics and Paralytics, and to the City Asylum for the Insane, New York, &c.

Syphilis has always been regarded as one of the accidental causes of Epilepsy, and ranks, indeed, among those which exert the most decided influence on its development. The epileptic malady, when so originated, throws almost into the shade the other constitutional accidents, or sequels of the syphilitic infection, if they are not—as it often happens—in suspension or latency. The first point, therefore, to be considered before we proceed to the description of its characters, is—at what stage of syphilis does the neurosis commonly occur, or rather, is there a secondary and a tertiary epilepsy, distinct from each other, as is held by Fournier,* who judges it difficult to connect the former, principally exhibited by females, like a transient specific neurosis, with any lesion of the nervous centres; whereas the latter should be, on the contrary, manifestly consecutive to encephalic lesions, thus constituting one of the manifold expressions of that complex organic state known as cerebral syphilis.

That insanity, epilepsy, or paralysis, may suddenly occur simultaneously with the early phenomena of constitutional syphilis is a well acknowledged fact, of great therapeutical value, since its recognition affords us a safe guide for the application of proper specific remedies, and a right management of such nervous disorders. But, the local paralysis, the hemiplegia, the neuralgias, or any derangement of the

* "Epilepsie Secondaire," "Ann. de Dermatologie et de Syphiligraphie." Paris, 1880. Tome I., 2me. Série, pp. 16 and 199.

mental functions, which might break out in the course of secondary syphilis, do not present, when taken singly, any distinguishable characters from those which may explode during the tertiary stage, beyond the peculiar features of the concurrent constitutional accidents in each case. Does epilepsy offer in this particular respect any exception to the other syphilic nervous maladies?

The investigation of the subject in patients under my immediate observation yields the following results. The irruption of the first epileptic attack in 118 cases—65 males and 53 females—took place, after the acquisition of syphilis, at dates which are thus noted:—

9 males and 15 females, from 4 months to 1 year.
16 males and 20 females, from 1 year to 2 years.
13 males and 8 females, from 2 years to 5 years.
15 males and 5 females, from 5 years to 8 years.
9 males and 3 females, from 8 years to 12 years.
3 males and 2 females, from 12 years to 20 years.

Now, 4 males and 12 females, of the first series, presented at the outbreak of the epileptic fits such unmistakable signs of secondary syphilis—as roseola, erythematous syphilid, superficial ulcers of the tonsils, iritis, inguinal adenitis, epididymitis, alopæcia, febrile paroxysms, sleeplessness, with gastric and other nervous troubles. The majority of these patients were females, as already observed by Fournier in similar instances; two males were the offspring of insane parents, and one of them had an insane sister. Another male became epileptic during convalescence from yellow fever, six months after having had a venereal sore of the prepuce, followed by glandular enlargement in the groin, and a cutaneous syphilid, already manifest at the time he was attacked with the fever. The remaining male exhibited a feeble constitution, with a marked nervous temperament, and had been subject, since boyhood, to periodical migraine of the most violent nature. The age of the males ranged from 19 to 31 years, that of the females from 21 to 28. One of the latter, aged 24, died with double pneumonia, three weeks after she had been seized with nocturnal fits. I shall refer presently to the lesions exhibited by her brain, and by that of one of the males, aged 19, who committed suicide by drowning.

It is evident that in the foregoing cases the neurotic temperament and enfeebled conditions of the males hastened the

development of epilepsy during the secondary stage of syphilis. Furthermore, it seems no less obvious that the greater nervous susceptibility of females accounts for their preponderance over the males in the first and second groups of cases, showing the early explosion of epilepsy at a period varying from four months to two years after syphilis had been acquired. To the same susceptibility I ascribe the state called by Fournier *nervosisme secondaire*, commonly exhibited by females in the course of secondary syphilis, and which I have chiefly noticed among prostitutes and women enfeebled by venereal excesses. These facts, together with the absolute similarity of the essential phenomena observed in every instance of epilepsy—whether originated during the secondary or during the tertiary stage of syphilis—lead us to recognise that, under such circumstances, precocity in the evolution of epilepsy depends altogether on the nature of the soil; that is to say, the nervous predisposition of the patient, rather than on conditions connected with the stages of the syphilitic diathesis itself. If the nervous system is in any way impaired in its activity, and, through disturbing nutritive agencies set up by accidental organic derangement, does not keep within the normal standard, syphilis will operate simultaneously with such agencies to favour with strange rapidity the evolution of epilepsy, or any other nervous disorder; just as with certain individuals the constitutional accidents and cachexia develop themselves sooner, while in others they happen at a remoter date, on account of organic defects, more or less appreciable, influencing the manifestations of syphilis from its very stage of incubation. Syphilis, in one word, operates like any other encephalic lesion capable of inducing epilepsy, without submitting it, however, by the specific nature of its etiology to exceptional laws of development. The nervous disorder exists correlated with the syphilitic diathesis; both have a place in the explanation of the phenomena displayed; but, I repeat it, the manifestations of the epileptic malady remain essentially the same as in any other case, notwithstanding its specific cause and its inception at any earlier or later period of constitutional syphilis. And, because the attacks during the secondary stage may explode and disappear simultaneously with the irruption of the specific accidents, thus showing, as Fournier says, a parallel evolution, are we to conclude therefrom that the epileptic phenomena are not connected with some material lesion of the nervous centres? Hemiplegia,

local paralysis, and other affections of the nervous system, generated during the secondary stage, are attended by structural changes which have been revealed by the autopsy on several occasions. As regards syphilitic epilepsy, the opportunities of demonstrating such lesions are not frequent, but there is not the least doubt of their reality, since in two typical cases I have examined, manifest pathological changes were discovered in the membranes, the cerebral hemispheres, the medulla, and the sympathetic ganglia accounting for the convulsive symptoms, and which, it is legitimate to presume, must exist likewise in other similar instances. In proof of these assertions I briefly report the principal characters of these two examples.

Case I.—Female, aged 24. Four months after appearance of a chancre in the fourchette, she presented a roseola over nearly the whole body, ulcerations of the throat, and vaginitis with swelling of the inguinal glands. She had besides iritis in the left eye; pain in the lower part of the back, and complained of tingling and numbness in her limbs, particularly in the legs. The first fit occurred in the night, with severe laceration of the tongue, and was followed all the day after by a depressed condition, with violent pain, chiefly over the parietal regions. This headache has troubled her very much, with vertigo, great irascibility, sleeplessness, and neuralgia in the præcordial region and lower limbs. The fits regularly recurred every night, sometimes four or five in succession, until she was seized with double pneumonia, and died three weeks after the accession of the epileptic malady.

On post-mortem examination, the lungs were found in a state of red and grey hepatization, with emphysema in the anterior part of the upper lobes. Heart rather enlarged, with right cavities filled by coagulated blood. Nothing wrong with the abdominal viscera. The brain presented the following appearances :—Dura mater normal looking, but very adherent to the calvarium. The arachnoid, dense and thickened in several circumscribed places, was firmly united with the cortical substance, yellowish and denser under these spots. Terminal branches of the left Sylvian artery with a notchy appearance, and surrounded by a glutinous exudation, which also covered the basilar artery. Membranes over the medulla thickened. Sympathetic cervical ganglia enlarged, with a red pellucid aspect.

Case II.—Male, aged 19. Entered the hospital in a very agitated condition of mind and prone to violence, after having had for three days several convulsive fits, alternating with vertiginous attacks. He laboured under the delusion of being persecuted by his mother, which rendered him extremely impulsive and excited, feeling at other moments quite low spirited and depressed. He was wakeful, talka-

tive, and noisy at nights. Whilst in the hospital he had eight very severe attacks of general convulsions, though obviously more violent in the right limbs. Curiously enough, in every instance the fits seized him just after voiding urine, preceded by a vertiginous condition and a long piercing cry. The first fit occurred early in the morning on getting up, six months after he had had a chancre and gonorrhœa, and when he had a papular eruption over the face and trunk, with condylomatous sores on the tongue and lower lip. Four days after admission he drowned himself. A letter disposing of his effects, and full of terrible invectives against his mother, showed that the suicide was a premeditated act.

The examination of the brain disclosed alterations similar to those noted in the preceding case. The arachnoid on the left side over the convolutions bordering the fissure of Rolando, presented, almost uniformly, a yellowish opalescent colour, with considerable thickness and firm adherence to the cortex, but in other places a limpid serosity filled the sulci between the convolutions. The cerebral tissue, very moist, firm, and highly congested, displayed in several points a denser structure of a yellowish hue. A much larger surface of exudation covered the summit of the right occipital lobe, and thence extended along the upper border of the hemisphere until the tip of the parietal region. The fissure of Sylvius was also masked by exudation on both sides, but more on the left. The cortical arteries, coated with a glutinous exudation, exhibited in lesser degree the notchy appearance noticed in the former case. The ventricles were rather distended by limpid fluid, and the choroid plexus covered with minute semi-transparent granulations. Membranes over the medulla, thickened and opaque. Sympathetic ganglia, red and swollen. Nothing particular with the other viscera, excepting some slight indications of perihepatitis.

Microscopic examination of the cerebral tissue, in both cases, showed a proliferation of nuclei and connective fibriles in the neuroglia, with notable enlargement of the cells in many places. In the sympathetic ganglia the cells were filled with dark pigment granulations, in addition to the hyperplasia of connective elements in the interstitial tissue, and the proliferation of nuclei along the fibres. The medulla showed its capillaries in a granular state, and with varicose distensions. The nerve-cells, dark, irregular, and véry granular, were surrounded by heaps of fine granulations and amyloid corpuscles, also abundant around the cerebral bloodvessels in the cortical substance. The vessels in these regions owed their thickening and notchy aspect to several nuclei and granulations filling the interstices between the muscular fibres of the inner coat. The muscular elements were less altered in the more constricted parts, which in some points were plugged by a mass of blood discs, white cells, and fine granulations. These elements in advanced cases undergo a retrograde change, forming a fatty mass tinged with an ochre colour, from decomposition

of the hæmatic crystals. In the second case the ependyma of the fourth ventricle was thickly interspersed with amyloid corpuscles and a finely granular semi-transparent amorphous matter. Finally, the above changes in the medulla and sympathetic were those I have long ago described in these nervous centres, as always existing in epilepsy.

If we deduct from the whole series those cases in which the onset of epilepsy took place during the secondary period of syphilis, we have 93 patients who exhibited unmistakable signs of tertiary syphilis, and 9 without any appreciable external manifestation of the diathesis, notwithstanding the previous existence of chancre and inguinal adenitis, at a more or less remote date from the outbreak of the syphilitic affection. The latter cases have not escaped those who have closely studied the etiology of syphilitic nervous disorders, having been particularly pointed out by Lanceraux and, more recently, by Buzzard. But although we might not discover plain proofs of constitutional syphilis in these instances, the diagnosis, in regard to syphilitic epilepsy, is not so obscure as it would at first appear, on account of the mark deeply stamped on the disease by its peculiar evolution and symptoms.

The changes undergone by the nervous system do not differ essentially in each individual syphilitic nervous affection. The pathology of the encephalon, and particularly of the brain, as established by Charcot, is immediately dependent on the circulatory system, and no more direct illustration of this truth could be had than in cerebral syphilis. There is, however, a proportion of cases, not exceptional, in which the nutritive histological changes effected by syphilis primarily arise in the nervous elements themselves, without impairing the vascular or interstitial structures of the nervous centres. I have met with the two following examples of spasmodic dorsal tabes and epilepsy belonging to this class.

Case III.—A man, aged 34, with constitutional syphilis and caries of the nose, and who had been greatly exposed to dampness, presented a paretic state of the lower limbs, with spontaneous epileptoid *trepidation*, which could be equally induced by flexion of the feet, and contraction of the two legs. No brain symptom or strabismus, trouble of sensibility, or shooting pain, existed at any period of the disease, which gradually ran its course in five years, until the patient, whom I had seen several times with Dr. F. J. Bumstead, died of tuberculosis of the lungs.

On post-mortem examination we found a symmetrical and primitive

sclerosis of the lateral columns in the dorsal region of the cord, without any degeneration in the anterior cornua, and no cerebral lesion.

Case IV.—A female, aged 40, died at the Hospital in the last stages of constitutional syphilis. She had been, for three years, subject to diurnal fits followed by profound coma. With the exception of its very anæmic state, no marked lesion was discovered in the brain, nor in its bloodvessels, the morbid alterations remaining limited to the medulla and sympathetic. In the medulla the nerve cells, irregularly shapen, were much enlarged, with an areolar aspect, or densely loaded with pigment, in the midst of a considerable quantity of amorphous matter. The sympathetic cells in the cervical ganglia appeared infiltrated with pigment, and shrunk or broken up, a great hyperplasia of the connective elements and several oblong nuclei in the exceedingly attenuated nerve-fibres, being no less conspicuous.

I do not ignore the fact that exposure to cold dampness was the determining influence of the disease alleged in several of the cases of spasmodic dorsal tabes observed by Charcot, who, however, regards its immediate causes as unknown. For which reason, I attach a chief etiological importance to the operation of syphilis on the spinal cord in the case just noted, and, principally, because the patient acknowledged that the first indication of a weary and fatiguing feeling, with the contraction in the legs, and his inability to use them freely after getting up in the morning, existed long before he had to expose himself to dampness, which, of course, helped the progress of the disease. Lastly, the fact that syphilis is often a cause of locomotor ataxy, determining a primary spinal sclerosis, strengthens the diagnostic views here maintained.

But, notwithstanding such important category of cases (which mostly refer—and this is an important distinction—to spinal affections commonly consequent, as shown by Vulpian and Charcot, on systematic lesions confined or circumscribed within definite boundaries), syphilis when it affects the encephalon, involves primarily, in the majority of instances, the vascular structures, the cerebral membranes, and the neuroglia. Ischæmia from obstructed circulation on one side, and, on another, the proliferation of connective elements compressing the nerve-cells, lead ultimately to disintegration or atrophy, and a retrogressive change with fatty degeneration of the cerebral tissue.

Notes of thirty-six examinations of the brain in different cases of syphilitic mental and nervous disorders, including ten of epilepsy, show more or less thickening, or an athero-

matous degeneration of the cerebral arteries, in thirty-one cases, distributed as follows:—Anterior cerebral artery, 3; Sylvian artery, or its terminal branches, 6; Posterior cerebral, 4; Cerebellar arteries, 3; Basilar artery, 4; Cortical arteries, 9; Circle of Willis, 2. In two of these instances the right Sylvian artery, and in one the basilar, presented an aneurismal dilatation caused by thrombosis and obstruction of the vessel. The three patients had epilepsy, the two first with left hemiplegia. In one instance, to be presently described, the superior longitudinal sinus was completely obliterated, and in another the right cavernous sinus was almost obstructed by a gummatous deposit on the same side of the sella turcica. Finally, the above thirty-one patients were—twenty-two males and nine females.

I could not better illustrate the histological changes undergone by the arteries and tissue of the brain than by the history of two most typical examples I have already published, in addition to the two cases, just reported, in proof of the lesions that exist in epilepsy developed during the secondary stage of syphilis.

Case V.—A female, aged 26, had constitutional syphilis: enlargement of the cervical and inguinal glands, roseola patches in the genitals and leucorrhœa, with obstinate headache, paralysis of both third nerves and left hemiplegia. The anti-syphilitic treatment proved of no more avail than to remove the skin accidents. The epileptic attacks persisted with troublesome coughing, vomiting, and other nervous symptoms, with a gradual failing of the intellectual faculties, until, passing into a somnolent condition, the patient finally died in a fit. In the commencement an aura, starting from the fingers on the left hand, preceded the paroxysms, but subsequently this warning ceased. During the fits the patient used to bite the tongue and to froth considerably at the mouth.

Autopsy.—Calvarium normal, vessels of the diploe very congested. Meninges opaque; serous effusion in the cavity of the arachnoid, which was opalescent on the anterior part of the base of the brain. Right middle cerebral artery plugged by a firm, laminated, orange-tinted clot, adhering to the walls, and inducing aneurismal dilatation of the vessel, with gummatous thickening of its external coat. The retrogressive change in the contracted portion of the vessel beyond the aneurism, caused its tearing asunder; and to the circulatory obstruction were due the infarctus and ischæmic softening in the parietal and frontal lobes. A large surface of the cortical substance around the fissure of Sylvius and over its posterior extremity, was covered by a film of coagulated blood; these regions were infiltrated and softened in many spots, without delimited boundaries with the white

substance underneath, which had a yellowish colour from the ischæmic change just noticed. On section, the brain-tissue looked rather wet, with two yellow patches the size of a hazel nut, in the right centrum ovale, near the anterior part of the corpus striatum, and surrounded by softened tissues. Ventricles containing turbid serosity, choroid plexus rough, covered by small, yellow granulations. These miliary bodies covered also the ependyma of the fourth ventricle, and the pia-mater over the medulla. Both lungs, with tuberculous deposits at the apex, extensive pleuritic adhesions on right side, with grey hepatization of the lower lobe. Heart natural, without any valvular disease. The other viscera presented nothing worthy of notice, excepting the liver traversed by fatty streaks. Uterus enlarged; granular cervicitis. Gummatous patches on labia minora.

The granulations in the lining membrane of the ventricles contained a cheesy matter, easily pressed out from an envelope formed by delicate connective fibres. Large oil cells and granular nuclei mixed with fatty particles composed the above matter. Same fatty metamorphosis in the patches of the centrum ovale, with more or less addition of neuroglia and nerve-fibres or cells, in granular disintegration. The surrounding softened tissue contained nervous elements fragmented, large granular corpuscles, and amorphous matter. The cortical matter under the apoplectic effusion showed no nervous elements among the granular cells, fatty granules and hæmatic crystals and globules constituting its softened structure. While such retrograde metamorphosis was thus evinced in these regions of the brain, the left optic thalamus and the cervical sympathetic exhibited a typical sclerosis, with its characteristic exuberance of connective elements. In the oblong medulla the fatty degeneration existed chiefly on the left side, along the path and nucleus of the hypoglossus, and hence extending to the fourth ventricle. The vessels, distended and granular, were masked by fine fatty granulations, grouped along their course. The cerebral capillaries, and those of the cerebellum, had undergone the same but less general alteration. The cerebellum exhibited an increased amount of connective nuclei and amorphous matter stuffed with fatty molecules.

The change in the roots of the hypoglossus was remarkable. Primitive fibres reduced in great number to their sheath and cylinder axis; medullary substance lost or fragmented into fine brilliant granules. This lesion had also invaded many of the primitive fibres in the roots of the right pneumogastric, the majority of those of the third nerve, and those of the sympathetic. No change in the median and ulnar nerves which were also examined.

The degeneration of the right middle cerebral artery chiefly involved its outer and muscular coats. The muscular fibres pressed asunder by heaps of nuclei, and fine granulations filling their interstices, had lost their apposition. In the outer coat there were large fusiform and round cells, mixed with a considerable amount of connective elements,

replaced entirely by fatty ones in those points where the retrogressive metamorphosis had already taken place. The swelling of the muscular coat, narrowed or completely occluded the calibre of the artery. This, and the increased thickening of the outer coat, gave to the vessel the notched aspect noticed in many of its branches.

There can be no doubt that the plugging of the middle cerebral artery produced its aneurism and the local infarctus with ischæmic degeneration of the cerebral tissue. Such morbid accident occurring without evidence of cardiac disease, and dependent on the diseased condition of the vascular walls, as much as on the influence of the cachexia, is always favourable to the formation of coagula obliterating the blood-vessels. Bristowe* has shown twice the occurrence of these cerebral aneurisms in connection with secondary syphilis, and occasioning, in one of the cases, epileptic hemiplegia. Similar observations have been reported by Virchow, Huebner, Lanceraux, Wilks, Broadbent, Allbutt, Hughlings Jackson, and several others. And these facts, too numerous, demonstrate how groundless was the opinion of Gouguenheim, who, in his interesting memoir on Aneurismal Tumours of the Cerebral Arteries, regards the influence of syphilis as a problematical source of their occurrence, whereas experience, on the contrary, proves it to be one of the commonest.

Case VI.—In February, 1866, I visited, in consultation with Dr. Perry, of Brooklyn, a shipmaster, who, for nearly a year, had suffered from fits, attended with vertigo, temporary paralysis, sometimes in one lower limb, sometimes in both, and most severe headache. He had been subject to fits some years before, but they gradually disappeared. Prior to their accession, he had chancres, with enlargement of inguinal glands, and, when I saw him, copper-tinted blotches on the skin were the chief indications of constitutional syphilis. The fits then recurred, four or five in succession, every two or three days, preceded by neuralgia in the legs, and constant violent pain in the fore part of the head. I suspected the dura mater and, most probably, the brain involved by gummatous deposits at the site of the cephalic pain. The antisyphilitic treatment, instituted by Dr. Perry, was kept up, increasing the doses of iodide of potassium, belladonna, and ergot to allay pain and cerebral excitement; but this proved unsuccessful, and the patient died, not long after my visit, in a comatose state consecutive to several fits.

I did not attend the autopsy, but my friend Dr. E. R. Peaslee, who had also visited the patient, was kind enough to send me the brain and medulla for examination. The dura mater, covering the

* "Trans. of the Pathological Society of London," Vol. x., p. 44.

upper surface of the hemispheres, was very much thickened. The superior longitudinal sinus completely obliterated and reduced to a fibrous tissue, like a tendinous ligament, for the distance of three inches, remained partially pervious in its posterior extremity, where concentrical layers closely filled out its cavity, thus indicating the manner in which the obstruction had been effected. This deposit was three-quarters of an inch long and half an inch thick. On the left side of the sinus there were several patulous, soft, not vascular, yellow patches, overhung by an irregular border. These ulcerations corresponded with similar ones involving the upper part of the ascending parietal convolution, nearly to the central white substance for the space of half a dollar, there being a well-established vascular connection at that point between the membranes and the cortical substance. The right cerebral hemisphere was less hurt by the gummatous ulceration not extending beyond the margin of the great longitudinal fissure. The cerebral tissue, uniformly indurated, approached a lardaceous consistency. The left hemisphere seemed as though swollen, with a noticeable bulging of the base of the middle lobe, the anterior perforated space and the peduncle of the brain. Just behind the optic chiasma there was a mass, about the size of a robin's egg, and stretching over the outside of it was the left optic nerve, which was torn. Whether this tumour affected the sight of the patient before his death I did not know.

The ulcerated tissue of the dura mater consisted principally in connective fibres and nuclei, more abundant in the gelatinous-looking soft parts. With these elements there were large irregular corpuscles containing fine granulations, and sometimes a round nucleus ; some of these corpuscles shrivelled, keeping their nucleus, were attenuated and elongated like a fibro-cell, and had the characters of lymph corpuscles in a retrograde state. In addition, a finely granular, semi-transparent, amorphous matter abounded, mixed with brilliant fatty molecules and elastic fibres. The capillaries were rare, and in a transparent granular condition.

The structure of the cerebral tissue in the circumscribed ulceration, varied from that of the rest of the organ. The adventitious growth nearly deprived of vessels, formed the centre of a thick capillary network in the pia mater. No capillary congestion of the brain ; brain substance firm, elastic and pellucid after section. The yellow, cheesy portions of the ulcer had a structure quite similar to that of the dura-mater, but with more fatty elements. The soft, central parts, circumscribed by a denser structure of a yellow colour, abounded in nuclei, and thick meshes of connective fibres, intermingled with fatty molecules, large fatty globules, and a considerable quantity of corpora amylacea. On approaching the apparently sound cerebral tissue, the neuroglia increased in nuclei, always mixed with a semi-transparent amorphous matter, and considerable proportion of corpora amylacea, fatty granulations, and scattered fragments of nerve-fibres and mye-

line. The fatty elements were not, however, uniformly distributed, and were more multiplied in the mass behind the optic chiasma. Different sections of the medulla manifested the same sclerosis, coincident with dilatation of the capillary vessels, granular, and surrounded by heaps of fatty molecules. These varicosities would be discovered likewise in many capillaries around the cerebral ulceration. The increased amyloid corpuscles and nuclei of connective tissue caused the elastic lardaceous appearance of the cerebral tissue. In the medulla the degeneration was strongly marked in the vicinity of the restiform bodies, and in the corpora olivaria. The cells in these latter had lost their fatty aspect, becoming dark and granular.

The foregoing example of cerebral syphilis, in its last stages, shows a gummatous internal pachymeningitis extending to the adjacent cortical substance, together with a general sclerosis of the brain tissue, less advanced in the right than in the left hemisphere, both being, however, much increased in size. Virchow draws a distinction between the internal pachymeningitis and the external, affecting the periosteal layer of the dura mater, and commonly attended with erosions, atrophy, exostosis, and caries or necrosis of the inner table of the skull. This division is more pathological than clinical, for in every case, including the one just related, in which the periosteal layer of the dura mater was firmly adherent to depressions in the inner table of the parietal bones, the two kinds of pachymeningitis invariably accompany each other, the predominance, not of a range of symptoms, but of certain cadaveric lesions being their only distinctive characteristics. Furthermore, and in confirmation of this statement, when, contrary to the present instance, the osseous lesions predominate, the meningeal layer of the dura mater becomes also thickened, and the seat of a subacute inflammation spreading to the meninges and the brain, this latter and its coverings being then, as in the other kind of cases, intimately united to one another. Nor do I, finally, know of any positive sign enabling us to discriminate when local pains in the cranium, accompanied by sensory or motor disorders, proceed from external or from internal pachymeningitis, and not from partial arachnitis or a gumma in the cortex of the hemispheres.

I have met with instances of syphilitic epilepsy among intemperate subjects, in which existed throughout the brain a marked hypertrophy of connective elements with a considerable but less uniform hyperplasia, similar to that causing the enlargement of the hemispheres in the case just described.

Identical hyperplasia must have occurred in the example reported by Virchow,* of a prostitute who, shortly after being seized with singular nervous symptoms, died with acute hypertrophy of the brain; but this opinion, as it seems from the brief account of the case, was only based on the naked-eye cerebral appearances.

I have not pretended to describe in detail the morbid anatomy of cerebral syphilis, when mentioning the histological changes met with in syphilitic epilepsy, and which do not differ from those observed in other nervous affections of the same specific nature. To sum up, syphilis of the nervous centres determines either inflammation or thickening of the membranes, or myelitis, and, not seldom, systematic sclerosis in the spinal cord; whereas, in the brain, vascular and interstitial morbid changes predominate, more or less diffused throughout the organ, when not consecutively affected by initial lesions in the membranes or cranial bones. The arterial sclerous and gummatous degenerations determine an impediment to the flow of blood, producing cerebral infarctus and local ischæmia, while the syphilitic inflammation of the cerebral membranes may give rise to pachymeningitis, partial arachnitis, or meningeal sclerosis, with proliferation of connective elements that also characterizes the syphilitic neoplasms of the encephalic tissue, ending in retrogressive or fatty degeneration, or in ulceration from necrobiosis upon the local ischæmia, due to narrowing and to thrombosis, obliterating in different parts, the arterial vessels.

Syphilitic epilepsy does not explode, as most writers state, in the midst of apparent good health. Violent pain on the parietal or frontal regions, and, generally, spreading all over the head, precede, very often for weeks and months, the accession of the first fit, to continue thereafter equally relentless. A præcordial distress or pain, of a decidedly paroxysmal form, with a dizzy or vertiginous feeling, of short duration, accompany often the cephalalgia. In repeating the patients' own expressions of præcordial "pain," I do not mean thereby the osteocopic pains in the sternum, observed in the later stages of syphilis, but those paroxysmal seizures suddenly causing an uneasy sensation in the præcordial region, with momentary shortness of breath, and neither excruciating nor persistent like the cephalic pains. These latter show little

* "La Syphilis Constitutionnelle." Trans. by P. Picard. Paris, 1860, p. 84.

remission and as much intensity in the day time as at night, although ordinarily there is a greater nocturnal exacerbation. The importance of this symptom has been particularly pointed out by Buzzard and Charcot, who assigns to the extreme violence of the syphilitic cephalalgia its diagnostic distinction from the similar circumscribed pain in the head that may exist with the various kinds of partial epilepsy.

I find noted among the antecedent phenomena of the first attack in the 118 patients here considered:

Cephalalgia, in 45 males and 38 females, or 83 patients, amounting to 70·33 per cent. of the whole cases.

Præcordial pain in 27 males and 32 females, making 59 patients, or just 50 per cent. of the whole cases.

Of the 83 patients with cephalalgia, 10 males and 16 females experienced the pain in the parietal regions; in 19 cases, 11 males and 8 females, the pain was principally located in the temples, or supra-orbital regions; and in the occipital region in 16 cases, 9 males and 7 females. In the remaining 22 cases, the pain spread all over the head; and the same happened in most of the cases, when the intensity of the cephalalgia reached its maximum.

Although violent cephalalgia anteceded the beginning of the epileptic attacks, these generally did not explode when the pain was in its greatest intensity, but, on the contrary, at a moment of remission, and often when the patient had appeared very somnolent. And, notwithstanding the exacerbation of osteocopic pains at night, the same peculiarity was observed in connection with the nocturnal fits supervening during the sleep of the patient.

Cephalalgia has been one of the most prominent symptoms throughout the progress of the epileptic malady in every case; but as it did not then acquire any different aspect from that it exhibited during the premonitory stage, I shall end here its description. Charcot thinks that the crossed disposition of the parietal pain and the convulsions in a certain number of cases of syphilitic epilepsy, is worthy of attention, since it points out to a connection with the motor zone, which is the only region in the cerebral cortex capable of producing upon its irritation convulsions on the opposite side of the body.* It is undoubtedly true that the parietal pain appears distinctly noticed in several of the recorded cases of partial epilepsy, whether syphilitic or otherwise; but the

* "Leçons sur les Maladies du Système Nerveux." Paris, 1877. Tome ii., Deuxième Edition, p. 357.

distinction drawn by Charcot is too precise, and neither upheld by a close analysis of clinical facts, nor by experimental Physiology, nor, lastly, by his own observations. Dalton, Carville, Duret, and more recently Bochefontaine, have shown that mechanical or electrical irritation of the dura mater produces contractions of the face and limbs on the same side of the irritation, and, if the stimulation is very powerful, of both sides of the face and the four limbs. In addition, Ferrier has demonstrated that "Epileptic convulsions can be produced with quite as great readiness by application of the irritation to the sensory areas as to the motor centres. In some cases it would seem as if convulsions of a more general nature can be so excited. And it would appear as if in such cases the loss of consciousness occurs more early in the train of symptoms."* Bearing these facts in view, and the frequent injury of the dura mater in syphilitic epilepsy, no surprise need be felt at the changeable relation actually manifested between the site of the most intense pain, or of the cerebral lesion beyond the area of the motor zone, and the convulsions. Pachymeningitis may, therefore, induce simultaneous convulsions, at first limited to regions of the face and the limbs on the same side, to extend afterwards to the two sides. In like manner, gummatous lesions involving the cortex in the occipital, temporo-sphenoidal, and frontal regions are, in the aggregate, accompanied by convulsions in a number of cases, according to my experience, superior to those in which the motor districts bordering the fissure of Rolando are involved. In 21 autopsies of syphilitic epilepsy the cerebral lesion was located as follows—general, throughout the brain, in 8 cases; the motor zone, 4 cases; temporo-sphenoidal region, 2 cases; occipital region, 3 cases; base of the skull, 4 cases. In 10 of these cases there was atheromatous, or sclerous degeneration of the arteries, twice with aneurisms of the right Sylvian artery, and once of the basilar. In the remaining cases the lesions consisted in gummy tumours on the cortex or in the substance of the hemispheres and ganglionic centres, or in cerebral sclerosis. These instances find their explanation, as given by Ferrier, in the production of convulsions with quite as great readiness by application of the irritation to the sensory areas as to the motor centres. There are yet several cases of epilepsy in which no cerebral lesion can be detected, the medulla and

* "Pathological Illustrations of Brain Function." West Riding Lunatic Asylum Medical Reports. Vol. iv., 1874, p. 50.

sympathetic being then, as I have pointed out, only affected. Their pathogeny is fully accounted for by the essential part which the medulla and sympathetic take in the production of epilepsy, without ascribing it primarily to the cerebral cortex, which acts when irritated, not in an autonomous manner, but by means of a reflex action exerted through the motor centres at the base of the brain and the medulla. On the ground of these assumptions, the latter instances present no singularity, and, whether the explanation be or be not correct, the existence of such examples entirely opposed to the theory of the epileptic zone, exclusively located in the motor centres of the cerebral cortex, is strongly corroborated by Charcot himself and Pitres, who emphatically assert :— "Several cases observed during this year (1878) at the Salpétrière, and which will be soon published, have demonstated to us that the most characteristic symptoms of partial epilepsy may have existed, and have even persisted for several years, without any lesion whatever being detected by our actual means of investigation."*

This explicit and authorised declaration, founded on accurate clinical and pathological inquiries, needs no comment. Let us now see what was the connection between the side of the convulsions and the cephalic pain in the 26 patients with parietal cephalalgia. Eight had the convulsions on the same side of the pain, 11 on the opposite side, and 7 in all the limbs. Two males with pain in the supraorbital region had convulsions on the same side of the pain, 4 other patients on the opposite side, and in 13 others the convulsions were general. Finally, 5 patients with occipital pain had unilateral convulsions. These results, besides the autopsies above cited, do not countenance Charcot's supposition, prompted perhaps by too great an extension of Ferrier's recent discoveries.

A large number of subjects exhibit, prior to their first attack, the aspect of the diathesis, "a muddy pallor and dazed expression," prominently and very properly noted by Buzzard among the pathognomonic signs of neuro-syphilis. This earthy tinge renders itself more conspicuous during the progress of the epileptic malady, and may be extremely marked, with comparatively little amount of other cachectic signs. I have noted it in 42 of the 65 males, while it appeared in 48 of

* "Nouvelle Contribution à l'etude des Localisations Motrices dans l'Ecorce des Hemispheres du Cerveau." "Revue Mensuelle de Médecine et de Chirurgie." Novembre, 1878, p. 814.

the 53 females, 18 of the former and 26 of the latter showing a very dry earthy pallor, without affections in the cutaneous surface to reveal the specfic nature of their malady.

Mental and moral disturbances are more apt, perhaps, than any other premonitory phenomena of syphilitic epilepsy to mislead us, not only as to their specific source, but also as to the impending explosion of the fits. The sudden moral change, or the depression and mental feebleness, as well as the uncontrollable impulses, all precursors of the threatening paroxysm, are often looked upon either as strange eccentricities, or as consequences of the gastric disturbances no less obvious at this stage, particularly if no well-marked constitutional accidents, enduring for a short time, have passed unnoticed by the patient, or if the fits explode during the relapse of syphilis. In cases affording so indefinite data, the criterion to recognise the specific nature of the epilepsy is the singular evolution and disjointed series of paralytic symptoms engrafted on it, and, above all, the beneficial effects of the specific treatment, which gives additional proof of the correctness of the diagnosis.

The question whether epilepsy or insanity might be developed without concomitant constitutional accidents perceivable by the eye—or, more correctly, the relation borne by syphilis to the above affections—is a subject which, after being at first much doubted or denied, has come to the opposite extreme of regarding syphilis among the common causes of epilepsy and certain forms of insanity. Leaving these latter out of discussion, it is notorious that convulsive disorders, the result of syphilis, may occur without sufficient evidence of constitutional accidents to demonstrate their specific nature; but the fact, so far as my experience goes, is infrequent. Should it exist, the peculiar character and unconnected grouping of the paralytic symptoms that usually accompany abrupt convulsive seizure are distinctive features, seldom clustered on any ordinary variety of epilepsy. Furthermore, although syphilitic nervous affections may occur at a very remote period from the date of infection, I have not seen this anomalous neuro-syphilis, if we may so call it, developed at a later period than four years after the undoubted existence of the infecting chancre with consecutive swelling of the inguinal glands, which remained—very often together with the cervical—still enlarged at the irruption of the epileptic malady, not seldom betrayed also by copper-tinted blotches in the skin. But, I must notice that, in all

such instances no anti-syphilitic treatment had ever been followed by the patients, for a proper treatment insufficiently prolonged may bring about the complete disappearance of the constitutional accidents without averting the liability of the patient to be suddenly seized with syphilitic epilepsy, or other nervous disorder, several years after his apparent recovery from syphilis. This class of cases is the commonest, and, without referring to the fact, Charcot describes a very typical example in his lecture on "Partial or Hemiplegic Syphilitic Epilepsy."* It would be easy to demonstrate that several of the examples of neuro-syphilis, and principally of epilepsy, classed under the above anomalous category, are altogether spurious, for they neither exhibit the acknowledged generic features, nor the plain previous existence of syphilis, freely attributed as their source. Not only do we find in genuine syphilitic epilepsy, when closely investigated, real antecedents of syphilis, but also such association of symptoms as belong to their specific origin, and distinguishing them from those of another nature; indeed, the diagnosis is then less difficult than in those hybrid forms, when syphilis and some other agency, such as alcoholism, traumatic injury to the head, lead poisoning, &c., exist in an apparent pathogenetic relationship, that renders it embarrassing to decide the part corresponding to each in the causation of the epileptic malady.

Vertigo, mental depression, and feebleness, with weariness, loss of memory, and a great apathy or disinclination to intellectual work, were symptoms displayed for several weeks, and even months, before the first epileptic paroxysm. Such intellectual disturbances seemed prevalent among patients free from cutaneous constitutional accidents, but who suffered from sore throat, with articular pains, sleeplessness, and very distressing cephalalgia, side by side with an unnatural change in their moral disposition. In females, the premonitory nervous disorders chiefly affected a sensory character much less noted in males. These symptoms have been—rush of blood to the head, coldness and shivering of the extremities, periodical fever, simulating ague; epigastric pain; nausea, with choking sensation in the throat; suppression of breath, with dizziness and singing in the ears; and queer, vague peripheral feelings, in addition to change of character and great irritability.

* Op. cit., Tome ii., p. 346.

Both males and females frequently complained of sleeplessness and obstinate dyspeptic troubles, besides the phenomena just described. Mental confusion or depression, loss of memory, apathy, and change of character, appear noted as premonitory symptoms in 76 cases; 54 males and 42 females; sleeplessness in 43 males and 38 females; and dyspeptic trouble in 46 male and 49 females.

The pathogenetic influences capable of hastening the development of syphilitic epilepsy extend over a wide range, but I shall only refer to those met with in the present cases—namely, an inherited neurotic predisposition, inherited syphilis, alcoholism, traumatic injuries to the head, lead poisoning, and debilitating organic general changes.

That individuals with an inherited neurotic temperament should be in a favourable state to manifest its morbid consequences upon the supervention of the least cause susceptible of operating upon the nervous system is a fact too evident to need demonstration. Such predisposition existed among these patients in three males and one female. The first male, the offspring of an insane mother, had an insane sister; the second had a mother epileptic, who died in convulsions; and the father of the third was an intemperate lunatic, with a sister epileptic. The female's mother and maternal grandmother were insane.

Two of the males, as before noted, became epileptic while affected with secondary syphilis, and a third committed suicide. The remaining male and the female were also prematurely affected, the former ten months, and the latter seven: after infection—tertiary accidents, syphilitic psoriasis, choroiditis, ulcers in the tonsils, condylomatous patches on the tongue, and periostitis, being in both instances plainly developed.

Inherited syphilis has engaged the attention of several competent observers, although the proportion of general nervous disorders which are its outgrowth is yet in great part based on vague conjecture, or on dubious and inconclusive evidence. I cannot discuss now this important point, but confining myself to epilepsy entailed on inherited syphilis, I may assert that I have never seen it appearing after the age of adolescence, and in all instances, whether the fits began in early childhood—as they usually do—or later, the patients suffered in first infancy from specific affections, leaving indelible marks of their existence. Looking at the prevalence of syphilis, one would expect to meet with a large number of

inherited nervous maladies as the effect of its pernicious influence, when we come to inquire into the individuals with unmistakable proofs of the heredito-syphilitic diathesis; but such is not the case.

Thus Hutchinson, in his most valuable and practical work, "On Certain Diseases of the Eye and Ear consequent on Inherited Syphilis," refers to 162 patients with iritis, interstitial keratitis, inflammation of the choroid and retina, amaurosis, deafness, &c., due to inherited venereal taint, and among them there are—

1. Male, aged 19, with double keratitis and epileptic fits, which began at the age of eleven. (Case XCIX., p. 104.)
2. Half-idiot boy, with almost total blindness and white atrophy of the optic nerves. Head large and mis-shapen. Subject to convulsive fits while teething. (Case II., p. 164.)
3. Female, aged 21 months. Iritis, with occlusion of both pupils and entire loss of sight. Hydrocephalic. Had fits while teething. (Case VI., p. 197.)
4. Female, aged 8. Abscess in lachrymal sac. Bygone keratitis. Partial paralysis of right arm. (Case IX., p. 191.)
5. Female, aged 8. Keratitis of right eye. Hydrocephalic and idiotic. (Case LXXVIII., p. 89.)
6. Female, aged 4. Suppuration of lachrymal sac. Hydrocephalus. (Case VIII., p. 190.)

Therefore, out of 162 patients with inherited syphilis only one was epileptic; two others, of whom one was half idiotic, had suffered from convulsive fits while teething; and two more were hydrocephalic, one of them idiotic. Carrying the examination into the family history, noted in the majority of cases, it is further remarked that among those patients free from nervous diseases only one had a living brother liable to fits. The mother of another lost five children, in infancy, of fits; while a female with chronic keratitis and suspicious indications of inherited syphilis, and whose sister was also subject to inflammation of the eyes, had an only child, who, like the brother of another patient, died of convulsions in early infancy. One boy and one girl had, the former a younger sister with convergent squint and oscillations of the eye, and the latter two brothers with strabismus. Finally, one of the brothers, in two other cases, died respectively from brain disease and "water on the brain." In most cases, apart from those just quoted, the patients were not the only victims of the specific disease afflicting their parents, for

when neither still-born nor dying in their first infancy, some of, and often all, the other offspring manifested also evidences of inherited syphilitic taint.

In the interesting "Gulstonian Lectures on Epilepsy," recently delivered by Dr. Gowers, in dealing with the subject of the causation of the disease as evinced in a series of 1,450 cases, he states, in reference to the predisposition of epilepsy by any other morbid heredity than that indicated by the occurrence of its own allies, that "in eight cases the patients were the subjects of well-marked inherited syphilis. In all these cases the attacks had the aspect of idiopathic epilepsy, cases in which there were symptoms suggestive of local brain disease being excluded. In only two of these cases did the attacks begin in infancy. In all the others they commenced towards the end of or after childhood." *

If I lay before the reader these self-speaking forcible data, it is to show that to no exceptional occurrence, or imperfect inquiries, could be attributed the meagre number of seven cases of epilepsy from inherited syphilis I have discovered among 618 patients whose etiology was well known; and, all source of error inherent to the complex subject of morbid heredity was in these instances avoided, since the testimony afforded by the patient's family history was corroborated by the existence of the unmistakable special signs of hereditosyphilitic disease established by Hutchison. I have excluded a few cases from the preceding number because the inherited taint was only presumptive, the parents of the patients admitting their great exposure to the risks of syphilis, without positive primary or constitutional accidents at any time, and, above all, because, nor in infancy or later, the patients themselves suffered even from vanishing symptoms that could have been referable to syphilis, in addition to the absolute absence of any physiognomical, dental, or other peculiarity to indicate that the epileptic disease was remotely dependent upon inherited syphilis.

The following is a summary of the seven cases with epilepsy, due to congenital syphilis :—

Case VII.—Girl, aged 16. Seized with nocturnal fits at the age of 13, on the establishment of menstruation. She has in the day time frequent attacks of *petit mal*, with slight twitchings of the eyelids. Intellectual faculties deficient. She is well developed, but has a very pale earthy complexion, and a marked asymmetry of the face,

* "The Lancet," No. ix., Vol. i, 1880, p. 316.

with protuberant forehead. Her lips are fissured, the palate V shapen, and the teeth stumpy and notchy. This girl's father died with tertiary syphilis, and her two elder brothers, in infancy, from convulsions. She died after a series of nocturnal fits.

Case VIII.—Boy, aged 10. Epileptic, with diurnal fits since the age of 7. Suffered in early infancy from sore mouth, and eruptions over the body. Had interstitial keratitis of left eye, causing slight opaqueness of the cornea. Upper incisors notched and peggy. Is well grown and robust, but his intelligence very low. Mother had syphilis during pregnancy, and has lost two other children a few weeks after birth, both with an eruption over the whole body.

Case IX.—Imbecile boy, aged 14. Epileptic since the age of 5, with *petit mal* and *grand mal.* Has large scars of suppurated glands in the neck. Mouth puckered by fissures; upper incisors very small and notched; head large, with very prominent forehead. Suffered in infancy from otorrhœa, and is very deaf. Though unsteady in his gait, he shows no paralysis, nor arrested development in any of the limbs; and his complexion has a dirty yellowish tinge. The father was severely affected with constitutional syphilis.

Case X.—Girl, aged 13; epileptic, with diurnal fits since the age of 4. Well grown and robust. Head large and asymmetric; bridge of the nose flattened. Upper incisors peggy and serrated at their extremities. Intelligence low. The father suffered from constitutional syphilis, but got well before marriage. Has had three children, two stillborn and the patient.

Case XI.—Girl, aged 15. Epileptic since infancy, with diurnal and nocturnal fits. Imbecile and very impulsive, with ophthalmia and double otorrhœa. The teeth, of a very dark colour, were very peggy, and stood apart. History of parents unknown.

Case XII.—Boy, aged 7. Epileptic since infancy, with diurnal fits. Head very asymmetric; right arm paralyzed and contracted; but is strong and well developed for his age. Right eye hazy from keratitis when three years old. Upper incisors very irregular and serrated. The mother miscarried several times; the patient is the only child born alive; but was very delicate in infancy, and his father died consumptive, with ulcers in the legs and throat.

Case XIII.—Boy, aged 11; idiotic and epileptic since infancy, with frequent diurnal fits. Face flat, and broad lips, with several fissures. Teeth very irregular and stumpy. Enlarged glands of the neck. Psoriasis on the thigh. Hardly able to speak, and extremely mischievous. His father, very intemperate, died with tertiary syphilis. The patient and a very puny young sister, with sore eyes, are, according to the mother's statement, her only living children, five others having been stillborn.

Case XIV.—Idiotic girl, aged 9, with diurnal fits since she was teething. She has a coarse skin, with a dry, dirty yellowish tinge, and is well grown and rather robust. Head large, broad nose, and

fissures at the angle of the mouth. The upper incisors, just showing, are dwarfed and notched, with wide interspaces. Her mother has two other very delicate living children, and has had two still-births. The husband had been affected with syphilis, but underwent a treatment, he thought complete, before marriage.

A glance at the preceding cases shows their two most striking peculiarities: namely, the onset of epilepsy in childhood, and the full growth and even robustness of most of the patients, which indicates that, though capable of deeply injuring the nervous system, heredito-syphilis does not necessarily arrest development. Nor did severe affections of the skin or mucous membranes in early infancy, exist in any of the seven patients. This fact fully agrees with Hutchinson's remarks:—"That heredito-syphilis does not always impede development is not unfrequently seen to be illustrated in patients between fifteen and twenty, who are in every respect well grown. Whenever, however, the infantile symptoms have been extensive and severe the growth is impeded, and often in a very remarkable manner."*

Intemperance and traumatic injuries to the head, associated with syphilis, favour in the highest degree the development of epilepsy in its worst forms, without any prolonged period of incubation. That intemperance alone, without being carried to actual drunkenness, most efficiently helps forward the potency of syphilis to undermine the nervous system, is obviously manifested by several of the cases under consideration. Perhaps the reverse has taken place; but be this as it may, it is nevertheless a fact that epilepsy often occurs as the outgrowth of conjoined syphilis and alcoholism.

Intemperance was noted in 39 males and 28 females, or 67 of the whole 118 cases, and it appeared associated with traumatisms to the skull in four males and one female. Frequent maniacal paroxysms were displayed by patients with traumatisms to the head, whereas those of intemperate antecedents usually exhibited, on the contrary, dullness and abasement with constant insanity.

Eight of the whole patients—five males and three females—had also received a traumatic injury to the head. Two males had a fracture of the left parietal bone, as they suffered from constitutional syphilis; on the remaining cases the injury to the skull happened prior to the primary syphilis.

* Op. cit., p. 214.

Three males and one female, after the attacks had lasted some time, became hemiplegic, with contraction of the arm and hand. In the female, the fits were preceded by a cold sensation, without any spasm, starting from the left great toe to spread up the leg to the trunk, and, without going to the head, descended through the arm to the hand, before consciousness was lost with convulsions chiefly unilateral. She had met with a severe fall on the head, and became epileptic immediately thereafter; but there was no fracture of the skull. She died comatose after several fits. The dura mater in the anterior part of the base of the skull, about the *sella turcica* on the right side, was considerably changed by a diffuse gummatous swelling. The anterior temporal artery, and most of the other branches of the right posterior cerebral artery were extensively altered by sclerous and atheromatous degeneration. The cortex over the gyrus uncinate and the inferior temporal convolution was destroyed by a gummy deposit. A yellow, transparent gelatinous and fibro-caseous mass, the size of a large bean, was also found at the anterior part of the right internal capsule.

One male had the left arm in permanent flexion, with contraction of the fingers, which were very sensitive. Any attempt to stretch them induced *trepidation* of the whole arm, and often a convulsive fit, which, singularly enough, was usually initiated by trembling of the right arm and leg, with involuntary passage of urine. He had a fracture with depression in the right temporo parietal region.

All these patients were maniacal and very dangerous, as illustrated in this case.

Case XV.—A sailor, aged 38, received a severe blow on the head, which made him senseless, producing a depression of the left parietal bone near its anterior lower angle. He soon recovered from the effects of the blow, although showing mental confusion and inability to express himself. At the time of the accident he had a scar of a deep chancre in the glans, with enlargement of the glands in the groin, sores on the tongue and corners of the mouth, a serpiginous ulcer over the left forearm, and a rash over the thighs and scrotum. Five days after the blow, he was seized by the first nocturnal attack, or rather, by three successive fits in the middle of the night, which left him very stupid and sullen, with the right arm paralyzed and contracted. The fits kept in the beginning their nocturnal character, but subsequently they also occurred in the daytime, commencing with shaking of the paralyzed arm, and drawing of the mouth and twitchings of the eyelids in the right side. This patient was subject to the most violent

maniacal paroxysms during the intervals of his fits, and would attack his attendants without any provocation. He improved considerably under the specific treatment, but left the hospital still subject to nocturnal fits, in great fear of being trephined.

Slow lead poisoning acted in conjunction with syphilis to produce epilepsy in two males, who quickly recovered. The first had one attack of colica pictonum, from which he got well under treatment, but soon followed by pain in the joints, and stiffness of the hands, when he became affected with gonorrhœa and a chancre, with enlarged inguinal glands. Four months later, while the preceding symptoms were still present, he had a syphilitic rash over the face, trunk, and arms, ulcers in the tonsils, and cellular indurations in the legs, with most violent cephalalgia. He was then seized with diurnal fits. The second patient had suffered from several attacks of lead colic, when the chancre and painless bubo appeared, followed by a rash in the thighs and scrotum, and, seven months after, by epididymitis, patches and fissures in the tongue, psoriasis palmaris, intense occipital cephalalgia, with articular pains and jerkings in the legs, which had existed prior to the development of the constitutional accidents. The first fit occurred early in the morning, succeeded by three others the same day, accompanied with profound coma and temporary paralysis of the left arm.

The gums displayed in both instances a characteristic blue line, and the patients became very agitated before the outburst of the fits, with bilateral convulsions of a tonic nature and complete loss of consciousness. The patients were seized between the attacks by a sudden jerk of the body, as though they had received an electrical shock. This phenomenon is altogether different from the general convulsive movements of flexion and extension, without loss of consciousness, often observed after fits of a saturnine character, and I have pretty constantly noticed it in epilepsy from lead poisoning. The first patient remained excitedly talking to himself, very much troubled by hallucinations of sight, of the strangest character, after the fits, which, as well as the other symptoms, yielded to a treatment with the binioduret of mercury, iodide of potassium, and sulphur baths.

Reference has been made to a patient who during the convalescence of yellow fever, and while exhibiting secondary symptoms of syphilis, was seized with epilepsy, favoured in its development by the enfeebled condition of the organism.

Similar in nature were three other cases, among males, very much debilitated by ague, when affected with the constitutional accidents, and who thereupon became epileptic. Finally, in a female, protracted lactation was the weakening cause, joined to syphilis in its tertiary stages, for the production of epilepsy, soon followed by furious mania. The child of this woman, whose husband was very intemperate, died of fits at the age of twenty-six months, with hydrocephalus, extremely emaciated and with an eruption over the body.

There is no difference between the fits of syphilitic epilepsy and those acknowledging other etiology. Ivaren and most French authors state that syphilitic epilepsy is generally nocturnal; but the assertion is not sustained by the analysis of these 118 cases, for only 7 patients—2 males and 5 females—had fits nocturnal from the beginning, and which continued so thereafter. It should be, however, noticed that in 21 patients—9 males and 12 females—the convulsions at first diurnal, occurred subsequently by both day and night, but with the diurnal character most preponderant, for which reason, I have never regarded them as nocturnal fits.

In 7 males and 13 females, the fits repeated at a fixed hour, always during the evening, excepting in one female, whose fits recurred daily, at nine o'clock in the morning, and she had secondary syphilis. The largest number of patients—31 males and 18 females—were seized with the first and most of the subsequent fits in the evening; and 17 males and 10 females, early in the morning on getting up. In 19 males and 23 females, the malady began with several successive fits. Finally, 6 males and 8 females, had the first attack at night, but all the following exclusively on arising in the morning.

If we now pass to the nature of the fits in the whole cases, we find that—

5 males and 7 females had *petit mal* alone.
31 males and 17 females, *grand mal* alone.
27 males and 24 females, *petit mal* and *grand mal.*
2 males and 5 females nocturnal attacks.

Fournier says that, *petit mal,* vertigo, sudden irresistible impulses, and cerebral accidents generally, are infinitely rare, if not altogether absent, in *secondary* epilepsy; but I have not so observed it. Of the 16 patients with secondary syphilis six had *petit mal* and *grand mal,* whereas nine exhibited also vertigo, and such cerebral disorders, as already evinced in Cases I and II.

In regard to the age at the beginning of the fits, we have seen that in the four patients with an inherited neurotic predisposition epilepsy began in two of the males at 20, in the third at 19, and in the female at 17, *i.e.*, at the age of puberty.

In the seven cases with heredito-syphilis, the males were seized with epilepsy between infancy and the age of 7, and the females between infancy and the age of 13. This development of the fits during childhood agrees with that shown by the cases of Hutchinson and Gowers.

The 16 patients with epilepsy and secondary syphilis—4 males and 12 females—were of ages ranging from 19 to 31 with the males, and from 21 to 28 with the females. But one of the males, aged 19, belonged also to the category of patients with an inherited neurotic temperament. The remaining 54 males and 37 females became epileptic at ages varying with the former, from 27 to 53 years, and with the latter from 28 to 47 years. To sum up, in cases of inherited neurotic predisposition, or syphilitic taint, epilepsy was developed during childhood, or in the prime of puberty; in cases of secondary syphilis, at ages varying from 19 to 30 years; and in cases of tertiary syphilis, from 27 to 53.

Fournier attaches considerable diagnostic value to the age of the first appearance of epilepsy due to syphilis. Should the initial fit—he asserts—happen at an adult or mature age of 30, 35, 40, or 45 years, it precludes the existence of genuine or essential epilepsy, for this never delays its first accession until adult or mature age, it being an extraordinary or unheard of fact that such kind of fits should commence at the age of thirty or forty years. Therefore, under these circumstances, in nine out of ten cases, when the patient has enjoyed apparently good health prior to the first seizure, the probabilities are that the epilepsy arises from a syphilitic source.*

My enquiries do not confirm these absolute views of the distinguished French syphilographer. The foregoing analysis shows that 21 per cent. of the whole cases with a neurotic predisposition, or congenital syphilis, had their seizures at ages under 20, and, consequently, before complete manhood. But a more extensive series of 618 cases, of all kinds, in which the etiology was well known, manifests that, exclusive of the syphilitic patients here reckoned, there were 164, or 26·5 per cent. of the whole patients, who became affected with

* "De l'Epilepsie Syphilitique Tertiaire." Paris, 1860, pp. 4 and 15.

epilepsy after the age of 25 years, from various exciting causes other than syphilis. These results are fully corroborated by those of Gowers, who in regard to the influence of age on the occurrence of epilepsy in 1,450 cases states that—"Just three-quarters (75 per cent.) of the cases commenced under twenty years;" and this calculation is also exclusive of syphilitic cases, as distinctly established by the further assertion that—"No facts which have come under my notice suggest that acquired syphilis is a cause of idiopathic epilepsy."* I confess that this result is rather remarkable, since nothing indicates that Gowers has any reason to exclude syphilis from the general organic or traumatic influences capable of causing the disease, inasmuch as he takes into account blows and falls on the head, chronic alcoholism, lead poisoning, scarlet fever, &c., which operate entirely like syphilis in producing epilepsy.

The age of the patient as a point of diagnosis in syphilitic nervous affections has all the absolute importance attached to it by Fournier, if instead of epilepsy we refer especially to hemiplegia, for then, it may be stated with little hesitation, as Buzzard very properly says—"That, putting aside cases of injury, hemiplegia, or paraplegia occurring in a person between twenty and forty-five years of age, which is not associated with Bright's disease, nor due to embolism (from disease of the cardiac valves), is, in at least nineteen cases out of twenty, the result of syphilis."†

A comparative study of the statistics published by various authors, and my own researches, demonstrates that the invasion of epilepsy gradually increases up to adult age, to decrease thereafter, in equally rapid proportion in the two sexes. The proportion in adult age does not fall off in any remarkable degree from that of adolescence, because it is beyond the age of puberty that intemperance, syphilis, and traumatic injuries to the head concur most efficiently to rise the number, the first-mentioned of these causes contributing, among lower and higher classes, to swell in a considerable manner the total of adults and old subjects affected with epilepsy. But the onset of epilepsy at adult or mature age is by no means almost exclusively dependent on syphilis, as Fournier supposes, because, apart from it, larger etiological shares belong to intemperance and to traumatisms to the

* "Lancet," No. ix., Vol. i., 1880, p. 317, and No. x., p. 355.

† "Clinical Aspects of Syphilitic Nervous Affections." 1874, p. 11.

head, or to the several remaining exciting causes of epilepsy. On thus rating the frequency of the association of syphilis to epilepsy developed at mature age, I do not pretend to deny it, but to demonstrate how very often its sudden accession, after manhood, acknowledges a different etiology from syphilis.

Having already described the symptoms that in several instances indicated the imminence of the epileptic malady, I will now consider those of the attacks. Several of the patients experienced feelings of different kinds as the *aura* of their fits. In 9 males and 6 females a tingling or creeping sensation, accompanied by contraction or twitching in the muscles of the face or neck, indicated the commencement of their attacks. The *aura* started from the limbs in 28 males and 35 females, and its origin is noted as follows :— From the arms, in 9 males (3 from right arm, 6 from left) and 11 females (4 from right arm and 7 from left). From both arms, in 2 males and 3 females. From the arms and face, in 3 males (1 right side, 2 left) and 4 females, all in the left side. From the arms and legs, 5 males (1 right side, 4 left) and 7 females (5 right side and 2 left). From the legs, 3 males (2 right side, 1 left) and 4 females (1 right side, 3 left). Trembling of right limbs with involuntary passage of urine existed in one male.

One female, previously cited, experienced a cold sensation, without any cramp, starting from the left great toe to spread up the leg to the trunk, and, without passing to the head, descend down the arm. Singing in the ears was complained of by 13 males and 17 females. One male felt a very violent pain in the stomach at the approach of the fit. In 3 females the pain was seated twice in the right ovarian region and once in the left, accompanied in the latter instance by shivering of the whole body at the beginning of the attack, which in 1 male was marked by a crawling disagreeable sensation ascending slowly from the right groin to the head.

Another male had a very strange feeling of numbness in the tongue and throat, with twitching of the eyelids and lips. In 1 male and 1 female the *aura* consisted in a choking sensation, with a large amount of flatulence raised from the stomach at the very inception of the fit. Finally, in 1 female the initial symptom was a considerable secretion of thick transparent saliva that dribbled from the mouth.

When the *aura* started from one or both arms, it com-

menced in the forefinger in 3 cases (1 male, 2 females); in the middle finger, 5 cases (2 males, 3 females); in one female in the two last fingers, in another in the little finger; and in all the fingers in 10 cases (4 males and 6 females). In the back of the hand, in 4 cases (3 males, 1 female). In the wrist, in 6 cases (2 males and 4 females). In the forearm, in 3 cases (2 males and 1 female). If the arm and leg were seized, the *aura* began in the whole hand and foot.

When the leg was the seat of the *aura*, it commenced in the great toe in 2 males and 1 female; in all the toes in 1 female; and in the dorsum of the foot in 2 females. In the calf of the leg in 1 male.

Consciousness was not entirely lost during the attack in 8 males and 5 females of those with a motor *aura* starting from the limbs; and, in every case either the arm or leg, or both, remained temporarily paralyzed after the fit. All the other patients had complete loss of consciousness during the fit, and in one female, her attacks of vertiginous *petit mal*, with slight twitching of the lips and eyelids, were followed by unconsciousness lasting for several hours, during which she seemed in a state of somnambulism.

The initial cry was only observed in the male who committed suicide, and in two females—one with inherited syphilis and the other with secondary accidents. Biting of the tongue during the fit occurred in 29 males and 32 females. Involuntary passage of urine, in 17 males and 26 females; not only urine but fœces being also passed, while in the attack, by 3 other males and 2 females.

It is commonly stated that the convulsions in syphilitic epilepsy are seldom bilateral, but I have not observed it so. Thus in 118 patients the convulsions were: equally strong in the four limbs in 23 cases; general, but with greater violence in the limbs of one side, in 53 cases; and decidedly unilateral, or limited to the arm and the head, in 29 cases. In 12 cases, as before noted, there was *petit mal* with slight convulsions in the muscles of the face and in the pupils. Therefore, I should think it more correct to state that: in syphilitic epilepsy, general convulsions, but with greater intensity in one or the two limbs of one side, exist oftener than the unilateral or partial convulsions, no great difference existing as to the frequency of the two latter separately.

Syphilitic epilepsy is commonly attended with hemiplegia, or local paralysis, of a transient or persistent character. This accident displays in its occurrence and relationship to

the other symptoms a sort of disjointed connection, which is a pathognomonic sign of syphilitic paralysis.

Permanent paralysis occurred in 38 males and 26 females. Its incursion took place after the first attack in 11 males and 8 females, and the nature of the paralysis was as follows:—

	M.	F.
Paralysis of third nerve (2 males and 1 female with optic neuritis)	7	4
Paralysis of sixth nerve (1 male with optic neuritis)	3	4
Facial paralysis	3	1
Right hemiplegia	2	
Right hemiplegia and paralysis of third nerve, with optic neuritis		1
Right hemiplegia and facial paralysis	1	
Right hemiplegia, paralysis of third and sixth nerves, with optic neuritis	1	
Right hemiplegia and aphasia (1 male with optic neuritis)	2	1
Left hemiplegia (in 2 males and 1 female with optic neuritis, and in 1 male with contraction of the hand)	5	3
Left hemiplegia, and paralysis of right third nerve, with optic neuritis in all but the female	3	1
Left hemiplegia and facial paralysis	2	1
Paralysis of right arm (in 2 males with aphasia and in 1 with choroiditis)	3	1
Paralysis of right arm and both legs		1
Paralysis of left arm (in 1 male with contraction)	2	3
Paralysis of one leg (in the males of the left, in the female of the right)	2	1
Paraplegia	2	4

In one male both arms were paralyzed with atrophy of all the muscles supplied by the brachial plexus. He had also ptosis and external strabismus, without optic neuritis, on the right side, and violent pain over the right side of the head and face. He displayed no other constitutional symptoms than epidymitis in the left testicle, with enlargement of the inguinal glands, and copper-coloured spots over the body and thighs. This patient, who was also seen by Professor Boeck,

of Christiania, and Dr. F. J. Bumstead, had reported very little benefit from the specific treatment, when I lost sight of him.

Aphasia alone existed in 9 males and 6 females, but in 6 males and 4 females it was of a transient character, lasting only a short time after the fits. Lastly, one of the females had aphonia with dyspnœa, for several hours after her fits.

All the above patients had *grand mal*, excepting three males and two females, who had vertiginous fits of *petit mal*, with slight convulsions in the face. These five cases exhibited monoplegia; in two males the right arm was paralysed, in one with aphasia, and in the other with choroiditis; the third male and the two females presented paralysis of the left arm.

Sight was affected, as already noted, in several of the cases with paralysis; but in 16 males and 10 females, double optic neuritis existed without any paralytic symptoms, and, very often, as it has been particularly pointed out by Hughlings-Jackson, without impairment of vision at the time it was discovered. This condition has been present, not only when the symptoms plainly evinced a syphilitic deposit pressing on the optic nerves, but also when there were no signs of such a cause for the consecutive atrophy of the optic discs. I have already spoken of syphilitic epilepsy with no remarkable external evidences of the diathesis, and it is in these very cases in which we are most likely to meet with optic neuritis associated with pain in the head, and in some instances with paralysis of the third nerve, or of the sixth. I have met with such a condition in 10 males and 7 females, the following being one of those not uncommon instances in which optic neuritis may progress unnoticed, until it reaches its extreme stages with irremediable loss of sight.

Case XVI.—Female, aged 28. Had lost her husband from constitutional syphilis and rapid consumption. Three years after his death, she began to feel pains in the chest, supposed to be rheumatic, and which were soon followed by the most excruciating pain in the head, with vomiting, great dizziness, and hallucinations of sight. She saw balls of fire dropping all the time and bursting into brilliant sparks, or birds entering through the chimney to fly around her room, or the most extravagant and grotesque figures, without exhibiting, however, any mental aberration. She was also seized with vertiginous attacks, in which she would lose consciousness and fall, with slight twitchings in the right arm and oscillations of the eyes. She had no warning of these fits, frequently repeating through the day, and which had been preceded by the above pain in the chest, and imperfect sight in the right eye. She had suffered from leucorrhœa and

sorethroat, but had no exanthem, and the inguinal glands were enlarged.

The patient's condition had become extremely serious when I saw her, on account of the obstinate vomiting and the unremitting violent cephalalgia. Having known the history of the husband's case, I did not hesitate to ascribe the symptoms to syphilis. Ophthalmoscopic examination showed the optic discs covered by a whitish swelling, striated on its margin, the arteries being minute and more conspicuous in the left eye than in the right, where they appeared almost concealed in the ill-defined swelling, which was also whiter than in the other disc. The eyes had a vague look, with the pupils dilated, and sluggish to contract before a light. The patient could not distinguish any letters close to her eyes, and on walking was continually hurting herself against the objects. This made her gait unsteady, but there was no paralysis, nor any trouble of sensibility. A specific treatment, with very large doses of iodide of potassium and mercurial inunctions, arrested the symptoms and the fits, without any improvement in her sight. Nor did hypodermic injections of strychnia around the eyes prove more successful. The specific treatment continued for over two years, has prevented the recurrence of the fits, but the amaurosis is complete, from white atrophy of both optic discs.

Instead of optic neuritis, 7 males and 4 females, exhibited choroiditis and retinitis in conjunction with their fits. All, but one male, recovered perfect sight by the specific treatment. Two of the males and three females had secondary syphilis, and one of the latter presented double iritis. The fourth female, aged 27, pretended to be tainted with inherited syphilis, but without any physiognomical sign thereof. She was subject since infancy to *petit mal*, which continued alone until the age of 20, when the convulsive fits began, preceded by pain in the right side of the body. Her mother was phthisical, and she had ulcers in the throat and at the corners of the mouth, with copper-tinted blotches on the arms and trunk, and severe pains in the temples and vertex. She was also troubled with night-blindness. Ophthalmoscopic examination showed the optic disc in the right eye with indistinct borders, vessels thin, and numerous minute spots of pigmentary retinitis. In the left eye, the nerve appeared very indistinct in outline; patches of exudation above and below it, and along the turgid retinal vessels. Spots of pigmentary retinitis at periphery of fundus. According to Liebreich, idiocy usually accompanies pigmentary retinitis, which is, besides, peculiar to offspring of consanguineous marriage. Neither circumstance was observed in this instance, nor the heredi-

tary taint, admitted by Gräfe as a constant etiological element of the affection.

Mental disorders, as previously asserted, may be the forerunners, but more commonly they are the sequel, of the attacks of syphilitic epilepsy, which may again assume the larvated or mental form. One of the striking singularities of these insane cases, particularly if they arise from syphilis conjointly with alcoholism or traumatic injuries to the head, is the great propensity of the patients to unprovoked violence. In fact, we may distinctly observe among such class of epileptics, the characteristic belonging to all genuine forms of epilepsy, to wit: that the uncontrollable impulses and evil acts, though sudden in their explosion, spring out nevertheless from a pre-existing unsound mental state that does not end on the perpetration of the violent misdeed. Real insanity was noticed in 37 males and 28 females of the whole cases; 8 males and 11 females were melancholic; dementia existed in 29 males and 14 females, of whom 18 males and 7 females exhibited symptoms entirely like general paralysis, and of them, only 7 males and 3 females recovered by the specific treatment. Of the remaining, 2 males died in convulsions, and another male and 1 female from exhaustion, pulmonary tuberculosis having been also developed in the four cases. The other 11 patients, of whom 9 were inveterate drunkards, continued less subject to fits, but depressed and demented. Retraction of the wrists and hands, or of the masseter and sterno-cleido-mastoid, with grinding of the teeth, existed in the majority of cases; few, however, exhibited well-marked quivering of the lips, but in all the patella tendon reflex was very pronounced. In 1 male, the right great toe was frequently drawn up, and the leg seized with *trepidation.*

Paralysis of the third, or sixth nerve, was remarked in 5 males and 2 females. Inequality of the pupils manifested itself in all the patients. Those with melancholic depression often, but not uniformly, presented the right pupil contracted and the left dilated, whereas the reverse similarly occurred in those with maniacal symptoms and elated. These investigations, extending with the same indecisive results over other general paretics, were made to test Austin's assertion on the subject.

General sensibility did not seem much affected in these cases, although in every one there was unsteadiness in walking, diminished grasping power of the hands, and hesitating articulation. The temperature was observed to rise before

the convulsive paroxysms; and, in 1 male and 3 females, there was a periodical fever, of tertian character, which promptly yielded to the antisyphilitic treatment. I should add, that this singular symptom has been further noticed in 2 males and 6 females, which seems to indicate its prevalence among the latter, it being no less worthy of remark that these 8 patients, excepting one male, had secondary syphilis. Lastly, 1 male and 2 females showed a religious monomania; all had the most ravenous appetite, and were very noisy and restless at night; while the impulsive homicidal propensities of those who had been of intemperate habits, rendered them extremely dangerous.

The post-mortem examinations in the four fatal cases, disclosed extensive lesions and disintegration of the arterial capillaries. In two cases the inner layer of the dura mater, over the right parietal lobe, was covered by thick extravasations of blood in different stages of decomposition. In two other instances, there were respectively in the left anterior part of the centrum ovale, near the cortex, and in the cerebellar peduncles, circumscribed gelatinous-looking patches, containing small caseous nodules, in addition to the sclerosed state of the cerebral tissue previously described. As to the nerve cells, they presented a general, fatty, colloid and pigmentary degeneration, the two latter remarkable in the corpora striata and optic thalami. In all the cases the lungs showed tuberculous deposits in different stages. In two instances the liver lardaceous, exhibited several puckered cicatrices of gummata. The kidneys were fatty in three cases, and in one the spleen, very much enlarged and hardened, showed traces of former perisplenitis on its thickened capsules.

Hallucinations of sight and hearing were the most prevalent among the 38 insane patients; but their respective frequency could not be properly estimated on account of their common association. They were generally of a terrifying nature, the patients seeing red, fiery, or bloody objects, or hearing piercing noises and voices threatening and haunting them. In some instances the hallucinations of sight assumed a spiritual and religious character. One of the females thought her food was poisoned, and another complained constantly of a very fœtid smell, and would at times strip off her clothes to rid herself of it.

The total deaths in the whole cases amount to 21—13 males and 8 females. Of the former 5 died from meningitis, in convulsions, 1 committed suicide, 1 died from diarrhœa and exhaustion, 3 from paralytic seizures and coma, and 3 from

pulmonary tuberculosis. The females died—3 from meningitis and convulsions, 1 from double pneumonia, 2 from seizures rendering them paralysed and speechless before falling, like the males, into a comatose condition ; and 2 from phthisis.

The result of the treatment was—complete recovery in 21 males and 23 females; 11 males and 5 females had a recurrence of the fits after having variously remained, from eight to fourteen months, without them. In 8 males and 7 females, who were very cachectic, the treatment did not produce any considerable change, and lastly, the final issue of the case was unknown in 13 males and 10 females, who were benefited by the treatment, and lost sight of before being completely cured.

I shall not dwell at any length on the details of treatment. In secondary cases mercury was resorted to, but using it from the beginning in conjunction with the iodide of potassium, as I always practice with cases of neuro-syphilis. In tertiary cases, large doses of iodide of potassium—from thirty grains to as much as two drachms, according to the gravity of the affection, were given three times a day, accompanied by mercurial inunctions, or the use of the calomel bath. I frequently prescribe Gibert's syrup, which contains a mixture of binioduret of mercury and iodide of potassium, very well borne by the stomach and not apt to produce salivation quickly. I administer the iodide of potassium, as generally practised in America, before or with the patient's meals, preferring to all preparations the sugar-coated pills, and generally using the dragées of Foucher, or of Garnier-Lamoureux. Under this form, the salt, as it needs to be, can be taken as food with every meal, free from any bad taste, and the amount required by the patient can also be easily and surely regulated. I do not remember that the symptoms of iodism have been hastened, or have persisted intensified, by the administration, in this way, of the large doses of iodide of potassium required to arrest from the beginning the untoward march of the disease. Such symptoms, on the contrary, diminish and wear off, especially if the patient is kept under a full meat diet, and drinks claret with his meals, which, in addition to fresh air, are important in the treatment.

Finally, trephining has been successfully employed by several English and American surgeons to remove the syphilitic cranial lesions ; but in no case of syphilitic epilepsy have I had necessity to recur to this operation, which I should have no hesitation to employ when duly indicated.

The Border-Land Between Physiology and Psychology.—Singular Judgment. From the Rev. W. G. Davies, B.D., Chaplain of The Joint-Counties Asylum, Abergavenny.

That there are two methods by which to approach the study of mind—the one inward and reflective, the other outward and transitive, including more especially the anatomy and physiology of the brain and nervous system—is by high authorities, even in physical and biological science, now generally admitted.

It is necessary, says Dr. J. Crichton Brown, in the address published in the October number of this Journal for 1878, that we should know the intimate structure of the brain and the pathological changes to which its tissues are liable; but we cannot rest in this knowledge, for to essay to understand mental processes by the microscopic appearances of dead brain-cells is infinitely more absurd than it would be to endeavour to explain a summersault by the aspects of an ultimate sarcous element, the distance between neurility and thought being vastly greater than between contractility and athletic feat.

Mr. Romanes, in a lecture on "Animal Intelligence," delivered at the British Association, held in Dublin, and published in the "Nineteenth Century" for October, 1878, takes a similar view of the question—

That psychical phenomena are intimately associated with physical phenomena is a fact that does not admit of one moment's dispute; but concerning the nature of this association, Science must declare, not merely that it is at present unknown, but that, so far as she is able to discern, it must for ever remain unknowable.

In a fine article, entitled "Virchow and Evolution," in the same periodical for November, 1878, Professor Tyndall also declares—

That the brain of man, the organ of reason and sense, without which he can neither think nor feel, is also an assemblage of molecules acting and reacting according to law. Here, however, the methods pursued in mechanical science come to an end; and if asked to deduce from the physical interaction of the brain molecules the least of the phenomena of sensation and thought, we must acknowledge our helplessness. The association of both with the matter of the brain may be as certain as the association of light with the rising of the sun; but whereas in the latter case we have unbroken mechanical connexion between the sun and our organs, in the former case logical continuity

disappears. Between molecular mechanics and consciousness is interposed a fissure over which the ladder of physical reasoning is incompetent to carry us. We must, therefore, accept the observed association as an empirical fact, without being able to bring it under the yoke of *à priori* deduction.

In these quotations we have the fact fully conceded that mental operations do not admit of being expressed in terms of molecular movement in the brain; they must be described through their attributes as discovered by pure psychological observation. No statement concerning a mental process can be verified except by putting the mind to perform that process. I cannot know what judgment is except by judging, reason except by reasoning, seeing except by seeing; for a man born blind can have no intuitive knowledge of light and colours. The two factors in mental science—the psychological and the physiological, the one relating to the mental function, its characteristics and laws, the other to the organ, its structure and movements—must evidently, then, be studied by two distinct methods of observation. But when the facts, in either department, are thus ascertained, their mutual comparison becomes imperative, and much light will manifestly be gained by the act.

The subject treated of in this paper, although one relating to man's knowing at its very threshold, knowing in its first association with the molecular mechanism of the brain, nevertheless, involves the psychological method. Before entering, however, upon this examination, it seems necessary that I should make a few remarks both on the peculiar nature of knowing and on the method which has to be pursued in this inquiry.

Knowing is, in a certain sense, the beginning, the *principium.* It comes between us, regarded as intelligent beings, and all else. Neither mind nor matter exist for us, except as revealed by knowing. We having nothing more ultimate, nothing more trustworthy, than the authority of this revealing principle for the existence of anything, whether of self or of not-self. The mind as known, matter as known, everything as known, to these we, as intelligent beings, are completely shut up; and the great problem which philosophy has to solve is of the following nature:—In what respects, and to what extent, is knowing trustworthy in its revealings—in other words, proof against scepticism? Physiologists teach—and, no doubt, rightly—that knowing, in all its grades, involves the brain and its molecular movements; but what is their

authority for this teaching? Knowing, knowing alone. In ultimate analysis, knowing is for us intelligent beings the starting point; but then, when any declaration of knowing is criticism-proof, that declaration must be accepted as the truth. For instance, if it is a clear revealing of knowing that, in the Order of Evolution, the brain and nervous system is presupposed by all knowing, and if this revealing can be shown to be superior to scepticism, then this declaration is a truth which cannot be disputed. So far as to the peculiar character of knowing.*

As to the method which psychological observation involves, I take the following view:—Affecting closely the question which we have here to examine, primary or singular judgment is the law that the more obvious and opportune becomes organised in the mind, acted upon, as it is, by its surroundings, prior to the less obvious and inopportune. Thus, general judgment and deduction have, in explicit growth, for ages preceded singular judgment and induction. The cause of this is to be sought in the fact that the sciences at first accessible to human research were those that imply the deductive method—for example, arithmetic and geometry—sciences in which the first principles are so simple and obvious, self-evident as they have been called, that there is involved in the apprehension of them no disclosing of that form of thought which the method of acquiring first principles in science of a later date brings to light.

Since deductive reasoning was objectively realised much before inductive, it follows that the logic of general judgment, of that which supplies deduction with its premises, must also have acquired advanced growth at a time when the logic of singular judgment, of that which is concerned with a delicate and microscopic examination of real unit objects, was in its infancy.

There was, indeed, in early times, much to draw the mind in the direction of resemblance and analogy. It was mainly under the influence of this attraction that language acquired full growth, which, at first embracing signs only of obvious and simple objects, had, by the aid of analogy, out of the root words in use, to adapt these so as to designate mental and supersensuous objects. The induction of the ancients was also mainly spontaneous generalization from experience

* The reader may find this question treated at some length by the author, in an article styled "The Veracity of Consciousness," in "Mind," January, 1877.

begotten by events that uniformly run in the same groove. It was only when earnest inquirers, bent on seeking the truth, had acquired a distaste for inaccurate observation and fanciful generalization that the need of judgment of a rigidly discriminating caste became fully recognised.

Every science includes perceptions, conceptions, inductions, and deductions, in all which there is a subjective element with an objective relation or reference. The subjective is the invariable, the objective the variable, element in science. If we regard this as the form, that as the matter, we shall then be able to state that the form is that in which the sciences resemble each other, the matter that in which they differ from each other.

Now, the form of thought is the mind's method of discerning and constructing scientific truth; and it seems to me that as soon as inquiry commences to sail beyond the sight of its native shore of spontaneity, inquiry must direct its course by following some tendency or embodiment of form of which, in its coasting voyages, it has already gained some knowledge. This tendency, at the outset, and for a long time afterwards, manifests itself, to use a chemical phrase, in the engaged state, the form being confused with the matter, without a prominent manifestation of which matter there is no display of the form. In such a state, however, the combination of matter and form—for instance, Euclid's "Elements of Geometry"—constitute one of the real helps of Bacon, an applied logic, without assistance from which the mind would in vain strive to grope its way out of darkness into light.

Futile is the attempt, then, to find out what scientific mental processes are, unless the mind have previously produced objective results which embody these processes, and unless, to take a physiological view of the question, it have so wrought that through the law of repetition, acting on the nutritive system, the brain molecules have been so organized as to be able to carry on their movements with prompt facility and vigour. There could be no deductive logic, for example, till the easier sciences, which involve deductive reasoning, had as an abridged embodiment of its form, or as an enthymeme, come into existence. In like manner, there can be no complete inductive logic, till some one succeeds, by the filtration of its form, to separate the same from the abundant scientific wealth that has now been amassed. The uniform process is lurking in the multiform matter, and

waits complete finding; but—and this is the fact to which I invite special attention—until the brain has become sufficiently organized to give objective realization to a mental process, the reflective observer, who seeks to be intimately acquainted with such process, has but a *tabula-rasa* to examine, even when, in simple cases, the process acts fully in a spontaneous or implicit manner. The main reason, therefore, why singular judgment, not to mention Induction, has not yet attained its complete logical development is owing to the fact that its formal development cannot precede, but must follow in the wake of the crude or applied logic which contains it.

I now proceed in my attempt to mark the place held, in the Order of Evolution, by the Singular, in Judgment or Belief.

The objects by which we are compassed are single objects, single cows and sheep, single trees and houses, single stars by night. There is, in Nature, no such thing as a general object.

It must be acknowledged, says Reid, that the objects we perceive are individuals. Every object of sense, of memory, of consciousness, is an individual object. All the good things we enjoy or desire, and all the evils we feel or fear must come from individuals; and I think we may venture to say that every creature which God has made, in the heaven above, in the earth beneath, or in the water under the earth, is an individual. "This," observes Hamilton, "Boethius has well expressed—*Omne quod est, eo quod est, singulare est.*"*

As the multitude of common nouns, says Cardinal Newman, have orginally been singular, it is not surprising that many of them should so remain still in the apprehension of particular individuals. In the proposition, "Sugar is sweet," the predicate is a common noun as used by those who have compared sugar in their thoughts with honey or glycerine; but may be the only distinctively sweet thing in the experience of a child, and may be used by him as a noun singular.—The terms of a proposition, he remarks, do or do not stand for *things*. If they do, then they are singular terms, for all things that are, are units.†

Professor Jevons, a great champion on behalf of the supremacy of the Law of Similarity in the realm of thought, yet points out that—

As the comprehension of general notions requires higher intellect than the apprehension of singular and concrete things, it seems

* "Hamilton's Reid," p. 389.

† "Grammar of Assent," p. 11, and p. 22.

natural that names should, at first, denote individual objects, and should afterwards be extended to classes. We have a glimpse of this process in the case of the Australian natives, who had been accustomed to call a dog Cadli, but when horses were first introduced into the country they adopted this name as the nearest description of a horse.*

Here we have a concurrence of testimony pointing to the fact that the multitude of common nouns have, as Cardinal Newman says, orginally been singular; and this singular element, be it observed, is retained even when terms become general; for since they stand for things they must necessarily stand for units.

The Law of Contiguity, in the doctrine of Mental Association, by which different mental modes are associated together; Division, in Logic, which is accomplished by attending to differences; the connotation of names, which relates to the embracing by a whole, the whole of Intension, of parts, as we shall see, which differ from each other; thought expressing itself without words, in the case of intelligent brutes, deaf mutes, and idiots, as shown by Mr. Romanes, in the lecture already referred to—afford so many indications that as much prominence is due to the cognition of the Singular as to that of the General, although, indeed, as Professor Jevons states, the comprehension of general notions requires higher intellect than the apprehension of singular and concrete things, that is, in the Order of Evolution, the General is evolved out of the Singular.

Mr. Romanes, in the lecture referred to above, observes that—

> Among idiots, as among animals, the faculty of forming special concrete ideas attains a comparatively high degree of development. But as regards the power of forming abstract ideas, which depend on the logic of signs, it is only among the very highest class of idiots that any such power is apparent at all; and even here, it is astonishing in how very small a degree this power is exhibited.

And of deaf mutes, before they have been educated, he says—

> They think in the most concrete forms, as shown by their telling us that so long as they were uneducated, they always thought in pictures. Moreover, that they cannot attain to ideas of even the lowest degree of abstraction, is shown by the fact that in no one instance have we been able to find evidence of a deaf mute who, prior to education, had evolved for himself any form of supernaturalism.

* "Elementary Lessons in Logic," chapter vi., p. 47.

From a careful analysis of the Order of Evolution in which mental processes are connected with each other, this is precisely what I should expect to find in the case of deaf mutes and others denied the average complement of mental powers; still I am disposed to think that to make the power of evolving any form of supernaturalism the test of a person's ability to form any abstract notion; is going too far. I believe that an intelligent deaf mute is capable, in simple instances, of forming typical notions, in other words, of calling up a mental image, say of an elephant which he has seen, that shall represent to his mind the whole race of elephants. While on this subject, I would also refer to the interesting articles on "Thought without Words," contributed by Dr. Ireland to this Journal, especially where he describes thought as expressing itself in action, which is manifestly the sphere of the concrete and singular. I would add that the achievements of the human hand, both in the Fine Arts and the Industrial, open up to contemplation a large field in which singular thought is greatly predominant; and were the human race deprived of the Hand, who can estimate the amount of decadence that would follow?

Now, to come into closer contact with the subject under examination, namely, Singular Judgment, notice, in the first place, that the following analysis has to deal with mental processes that already exist as objectively realised, and did they not, could not, as we have seen above, be made objects of reflective research. Notions involving sensation, perception, conception, reasoning, and other operations, are mingled together in the mind of the reflective observer. These, when objectively realized, or existing in the engaged state, have to be analyzed and nicely discriminated; and logicians have done much in effecting this end. In proportion as this analysis is successfully accomplished, the logical order in which mental processes arise comes into view. It is with this order, which, indeed, is the Order of Evolution, that I am principally concerned in this contribution; and it is my intention to show that, in this order, every general judgment supposes singular judgments. If space permitted, I might also proceed to show that both Induction and Syllogizing must, as the condition of being general, be, at the root, singular processes of thought, thus challenging, on behalf of the Singular, an importance which has not hitherto been awarded to it.

In the Order of Evolution, consciousness, in its origin, is

presentative. What becomes obvious to a reflective observer, after a little practice, is the fact that whatever is revealed to us in intuition is so revealed as a whole or group, possessing an individual or unit character, as "a (one) house," "a tree," "a ship." This is mere presentation in sense. In the Order of Evolution, there is nothing for us, intelligent beings, prior to presentations, either in sense or other inlet to the Mind. In presentations, and these alone, are we placed in primary relation with things that are.

The mental process next in order to presentation is Singular Perception or Judgment, and this is here set forth under the following heads:—

A Presentation is positively judged to be existent.

The intellectual act here concerned I call Singular Perception, which is, with its implications in Sense or Presentation, the radical process of intellect. Singular Perception, among other attributes which shall be enumerated in order, judges an object to be possessed of existence. Concrete, individual, unit, existence, is, of course, first apprehended, for it is on this condition alone, as we shall see below, that common existence is capable of being cognized.

I fail to see that Perception and Judgment or Belief are separate processes; or that there is any act of intellect corresponding to the Simple Apprehension set down in so many manuals of Logic, and said to be the origin of terms. When I perceive, I judge or exercise Belief; and Belief can only be expressed in a proposition or asserting sentence. Hamilton, speaking of Reid, says—"He has the merit among modern philosophers of first approximating to the recognition of judgment as an element or condition of consciousness in general."* Reid, indeed, was strongly impressed with the fact that Belief—Judgment—is an essential element of all the leading operations of the mind—

> For a man, he says, cannot be conscious of his own thoughts without believing that he thinks. He cannot perceive an object of sense without believing that it exists. He cannot distinctly remember a past event without believing that it did exist.†

Reid thoroughly dissents from Locke's position that knowledge results from the perception of the agreement or dis-

* "Hamilton's Reid," pp. 878, note, and 934.
† *Ibid,* p. 327.

agreement of our ideas. For how can these ideas be realized or known without Belief or Judgment? Then as to terms (*termini*), these imply the Proposition, that is, Judgment expressed in words.

I. Statement.—*A Presentation is positively judged or affirmed to exist as a unit Whole.*

Let it be noticed that the Proposition invariably has, in the Subject, the name of a whole or what is understood as its equivalent, as "The Good are wise." This whole is styled the Whole of Intension, of which, before we conclude, we shall have more to say.

II. Statement.—*The Whole is differentially judged to be non-identical with other wholes.*

In Singular Perception, we exert not only a positive or apprehending, but also a differentiating or discriminating judgment. We assert that this whole is not that and the other whole. The functions of affirming and denying imply each other. There could be no affirming of the positive existence of objects, unless we could clearly see that they stood quite aloof in their oneness from other objects. When a large number of things are known to exist as severally one, it must also be known that they exist as many, that is, as non-identical with each other. Were there no cognition of difference, there could be no approach to thought, of the apprehension of this and that, this and the rest. For differentiation, denying, stands, as much as positive apprehension, affirming, at the root of all intellectual effort.

III. Statement.—*The Whole is positively judged to be possessed of parts or qualities.*

When the whole is attended to, or carefully judged, it is, as far as is practicable, analysed into its several parts or qualities; and when these are singled out, there are before the mind two aspects in mutual relation. When the Whole is named, as "well," and one of its qualities is also named as "deep," and the whole and the quality is considered in this relation, the latter is expressed by the proposition, "The Well is deep," the purport of which proposition is that the whole "Well" is judged to be possessed of the quality "deep."

IV. Statement.—*The Whole is differentially judged to be possessed of qualities that are mutually non-identical: the attribute of existence and of time being, however, in one respect, an exception.*

The Whole here named is the Whole of Intension, and one of its peculiarities is the fact that the qualities of which it is composed are distinct from each other, both in number and nature. If the Whole be expressed by A, and the qualities by *b c d e*, then we perceive that in the Whole (A=*b c d e*), A=*b*, and A=*c*, &c., are mutually non-identical, consequently cannot be affirmed of each other.

But the attribute of existence and of time, in so far as the several qualities involve these in common (not otherwise), must not be included among the non-identical qualities. Of these attributes we shall have more to say when we come to treat of resemblance.

V. Statement.—*The Whole is positively judged to be one with the sum of its qualities.*

In an affirmative judgment, one and the same Whole, or part of the Whole, is referred to by both the Subject and the Predicate. Let the whole be represented by A, and its qualities by *b c d e*, then the Whole A is affirmed to be one with its qualities *b c d e;* or A is affirmed to be in part of its intension *b*, in another *c*, and so on. Hence it can be seen that, in Singular affirmative propositions, there is a connotative or intensive equation expressed by the copula between the two terms.

This is the ground given by Hobbes of the theory of predication, which J. S. Mill has adopted, and more fully developed; but not the sole ground, as the present analysis will serve to show.

VI. Statement.—*The Whole is differentially judged to be distinguishable from its qualities separately regarded.*

Although in affirmative propositions identity is asserted between the Subject-object and the Predicate-object, there is, except in such merely verbal propositions as "A spade is a spade," "A sovereign is a pound," a relation of contrast expressed between the Subject and the Predicate. In the proposition, "A triangle is a three-sided figure," the Subject names the object as a Whole, while the Predicate names its qualities as *b c d e*.

The *rationale* of this contrast may, I think, be stated as follows :—If the Whole be A, and the qualities *b c d e*, then (A=*c d e*) is different from (A=*b*), (A=*b d e*) from (A=*c*), and so on throughout; that is, the Whole, regarded as the sum of every quality but the one predicated of it, is non-identical with the Whole regarded as identical with that quality. A=*c d e* is non-identical with A=*b*. It is to propositions of this class that we owe the extending of our knowledge.

Thus far, Judgment, be it particularly noticed, has been regarded as strictly singular. The only whole which has been examined is that of Intension, which is essentially an unit whole. Judgment becomes general when we judge that two or more objects resemble each other; and here I would call attention to the fact that while identity involves oneness, and is intimately at home among single objects, resemblance involves plurality, and has no place in the Whole of Intension.

In Singular Perception, as in every other mental process, be it observed, the conscious manifestations of the present moment are judged to be identical with the latest, later, late, past existence of the same. We do not regard the various manifestations, in time, of certain thoughts as so many different thoughts, but as so many distinguishable manifestations of *one* and the same thought. An essential condition of all knowing and feeling is this continuity of mental manifestations, in time, forming one thread of identity. The consciousness of the present trailing after it the memory of the consciousness gone before, gives to our thoughts and feelings an appreciable length, which would be wanting were every manifestation a mere flash unretained in memory to any perceptible extent.

In all consciousness, notice also, that there is a contrast realised in the flow of its several manifestations, in time. If we compare consciousness to the steam streaming from a locomotive in motion, we can, with no great stretch of the imagination, fancy we see inscribed upon the white streamer, present, latest, later, late. Thus, if memory does not fail, we have no difficulty in discriminating one part from another in the thread, or identical continuity, in time, of our thoughts and feelings. We cannot, as intelligent beings, break with the past, or the identical continuity of consciousness.

But we must also not overlook the fact that there are two

instances of identity which need to be distinguished: the one is that of which I have just been treating, namely, a chain of identity: the other that which, as shown above (Statement V.), the Proposition affirms. The former is not absolute identity, for the cognition which I have, even of myself, this moment is not absolutely one with the recollection which I have of myself each successive moment that follows. But the identity with which the affirmative proposition is concerned is absolute identity or unity. When it is affirmed that "Victoria is Queen of England," the import of the proposition is that the whole of which "Victoria" is a name is actually one with the whole of which "Queen of England" is a name.

In introspective psychology, as much as in any other branch of science, nice discrimination then cannot be dispensed with. Although some may detect no important distinction between the facts expressed by the terms "identity" and "resemblance," yet an exhaustive analysis demands that a distinction should be made between likeness as met with in individual continuity, as given above, and likeness as met with among a plurality of individuals. Although the Singular can be realised solely as a continuous thread of similar presentations, yet the fact must not be overlooked that the General always involves two or more singulars or chains of identity. There is, therefore, a further degree of evolution to be detected in the latter than the former. Seeing that this is the case, it becomes necessary that terms should be selected to mark the one stage of likeness from the other; and how can we do better than retain the term "identity" to signify the first stage of likeness, and "similarity" and "resemblance" to signify the second? Using these terms, then, as now defined, I proceed to state that while identity in thought and feeling involves oneness of objects (not of presentation, as present, latest, later, late), is primary in the Order of Evolution, and has its home in the Whole of Intension; resemblance involves plurality of objects or units, is more advanced in the Order of Evolution than identity, which it supposes, and has its home in the Whole of Extension.

Having thus suggested the nomenclature which it is desirable to use, we may proceed to show, in accordance with it, how the transition from Singular Judgment to General is effected. A proposition which affirms, for the first time, that the single object, A, is like the single object, B, expresses

that kind of judgment by which a general Whole is formed; for if we judge that A resembles B, the comparison gives rise to a concept or general notion, which can therefore be given a common name. Whence we see that General Judgment supposes Singular. There must, at the outset, be two Wholes of Intension, at least, in order to form a Whole of Extension, which latter is a numerical Whole, one of which the parts are similar to each other in all respects, save number or individuality, the singular element as, (A=*a a a a*) or A=1*a*, 2*a*, 3*a*, 4*a*).*

When, therefore, the Wholes of Intension and of Extension are mutually compared, there is to be seen this marked difference between them: in the former (A=*b c d e*), the Whole is the sum of qualities that are judged to be non-identical with each other: in the latter (A=*a a a a*), the Whole is judged to be the sum of parts that resemble each other, but yet are mutually distinct, the singular element not being lost in the general.

While identity and resemblance bear to each other the relation now described, there are two leading instances in which the cognition of resemblance comes in among mental processes almost from the outset. The attribute of existence and of time are judged to be possessed in common by all things. So far, then, the perception of resemblance follows immediately upon that of identity. But then, it is exerted, at this stage, solely in relation to One Whole (A=*b c d e*). It cognizes the fact that the qualities of this Whole resemble each other in their attribute of existence, and existence in time. On the other hand, in the more advanced stage, the perception of resemblance is exerted in relation to Two or more Wholes of Intension, cognizing in them not only likeness as regards existence and time, but also as regards various other qualities.

From the foregoing analysis, we may safely conclude that, in the Order of Evolution, every General Judgment that has been realized supposes Singular Judgments as its base. There is, however, an opinion adverse to this conclusion, held by Hamilton and Mansel, the examination of which opinion will cast some light upon this subject. "The fact is," says Mansel, "our earliest consciousness is neither of the individual, nor of the universal discerned as an universal, but of a confused mixture of the two, which requires a further de-

* 1 2 3 4, mutually differ; *a a a a*, mutually resemble. The former are in the sphere of the Singular, the latter, of the General.

velopment of thought to analyze into one or the other."* It has been shown above that the reflective analyst has to examine "this confused mixture," but, in the Order of Evolution, the General that is early developed, in harmony with the Law of the Obvious and Opportune, forms no exception as to involving Singular Judgments as its base; for the General cannot exist on any other condition. It is true that the *differentia* which divides class from class supposes the prior cognition and comparison of these classes, but this does not make it the less true that every class is built upon Singular Judgments. "Children," says Aristotle, "at first, call all men *father* and all women *mother*, but afterwards they distinguish one person from another."† This admits of being accounted for, in agreement with the view advocated in this paper as follows:—The child's mind operates in that mode that is most easy to it. It forms a notion of the father and the mother, but a notion that is not sufficiently differentiated to distinguish them from other men and women. But then, inadequate as the child's notion is, it, nevertheless, must be based on Singular Judgments. Indeed, we seem to have, in the child's style of judging, a type of much of the early judgment of the human race, a sort of judgment, as was shown above, too much taken up with likenesses and analogies, and two little with differences; but, at the same time, compelled, in the Order of Evolution, to have as much to do with the latter, as the very existence of the general notions that had been formed, necessitated.

In this paper I have had to confine myself to the Singular as pertaining to the elementary processes of thought. It could be shown, however, that the Singular holds an important place in every mental process, however advanced. Here an opening offers for stating that, although on the whole, the Singular is lower in the scale of dignity than the General, yet we must guard against the error of thinking that every instance of the latter is higher than every instance of the former; for in proportion as the Singular pertains to that which is higher in the Order of Evolution, in that proportion is it higher than the General that pertains to what is low in the same Order. In contending, therefore, for the necessity of attaching much importance to the Singular, it will be seen that I am not simply vindicating the importance of the Singular merely in the elementary, but also in the

* "Prolegomena Logica," p. 34.

† *Ibid.* p. 35.

more advanced processes of thinking. And it is the increasing complexity and superiority of objects, high in the Order of Evolution, that elicits, as I have taken some trouble to indicate, a more searching and discriminating style of observation and experiment, a more thorough organization of Singular Thought, than sufficed, in early times, for the construction of such sciences as were then within the reach of the human mind.

The priority, in the Order of Evolution, of the Singular to its related General knowledge, I hold, therefore, after long and careful excogitation, to be true, not only in Judgment, but also in Induction and Syllogizing. I am aware that Professor Jevons will greet this declaration of faith with a derisive smile, and call it "astounding and absurd," as he does the following question put by J. S. Mill:—"Why is a single instance in some cases, sufficient for a complete induction, while, in others, myriads of concurring instances, without a single exception known or presumed, goes such a little way towards establishing an universal proposition?"* I submit that the true reply to this question is wrapped up in the statement—That unless Induction can be made formally valid, just as Judgment is made sure or certified, in single instances, no accumulation of similar instances will avail to insure its validity. An exact inductive inference is not radically evolved out of a concurrence of like instances, but, as Mill hints in the passage just cited, from single instances of a certain stamp. How do we know that the ground sustains objects lying on its surface, or that objects depend on the ground for the position they occupy? Not by intuition or direct perception, but by indirect perception, by Inductive Reasoning.†

I would conclude this article with the remark, that if the cerebral physiologist is to succeed in locating, in the brain, the several functions it performs, these functions must cease to be sought in the vague regions of generality, abstraction, and *à priori* thinking. They must be sought, especially at the outset, in the study of singular and concrete knowing. It is only when this is accomplished, that we can hope, and that only by the regular approaches of scientific investment, to conquer the greater difficulties of the problem.

* "System of Logic," Book iii., chap. 3.

† The author's views on this question are given in "Mind," July, 1878.

Remarks and Notes upon the Branch Asylum at Newark, U.S., for Adult Imbecile Women. By William W. Ireland.

(Read at the Branch Meeting of the Medico-Psychological Association at Glasgow, 24th March, 1880.)

It was only when special attention was paid to the training of idiots, that an idea began to be formed of their actual number, and it is only within a few years back that in the census of civilized nations idiots were distinguished from lunatics, or as it is generally put, born insanity was distinguished from acquired insanity. Even yet to some people it will be startling to hear that in most countries there are as many idiots and imbeciles as there are lunatics, and that in some countries there are more. According to Koch*, there are for every hundred lunatics in Prussia 158 idiots; in Bavaria, 154; in Saxony, 162; in Wurtemberg, 97; in Austria, 53; in Hungary, 140; in the Canton of Berne, 117; in France, 66; in Denmark, 58; in Sweden, 22; in Norway, 65; in England and Wales, 74; in Scotland, 68; in Ireland, 69, and in America, 79. Large as this proportion is, there are many reasons for believing that it is considerably understated, both in our own country and in America. In France I have already pointed out that, although in the census of 1872, there were only 35,133 idiots given, it was found by a special commission to inquire into the diffusion of cretinism, that there were about the same time in the country 122,000 cretins and idiots, that is, 230 idiots for every 100 lunatics. Moreover, from the known unwillingness of parents first to believe and then to admit that their children are imbecile, we may fairly assume that there must be a large number of idiots under five years of age, who are never returned as such in any census, and of whom a large proportion die in early years. Koch found that in Wurtemberg only 43 idiots were returned under 5, while between the ages of 6 and 10 years there were 294 returned.

Long ago, when the first hospitals and infirmaries were established, contagious diseases were confounded with one another, and non-contagious diseases were confounded with those which were really contagious, while maladies requiring separation were treated in one common ward. It is said that

* "Zur Statistik der Geisteskrankheiten in Württemberg und der Geisteskrankheiten überhaupt," von Dr. J. L. A. Koch. Stuttgart, 1878, p. 62.

in the vast dormitories of the old Hotel Dieu in Paris, patients suffering from fevers, insanity, and all sorts of diseases, were crowded together along with the destitute wanderers who needed a night's lodging. In the process of time a rude division was made, and increased subdivision went on along with all improvement in the study and treatment of disease. Contagious diseases were discriminated, and separated from the non-contagious diseases, the incurable were separated from the curable, and lunatics were taken out of the hospitals and gaols where they had been confined, to be treated in special asylums. The segregation, however, ought not to stop here, and it seems to me that an essential condition in the further treatment of insanity must consist in a more thorough-going separation of the insane into various classes, and that to gather into one monstrous pile of building all forms of mental aberration—the maniac and the idiot, the general paralytic and the melancholic, the dement and the puerperal, the curable and the hopelessly incurable—is to spend money in raising a structure which, in some respects, is as well adapted for the perpetuation of insanity as for its cure. For my part, the spectacle of a vast asylum, with its population of a thousand or two thousand lunatics, its miles of corridors and monotonous rows of cells, is something fit to unhinge the mind of any one who does not possess unusually firm nerves. It may be a triumph of administrative skill, but there is not sufficient room or time for the physician to study individual cases, and to infuse kindness and sympathy into the treatment. If we consider how extremely sensitive many of the insane are, and, indeed, how many of them have become insane simply because they are too sensitive, because they feel too keenly what they believe to be harshness and injustice, and loathe too deeply what they think disgusting, it seems to me no greater improvement can be made in the asylums in which they are confined than the removal of companions whose presence can only add to the sense of their degradation, and disturb the process of their recovery. To hang engravings on the walls and draperies above the windows, and deck the rooms with neat bits of furniture and haberdashery, while nothing is done to remove from their sitting-rooms and dormitories the unsightly idiots and dotard old creatures whose presence is not suffered in an ordinary poorhouse, is surely zeal which does not nicely estimate the relative importance of things. It may be a good thing to substitute door-handles for locks

in an asylum, but it would surely be a greater improvement to let out those who should never have been there.

On the other hand, idiots suffer much injury from being shut up in district or pauper lunatic asylums. Naturally gentle, timid, and defenceless, they suffer much from the violence of maniacs, and, inexperienced in evil, but imitative and prone to yield to debasing influences, they learn in a few days indecent practices, curses and oaths, which they never unlearn in the rest of their lives. Thus, an imbecile child, who has been a short time in a lunatic asylum, is often very troublesome and unmanageable when shifted into a training school. The whole scheme of the ordinary lunatic asylum being designed for the treatment, care, and retention of the ordinary insane, all that is done for the idiotic and imbecile is to attend to their bodily wants, and to let them wander about. It is almost superfluous to repeat these remarks to such an audience, and no superintendent of an ordinary asylum for lunatics views the admission of an idiot with anything less than dislike.

Something is done by private charity for the imbecile, though it becomes every year more and more apparent that if this class is to receive sufficient care and training, it must be done, as lunatics are provided for, at the public charge. Considering how numerous they are, it seems very strange there is no asylum for grown-up idiots and imbeciles in Great Britain and Ireland, save those belonging to the Metropolitan Asylum Board of London. For such institutions there is an urgent want. Many imbeciles are kept by their parents, either out of shame to send them to a training school, or in the hopes of possible improvement, until they get grown up and troublesome, or their parents being removed by death, their brothers and sisters will not take the same charge of them. They are very much perplexed at finding no place where their charges can be put under proper care. Moreover, I believe it is the opinion of most of those who are well acquainted with idiots and imbeciles, that it would be much better if they could spend their lives in an institution especially intended for their reception. Some may return to their homes if suitable after a lengthened education in a training school, and a few may earn their bread out of doors, under the care and protection of their friends; but a large proportion of them ought to be all their lives in an establishment where their work can be utilized, their evil tendencies re-

pressed, and their weakness protected. The condition of grown-up imbecile girls of the poorer classes, is most unfortunate. If they are at all healthy, to seduce them is a mere question of opportunity, and, unless they be very narrowly watched, they are all seduced at one time or another. Many prostitutes belong to the class of simple-minded women. Luckily imbecile females are not very prolific, but I have seen a good many children whose mother's imbecility had been transmitted to them. Cases of this kind cannot be unknown to you. When an imbecile pauper has given birth to one or two illegitimate children, the parochial boards generally take fright and send her to a lunatic asylum, where she is immured for life.

There are three classes of idiots—the uneducable idiot, often a very heavy burden upon a family, who is susceptible of no instruction, save, perhaps, what has been called "habit teaching," the educable idiot, for whom a training school is needed, and the adult idiot. The first two classes can be cared for in the same building, but the idiots of the third class had better be treated in a separate establishment, though they could all be under the same superintendence, if the buildings were at a moderate distance from one another. The two sexes had better be widely apart, not necessarily in a separate asylum, but in compartments well arranged for segregation.

In Upper Canada, which I visited last autumn, I found that the separation between idiots and lunatics had been already made, all the idiots having been taken from the asylums at Toronto, London and Kingston, and sent to Orillia. Through the kindness and hospitality of the Superintendent, Dr. A. H. Beaton, I had an opportunity of thoroughly seeing this asylum. The patients were lodged in a building which had once been an hotel, looking upon a wide and beautiful lake. Dr. Beaton was making the best of his accommodation until a new asylum should be erected on the ground close by. It was thought that it would be built in about a year. The inmates, about 150 in number, consisted of idiots, young and old, with a few dements. Many of them were recent arrivals. They looked healthy and contented. The food seemed to be excellent, and the patients well cared for. There was a governess who was giving lessons to the children, but I understood it was contemplated, in the course of time, to erect a training school elsewhere, and to make

Orillia the asylum for adult idiots. In Hamilton Asylum two wards have been set apart for idiots, 27 of whom have been received.

The asylums in Canada are supported by the Government. The Inspector of Asylums, Prisons, and Public Charities for the Province of Ontario, Mr. J. W. Langmuir, does all the work distributed in England and Scotland amongst the Central Lunacy Boards, the Visiting Commissioners, and the District Lunacy Boards. He accepts all the contracts for provisions as well as for buildings, inspects the asylums and audits the accounts. As far as the asylums of Toronto and Orillia went, everything seemed to move well, and, strange to say, for a man with so much influence and authority, every one spoke well of him.

On my return through the States I spent ten days in the New York State Asylum for idiots with my friend Dr. H. B. Wilbur. It gave me much pleasure when Dr. Wilbur told me of the new Asylum at Newark for grown up imbecile women, and offered to take me to see it. The State Legislature has done wisely in placing the new institution under the care of one so well fitted by ripe experience and proved ability to organize it in a proper manner. It is fifty miles to the west of Syracuse; but in the States they make very little of distances. We went by rail, and on arriving at the village of Newark we found the resident Superintendent waiting to drive us to the asylum. It is a three-storied building on the top of an eminence looking down on the Erie canal. The building was originally intended for a boarding-school, and is large and roomy, with an inside corridor of cruciate form, which, I daresay, is useful enough in a country where the winter is so cold. On entering the court-yard we saw the inmates returning from a walk. They were mostly young women. The great majority were evidently imbeciles, though a few might be harmless lunatics. Erotic tendencies were noticed in a few instances, otherwise the whole tone was quite different from that of a lunatic asylum. There were no petulant complaints or violent language, or attempts to get hold of the visitors to pour out into their ears accusations against the officials or to get assistance to procure their liberty. Every one seemed in good humour and in good health. The women were all clean and neat in their dress and persons. The staff consisted of a resident superintendent and his wife, one teacher of ordinary lessons, and one of industrial occupation, one cook, one baker, one

laundress, six other attendants, and one man of all work. As far as I remember there were about 86 patients, but the asylum could hold about 110. The year's pay bill was 3,100 dols. = £600. The staff is evidently a sufficient one, but it includes attendance for the superintendent and the teachers; and the asylum being newly formed, probably many of the imbecile women had not yet learned to do work. Some of them, however, had been pupils in the Syracuse Training School. In an American Asylum we might expect the cost of servants to be greater, but that of food to be less since provisions are cheaper. The dietary is generally very liberal and of astonishing variety, for the Americans are not at all inclined to be mean and stingy in such matters. There seemed very little ground belonging to the asylum; though no out-door work could be expected of American women, one might think keeping a dairy or some such occupation would be of advantage for the inmates.

The builders of the house had not provided for a sufficient supply of water, and the Superintendent told me that he had been getting water carted for washing purposes from the Erie Canal, but Dr. Wilbur assured me that he had no doubt measures would soon be taken to obtain a good supply of this element so necessary to the health, comfort, and safety of an asylum.

There is no doubt that here we have a difficult question solved in a simple manner. Such an asylum as that at Newark must be a very useful and beneficent institution, and one which can only be supported at the expense of the State. The money, however, is only money spent in a good way which would, in other circumstances, be spent in a bad way, for most of these females must have been supported in one way or another by the community, whether in asylums, poor-houses, jails, or hospitals. Viewed in a money point of view alone, the cost of neglecting them is likely to be greater than the cost of taking proper care of them.

Insanity from Lead Poisoning. By Drs. Rayner, Robertson, Savage, and Atkins.

I.—By Henry Rayner, M.D.*

Although my attention has been directed for some years past to the consideration of this subject, the number of cases of lead poisoning coming under my observation is inconsiderable, and I put forward the following with the hope of inducing others to place on record their experiences rather than with the idea of formulating definite conclusions.

It is unnecessary to describe the general effects of lead poisoning—the colic, the palsies, the arthralgia and gout, are matters of everyday experience; while the various symptoms, the discoloration of the teeth, the bad taste and breath odour, the yellow tint of skin, the appearance of premature age, the emaciation and the slow pulse of high tension, are equally familiar.

In regard to the special effects on the nervous system, a more lengthy notice may be pardoned, and it is of interest to note that the more direct and obvious of these were recognised by the earliest medical authorities; thus, Dioscorides (in his work on mental aberration) mentions delirium produced by lead; Aretæus speaks of epilepsy following colic, and Paul of Ægina refers to epilepsy and convulsions from lead. Many writers in the Middle Ages also described colics terminating in delirium, but do not appear to have recognized them as being produced by lead.

In our own century these complications have been fully recognized, so that in 1830 Tanquerel was able to describe them under the term: "Lead encephalopathy," as being divisible into four classes. 1, a delirious; 2, a comatose; 3, a convulsive; and 4, a delirious, comatose and convulsive form.

His delirious form assigns a predominance to confusion, incoherence and sensory hallucinations in the mental disorders, and he mentions a light trembling chiefly affecting the arms and face, with a difficulty in using the limbs, an embarrassment of articulation and often amaurosis, which renders the muscular difficulties more pronounced.

* *Read at the Quarterly Meeting of the Medico-Psychological Association, Feb.* 25, 1880. *See April No., p.* 129.

The comatose form he describes as occurring suddenly in the midst of apparently good health.

The convulsive complications occur in various forms, firstly, in partial convulsions, analogous to those produced by electric shocks; secondly, in *general* convulsions of the same character, followed by a general stiffness of the limbs and trunk, the patient being completely unconscious, the eyes being open, fixed, and immovable.

The partial preservation of consciousness, Tanquerel asserts, is the distinctive characteristic of lead epilepsy.

My attention was first attracted to the fact that certain cases of insanity in painters seemed to be very much alike in the characteristics of their mental disorder, and that the number of these in the asylum seemed to be in excess of the relation of this class of artisans to the population at large.

As the result of my investigation into the latter point, I find that of the whole male inhabitants of England and Wales, aged 20 and upwards, at the last census, there was one painter, plumber or glazier in 68·1, and that in the county of Middlesex there was one in 34·6.

Assuming that the relative proportion of this class of artisans to the population has not changed, I should have, on this calculation 21·6 of these in my 750 patients, whereas I have at this date 29, or nearly a third more than the estimated number; and I further find that of the patients who have been admitted under my care whose occupations have been ascertained, these artisans are in the proportion of one to 29·3, instead of one to 34·6, as estimated above.

It is probable, therefore, that painters, plumbers, &c., furnish more than their proportionate quota to the insanity of this country. Is this excess due to exposure to lead or other causes? Now it would appear to me that the occupation of these artisans is pursued under favourable conditions, and that they are not as a class intemperate beyond the average of men similarly placed in life.

The direction of their attention to careful habits of living in preventing the effects of lead poisoning would indeed tend to prevent habits of intemperance, although perhaps the good effect of this is more than counterbalanced by the popular belief that gin is a good remedy for lead poisoning. I do not believe, however, that my statistics would show an excess of intemperate habits in the patients of this class; and, on the other hand, I believe that heredity, the other chief cause of insanity, is in defect amongst them.

The following case is one of comparatively coarse poisoning, for the notes of which I am indebted to my colleague, Mr. J. P. Richards. It is that of a woman, M. T., admitted in January, 1875, aged 34. She had been working for six months in white lead works, where respirators had to be worn on account of the dust. On her admission she had well marked symptoms of lead poisoning; there was great debility and restlessness; hallucinations of sight and hearing, and a delusion that she had a large bag of money in bed with her. She had double optic neuritis, and there was much muscular tremor.

She is now (Feb., 1880) somewhat imbecile, is nearly blind, has muscular tremor of her hands, neck and face, which at times is so great as almost to resemble paralysis agitans, and she is at such times melancholic. She has entirely lost all sensory hallucinations.

The four following cases appear to be the result of a protracted and minute lead intoxication acting on perfectly healthy nervous organizations, and it is almost obvious that the reason why the nutrition of the brain should suffer in minute toxæmia, rather than any other tissue or organ, is the fact of the enormous proportion of blood which passes through the grey matter of the brain as compared with that which is supplied to any other organs or tissues.

The first case is that of J. S., at 53, principally employed as a writer, of sober habits, of perfectly healthy family history, of good physique, and general development; an excellent workman of good character, and of more than average intelligence. Had never had head injury or any serious trouble. Had always been very careful and cleanly, had never had lead colic, dropped hand or gout, but on admission he had a lead line on the gums, was of sallow complexion and very grey. This patient stated that for twenty years he had heard noises, usually speaking in a pleasant manner, so that he was inclined to be by himself that he might commune with them. It was not until he heard of spiritualism that he found himself to be a spiritualist.

His memory was unimpaired, and his power of attention also; he talked coherently and with considerable shrewdness on most topics.

He manifested no emotional depression, but on the contrary, was cheerful and good tempered. He did not feel persecuted or annoyed by the noises he heard, but rather seemed to imagine that he was gifted with a superior faculty.

He had never had an attack of maniacal excitement, and was altogether free from the feeling of suspicion and resentment common in cases of alcoholic hallucination.

The next case is of the same character. F. S., aged 30 on admission, a decorative painter, of healthy family, a good workman, of sober habits, and steadily employed until the manifestation of his insanity some months before.

He is now 38, of medium height, well built, and normally developed. Sparely nourished, of sallow complexion, hair greyish, very bald, and with marked wrinkling about his eyes.

He has, both by day and night, hallucinations of sight, hearing and common sensation, at one time he appears to have had hallucinations of taste and smell. At present he sees figures which he describes as wind bags, blown out to look like men, and hears them make remarks on him. He also speaks of being electrified at night. He describes in a confidential manner and with great evidence of self-satisfaction, the way in which he destroys these figures by some power which he possesses. His memory is fairly good, but he rambles somewhat in his account of his hallucinations.

His head and arms are occasionally jerked spasmodically, and this he ascribes to electric shocks. He has no noticeable muscular tremor. He has never had any maniacal attack or even extreme excitement.

Formerly he worked at painting in the asylum, but always after a time would strike work on account of the hallucinations, and the "electric" shocks being "too hot for him." Employed in other ways he has been able to keep steadily at work.

C. M., a painter and grainer, of sober and steady habits, and in constant employment, relatives sane and healthy. Lead poisoning was given as the cause of his insanity.

He has now been insane fifteen years, has hallucinations of sight and hearing, and also states that he has electric shocks; his head, arms, and facial muscles are frequently jerked, as if from a sudden involuntary contraction, but he also twists his head and contorts his face voluntarily. He is very incoherent, his memory and power of attention being defective.

He manifests a great deal of cunning self-satisfaction, and believes himself possessed of exalted powers; he manifests no suspiciousness or resentful feeling.

He formerly worked at painting in the asylum, but since he has been otherwise employed he has gained flesh, has lost

much of his sallowness of complexion, and is less constantly under the influence of his hallucinations.

As an example of a more advanced form I may quote the case of R. R., 27 years insane. He suffered from lead colic in youth. For many years had sensory hallucinations. He is now weak-minded and incoherent, is cheerful and self-satisfied, and has exalted and over sanguine views concerning himself. He has had for many years marked facial tremor, thickness of speech, tremulous hands and shuffling gait. He was at one time regarded as a general paralytic.

In these cases there is no one distinctive symptom, yet the very gradual development of the mental disorder, the absence of attacks of excitement or mania in the typical cases, the absence of suspiciousness and resentment, the existence of contentment, and slight exaltation, together with the sallow complexion and appearance of age, would probably attract attention, although insufficient by themselves to give foundation for the diagnosis of the cause.

It will be remembered that Dr. Garrod observed that 30 per cent. of his gouty out-patients were workers in lead, all manifesting symptoms of lead poisoning. In the following case, the poison appears to have developed gout in the first instance, and later the gouty and lead poison appears to have united in their action on the nervous system.

T. W., æt. 30, a plumber, of sober and steady habits, having no inherited predisposition to insanity or gout.

He was a tall, well-built, well-developed man, had been in good health until the age of 24, when he began to suffer from gout, and he has never been quite free from it since. He had never had colic or paralysis. Had taken large quantities of purgatives, but had remained at work until three weeks before his reception at Hanwell.

On admission he had a well-marked lead line on the gums, was very elated and joyous, possessed millions of money, and had numerous exalted delusions. There was slight facial inco-ordination, some thickness of articulation, and his writing was irregular. The pupils were equal, regular, rather large, and acted freely.

He was put on iodide of potassium, and soon had an attack of gout, which coincided with a very sudden improvement in his mental condition ; he improved very rapidly, and was discharged. I believe, however, that his disease was only in abeyance, and that he would, under unfavourable circumstances, re-develop his malady, and die a general paralytic.

In the next case, that of J. P., æt. 30, a painter, admitted in 1878, the patient had been of intemperate habits and had suffered from gout, but had no inherited predisposition either to gout or insanity.

On admission his gums were spongy and lead-tinted. He was dejected, hopeless and self-abased; he had sensory hallucinations, those of vision being predominant; he was reported to have had several epileptic fits. He complained of tingling and numbness in the hands and feet. There was diminution of sensibility in the extremities, and he could not stand with his eyes shut.

The hands and facial muscles were tremulous, and his articulation was somewhat thick.

This patient has had several attacks of gout, and has notably improved after each. He has entirely recovered sensation in his hands and feet, but has still slight facial tremor; his speech now presents nothing noticeable. He has entirely lost his sensory hallucinations, is now hopeful and cheerful, and has epileptic attacks only at intervals of increasing duration.

I may remark on this case that his intemperance had apparently been moderate in degree and not of long continuance; certainly not of that extent that one would expect to find had the anæsthesiæ of the extremities been due to the effects of alcohol alone.

In the early stages of his disorder he might well have been mistaken for a general paralytic.

From the foregoing cases, and from the records of Tanquerel and others, it would appear to me that there are three chief modes in which lead-poisoning may produce insanity.

1stly. That of coarse lead-poisoning, producing attacks of acute mania and conditions closely resembling general paralysis, such as Tanquerel describes under the term lead encephalopathy, and of which, as he has described it so fully, I have only given one case.

2ndly. Cases of minute and protracted lead-intoxication, producing slowly-developing sensory hallucinations, noticeable by the absence of the feeling of persecution, and by the persistence of the hallucinations of sight.

3rdly. Cases in which somewhat coarse toxæmia in the first instance develops gout, and then, acting in conjunction with the gouty poison, produces a form of mental disorder closely resembling general paralysis.

II.—By Alexr. Robertson, M.D.

I have had six cases of chronic lead-poisoning under my care during the last five years, all due to working in a white-lead manufactory in this city. The patients were women, and their ages ranged from 18 to 44 years. All of them had at one time or other during their illness suffered from vomiting, colicky pains, and other general symptoms of the poisonous action of lead, but I shall confine my remarks to the points involved in the questions.

Case I., age 18.—There was maniacal delirium on admission, which lasted four days; after that, patient gradually recovered, but it was about ten days before her mind became quite clear. There had been at least one attack of convulsions before admission. The mental disorder resembled a good deal what is occasionally met with in epilepsy, with less disposition to violence, however, than one often sees in epileptic cases. On examination after she became rational, she was found to be completely amaurotic, this being due to white atrophy of the optic disc and other retinal changes. There were no paralytic symptoms.

Case II., age 30.—Patient was amaurotic on admission, with marked cupping of the discs. She stated that her memory had become defective, and that her mind generally was less clear than in health. There was, however, no mental defect obvious to others. There was also temporary weakness of the upper extremities, particularly of the left forearm, but not amounting to drop-wrist. There was likewise marked hyperæsthesia of the skin of the head.

Case III., age 21.—Before admission she had a convulsive seizure, and had been unconscious, or nearly so, for two days afterwards. She had become nervous and shaky, without distinct paralysis. Mind, she said, was less clear than before her illness; had occasional feelings of "needles and pins" at the points of the fingers. There was partial blindness, with marked neuro-retinitis of both eyes.

Case IV., age 24.—General tremor and marked nervousness of manner, but no paralysis. Mind clear.

Cases V. and VI., ages 28 and 44.—No special nervous symptoms, except a feeling of lassitude and mental depression, with some headache and giddiness; and the younger of the two, during the most acute period of her illness, had been much troubled with optical illusions.

Remarks.—Though there was general tremor, with nervousness of manner in two of the cases, and a degree of paralysis in another, these symptoms disappeared soon after the poison had been eliminated from the system. In no case could any one at all familiar with general paralysis have mistaken the condition for that disease. Further, though there was a temporary mental enfeeblement in two cases (besides the maniacal one), the state was very unlike the emotional weakness with grandiose delusions, so characteristic of general paralysis in most cases.

With respect to the acute attack of insanity, the mania considered along with the convulsive seizure, the amaurosis, the blue line on the gums, etc., constituted a group of symptoms sufficiently distinctive.

III.—By G. H. Savage, M.D.

Henry W. C., widower, aged 45, admitted to Bethlem Hospital, February, 1879. No insane relations; no previous attack of insanity; of sober, industrious habits; foreman at lead works. He has held this situation for many years, but in consequence of depression in trade he had to take on extra duties, such as sampling and handling the white-lead, which brought him in actual contact with lead for three or four months.

The earliest symptoms were noticed 7 to 14 days before admission. They were sleeplessness, restlessness, tremors, particularly of right hand; these symptoms increased, he became noisy and violent, and was sent to Bethlem under certificates, which stated that he was quite incapable of fixing his mind, and that he was very restless. He said he was misjudged, and injured by his foes. He was easily enraged; he wandered about the house all night.

On admission we noticed indecency in dress, incoherence in language, dirtiness of habits, and loss of memory. He had no exalted ideas, no history of colic; he could hardly hold anything in his right hand. Appetite fair. There was very great tremulousness of lips and tongue, and his speech was rather imperfect. He was very violent and noisy day and night, and on the second day he cut his head open against the wall, and would not submit quietly to have it dressed.

There was a well-marked blue line on his gums.

His weight was 8 stone 9 lbs. The pulse tracing showed increased tension, but to no great degree.

The wound on the head healed slowly.

About three weeks after admission there was exaltation, so that he talked of forming a choir and leading it himself, as he considered himself a splendid musician.

Next he had a small abscess on the pinna of his right ear.

Within a month from admission he became quiet, the tremulousness passed off, he talked less, was clean in his room, and the cut head went on healing.

Two months from admission he was convalescent. The blue line on the gums disappeared.

He was sent to our convalescent establishment for a fortnight, and then discharged well, after two and a half months' residence in the Hospital.

The only treatment given was abundant, easily digested food, some stimulants and purgatives; and as he began to improve without any special treatment, none was given. The blue line disappeared, and the tremors and other nervous symptoms recovered.

On recovery the patient himself explained that lead was the cause of his trouble.

From the first I considered the case to be due to lead, and intended treating him specially, but as he improved unassisted I thought I would leave well alone.

The rapidity with which he became affected is to be noticed, but I saw a case in Guy's Hospital, under Dr. Moxon, where maniacal symptoms and a blue line followed the use of lead lotion for vaginal discharge without ulceration. This case I hope to get published in the Journal also.

Another point of interest is the similarity in the symptoms to those occurring from drink and those seen early in general paralysis.

I have seen recently in Guy's another case due to lead, in which general paralysis was suspected.

For some years I have recognised the symptoms due to lead, and Dr. Rayner, of Hanwell, five or six years ago, pointed out cases of the kind then under his care, and yet English writers seem to have left the fact either unrecognised or unrecorded.

Where the true pathology is remains to be discovered; but such a careful observer as Dr. Gowers has told me that he has recognised many varieties of nervous symptoms from epilepsy to paralysis due to lead.

It seems that lead, and, perhaps, some other mineral poisons

have a special influence on the nutrition of the nervous centres, and perhaps, too, on the nerve trunks also.

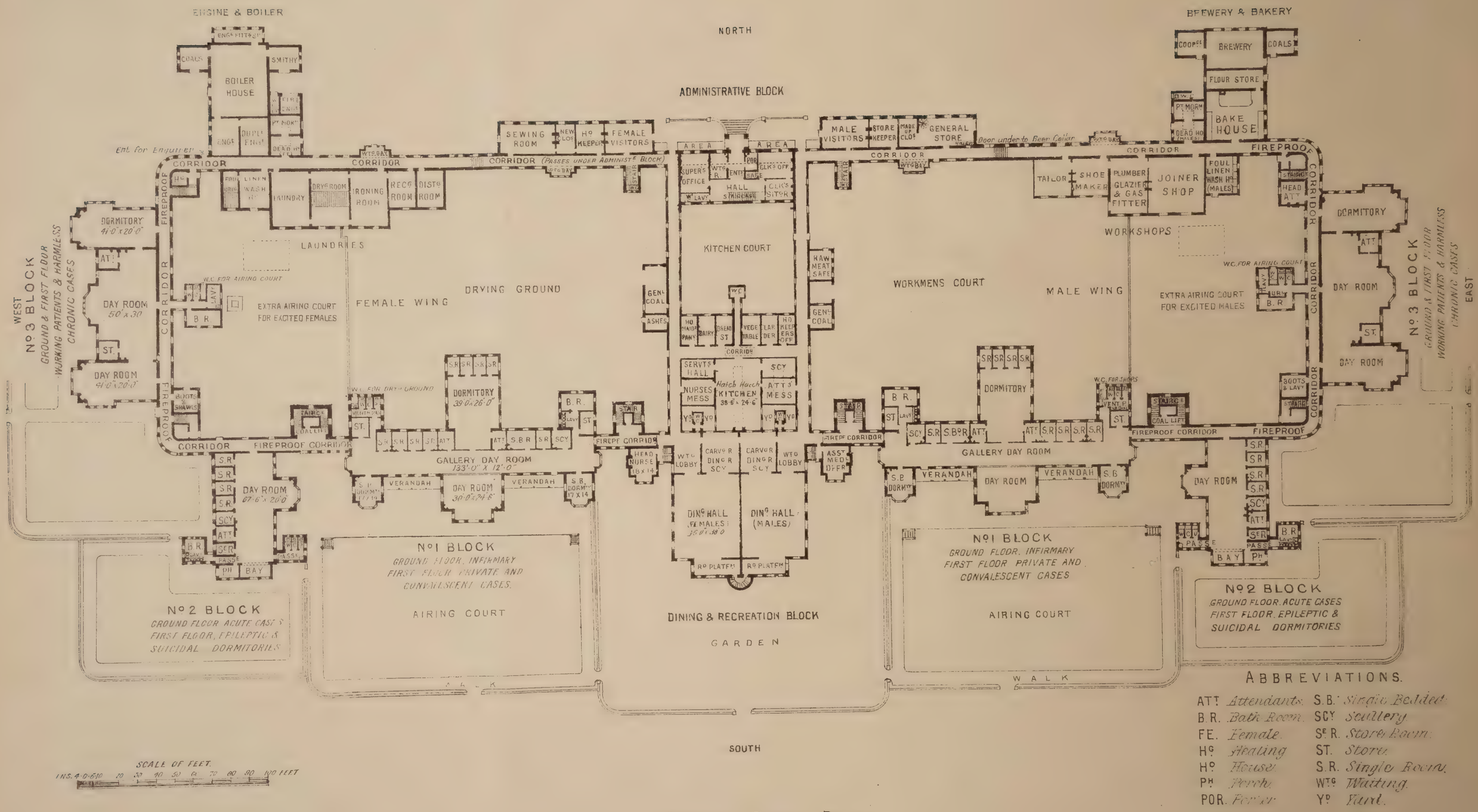
By a strange coincidence, there is an interesting article on Nervous Diseases after Lead-Poisoning, by Dr. Barton, in the last number of "Allgemeine Zeitschrift für Psychiatrie," xxxvii. Band., 4 Heft., page 9.

I believe Dr. Hammond, of America, has written fully on lead neurosis, but that it is generally neglected in England is shown by the fact that in Dr. Blandford's "Index to the Journal of Mental Science" only one meagre report of one case is given.

IV.—By Ringrose Atkins, M.D.

T. O'Shea, house-painter, aged 55 years, admitted into the Waterford District Asylum, March 29, 1880. The patient's family history is obscure. It is stated that he had been always irritable, and of a passionate disposition. He resided with his wife in a seaside village, and some sixteen years since first became affected with the ordinary symptoms of lead poisoning, colic, constipation, muscular weakness, etc. Subsequently to this his "fits of bad temper" became more frequent, and at times he appeared to suffer from periods of depression. Six years ago he had his last and most severe attack of coarse lead-poisoning, and since then his mental condition has become distinctly more disturbed; periods of ungovernable passion and excitement, alternating with periods of depression and gloom; during this time his powers of locomotion have gradually deteriorated, his gait assuming a tottering, unsteady character, and coincidently he became affected with muscular tremor, and broke down entirely in health. Increasing mental weakness and irritation, with occasional outbursts of passion, were the immediate causes of his being sent to the asylum. On admission he presented the appearance of a prematurely aged and broken-down man, being thin, with a worn and haggard expression; his gait was feeble and tottering, due apparently to general nervo-muscular weakness, rather than to any definite lesion of brain or cord producing limb paralysis; his grasp was feeble, and there was a general muscular tremor, especially noticeable in the hands and facial muscles during voluntary motion; when he sat with one leg crossed over the other, the upper limb shook uncontrolledly, and in any position a fine fibrillary twitching was noticeable in the muscles of the calf especially

in the region of the peronei, which appeared to be intensified by exercise. The patellar tendon reflex was absent, or at least repeated attempts failed to elicit it. There did not seem to be any diminution in the sensibility of the skin, nor disturbance of the organs of special sense. The pupils were of equal size. The articulation was slow, and the voice somewhat monotonous, but this was clearly due to the mental depression, and not to any defect in the speech apparatus, in the brain or medulla. The mental condition was characterized by marked depression and weakness of the intellect, and for some time after admission he had repeated outbursts of melancholic excitement, occasioned by his desire to return home. He always persisted in saying that he was quite well, and anxious to go back to his work. During the periods of excitement, he frequently refused his food, and on several occasions had to be artificially fed. His memory was evidently failing; he could recall but little of the events of his life, and when questioned directly could give but little information; this was, however, due in part, at any rate, to the emotional disturbance which invariably became intensified when he was spoken to or interrogated regarding his habits and life. He never gave expression to any delusions, nor did he appear to labour under hallucinations. Since his admission he has had bromide of potassium in combination with muriate tincture of iron, and under these, and with a largely milk diet, he has improved to some extent, both physically and mentally; he walks more steadily, and with greater strength, the tremor has lessened, he is brighter and less depressed, and takes his food without any reluctance. The history of this case, brief and obscure as it is, indicates that the long-continued absorption of lead, and the repeated attacks resulting from it, produced such a degradation in the nutrition of the nervous system, as to lead to the failure of its physical and mental powers. Whether this was the sole cause of the mental disturbance, or only one of the factors at work, is a question which the meagreness of the information supplied renders it difficult to answer; from the statement that he had been always of an irritable disposition, it is possible that there may have been some latent inherited taint, which the lead-poisoning brought into activity. The symptoms of the case are not particularly characteristic; taken, however, together, the physical and mental conditions approach more nearly to the "paretic" than to either of the other forms of the malady which have been described.



ABBREVIATIONS.

ATT. *Attendants.*	S.B. *Single Bedded*
B.R. *Bath Room.*	SCY *Scullery.*
FE. *Female.*	SE R. *Store Room.*
HG *Heating*	ST. *Store.*
HO *House.*	S.R. *Single Room.*
PH *Porch.*	WTG *Waiting.*
POR. *Porter*	YD *Yard.*

FIG. I. GROUND FLOOR PLAN.

FIG. 2. BIRDS EYE VIEW OF ASYLUM.

A Public Asylum, Designed for 414 *Beds, capable of Extension to* 600. By Richard Greene, Medical Superintendent of the County Asylum, Berry Wood, Northampton.

Preliminary.—The greater part of the letterpress and accompanying plans were sent into the competition lately requested by the Borough Magistrates of Hull, and were awarded the third premium. The elevations and architectural details were designed with much care and success by Mr. B. S. Jacobs, of Hull; the sanitary and sewage works were prepared by Mr. George Bohn, C.E.; while the writer is responsible for the ground and first floor plans, and for the internal arrangements generally.

The architect's estimate of the cost, after taking out the quantities, was £46,000. The contractor's tender was £46,500. This sum included all engineering work, the chapel, Superintendent's house, airing court walls, two entrance lodges, sewage tanks and channels. The internal walls were to have been plastered throughout; the floors were of pitch pine, and a pine dado five feet high surrounded the principal rooms.

The accommodation was for 414 patients, and included first-class provision for private cases. The cost would have been a trifle over £112 per bed. The Italian style of architecture was adopted.

In publishing these designs in the "Journal of Mental Science," I do not wish it to be inferred that I consider the asylum ought to be accepted in all its parts as a model institution, but I am satisfied it possesses everything essential for carrying out the most advanced and successful treatment of the insane, and that there is as much decoration and embellishment as is consistent with the expenditure of public money. It should be stated, too, that the asylum was intended to meet the requirements of the class of patients found in Hull; and that the number of beds allotted to the different classes might not be in suitable proportion for another district.

Again, the instructions to architects issued by the Hull Magistrates made it imperative that the block principle of construction be adhered to. This system, although so much in vogue at the present day for infirmaries and hospitals, has not as yet met with the universal approval of Medical Superintendents of asylums; indeed, it is more than pro-

bable that the balance of opinion is against it. Certain it is that a block asylum is more expensive to build, more difficult to supervise, less imposing in appearance, and less cheerful for those confined in it than one constructed on the old plan. While, therefore, the instructions to architects were carefully attended to in the preparation of these designs, an attempt was made, with what amount of success the reader must judge, to reconcile the old and new systems, and to see whether it was not possible to join what had hitherto been regarded as too unlike to permit of union.

It is not allowed to many men in these days to produce anything purely original, and in arranging the component parts of this asylum ideas were often borrowed from other buildings, though in all cases the parts copied were subjected to great modifications. The double quadrangle was taken in great part from Berry Wood, and the position of No. 2 Blocks in relation to the main building from Haywards Heath; but the rest of the chief features and most of the minor details may fairly be claimed as our own.

Description of the Asylum.—The asylum is designed on the block system, each block being independent of the others, but connected with them by fireproof passages.

The whole of the elevations are of red stock bricks, as are also the cornices and mouldings. The window sills are of Idle or Bolton Wood stone. The fireproof corridors are carried out according to Homan and Roger's Patent, and the fact that many English asylums have within the last few years been wholly or partially destroyed by fire, renders it essential that every means should be taken to prevent or limit the destructive effects of such accidents.

The windows may be either the ordinary double hung sash window, or a modification of the French casement, with an oblong swivel fanlight, both of these being in harmony with the architectural design; but the latter are for many reasons preferable.

Projecting from the fireproof passages, but incorporated with them, and also fireproof, are the staircases, the brickwork of which, running above the height of the adjoining blocks, contains the tanks for the supply of water to the wards, and for feeding the internal hydrants. In the event of fire, therefore, not only would the patients be able to leave the block without risk, but those having charge of the fire hose would be protected from danger, and would have at im-

mediate command an unlimited supply of water. An additional advantage of placing the water tanks in this position is that day-rooms and dormitories are neither under nor near them; and should the tanks or pipes need repair, the asylum artizans can gain access to them without passing through any part of the asylum occupied by the patients. Water tanks are a source of much trouble when placed in the roof of an asylum, and in case of fire, would, if so situated, be quickly rendered useless. The hot water system for the supply of baths and sculleries is also placed over the staircases, and by warming the air will materially assist in making the ventilating shafts act. The heating apparatus for each block is in the basement of the staircase towers. A coal lift is provided in the well of each main staircase.

As the asylum must have staircases and high level water tanks, the towers surmounting them are obtained at a comparatively trifling extra cost, and they will have the effect of vastly improving the appearance of the pile of buildings. Moreover, the advantage of having the staircases and water supply separated from the blocks, and secure against all contingencies, is so manifest that it fully justifies a slight extra expenditure.

The ground floor of the centre block to the south contains dining halls for both sexes, in conformity with the instructions. Each hall will accommodate 180 patients; and should it at any time be considered advisable to dine both sexes in one room, the removal of the central partition would effect this without in any way endangering the safety of the recreation hall above, or interfering with the design of the block. At the end of each dining hall is a dais, three feet above the level of the floor. This allows of the most perfect supervision at meal times, and affords a convenient place from which Morning Prayer or Grace may be said.

The carving rooms and dining hall sculleries are between the dining halls and kitchen, so that no time will be lost in serving the food; and to avoid confusion these rooms are of ample size.

The quarters of the assistant medical officer are to the east of the hall; and those of the head nurse are placed in a corresponding position at the west side. Consequently these offices occupy a very convenient position in relation to the infirmaries and dining halls, where their services are most frequently required, and that on the shortest notice.

As already stated, the kitchen adjoins the carving rooms;

and the dairy, larder, vegetable room, bread room, kitchen sculleries, servants' hall, attendants' and nurses' mess rooms, and all other usual offices are grouped around it.

The recreation hall occupies the second story of the centre block. This plan entails but little expense in construction, and it has been found to answer well in several asylums—the Woodilee Asylum, near Glasgow, amongst others. The size of the recreation hall is 70 feet by 45 feet. The entrances to the room are wide, and permit of easy ingress and egress. The doors open outwards, and in addition to the main entrances there is a smaller staircase leading from the dining halls, which could also be used in case of emergency. There is a fixed stage for theatricals, with dressing-rooms on each side. No mention is made of a recreation hall in the instructions to architects, but experience in other asylums shows that one is essential to the satisfactory working of a first-rate asylum. Should, however, the Visiting Justices consider it unnecessary to provide a recreation hall, the first floor may be omitted without any detriment to the general elevation or plan. The use of one hall for the purpose both of dining and recreation has, however, been found to be extremely inconvenient, indeed almost impossible in practice.

No. 1 block on the female side faces due south, and is connected with the centre or dining-hall block by one of the fireproof passages. On the ground floor there is ample space for 40 patients. This ward is intended for sick and infirm, and consequently all the patients occupying it sleep on the same floor. The cubic space allowed here is slightly in excess of that found in most asylum infirmaries; but in view of the high proportion of general paralytics, and other feeble cases in the present Borough Asylum, it is believed that the excess of space will prove advantageous. The large and small dormitories have windows on both sides, permitting of easy ventilation, and the latter, being intended for bed-ridden cases, have a southern exposure. The gallery is 12 feet wide, and is well lighted. At each end is a large bay window, affording extra means of ventilation. The day room projects to the south, and is easily separated from the gallery by a partition having folding glass doors; and thus, if thought advisable, the gallery, being empty (as the infirmary patients would be in their day-room), would serve as a corridor for those few patients in No. 2 block, who might be considered fit to use the general dining hall. Those objectionable corridors under the sills, which are found in most asylums, are thus avoided.

A verandah, into which the airing court doors open, runs along nearly the whole length of the ward; and the airing court is greatly protected from the east and west winds by the dining-hall block on one side, and No. 2 block on the other.

The water-closets are placed at the end of the gallery, and project from the main block. A ventilating passage separates them from the ward, and a ventilating pipe is carried up from each trap above the eaves. This plan is adopted in all the w.c.'s throughout the Asylum. It may be confidently asserted that no bad smell can ever find its way into the wards. The bath room and lavatory project in like manner from the other end of the gallery.

On the first floor are the convalescent cases and the private patients. The small rooms used as four-bedded dormitories on the ground-floor become day rooms on the first floor, and the entire day room space is sufficient for 60 patients. This ward is so arranged that it may either be treated as one large day room or as several small ones, allowing classification of the patients. Thirty-four of these cases also sleep on this floor, the remainder occupying the second floor. This is the only block provided with a third story, and here it is limited to the space over the gallery; the projecting day room and the large dormitory not being carried up. The necessity for extra blocks is thus avoided. It will be seen that all the patients occupying this block by day sleep in it by night, and the same arrangement is carried out in all the other blocks, so that each block may be looked on as a distinct asylum.

It may here be stated that the fire-proof passages are two stories high, and permit of direct communication between the upper floors of the several blocks. Thus is obviated one fatal objection to the block principle as hitherto carried out, and supervision is made as easy as in the old system of asylum construction. The inconvenience of having always to descend from the upper floor of one block, and ascend the staircase of another block to reach its first floor, is so great that it can hardly be exaggerated, and militates greatly against proper supervision.

In the fire-proof passage at the end of the block is the main staircase, and over it is placed one of the main cold water tanks, containing about 10,000 gallons of water, from which the external hydrants and service tanks are supplied.

No. 2 block stands out at right angles to No. 1. The

ground floor gives day-room space for 35 patients, and has been designed for the acute cases. This ward is in the form of a parallelogram (with bays looking south and east on the females' side, and south and west on the males' side), so that every part of it will be under the eye of the attendant. The bath-rooms and water-closets project from the east and west corners respectively, and, like those in the other blocks, are cut off from the ward by passages having thorough cross ventilation. There are five single rooms on the ground floor, besides the attendant's room, scullery and storeroom. There are two ways of reaching this ward from the centre block. The first, as already stated, through No. 1 gallery, the second by the north corridor without passing through any other ward or gallery. The second way is longer than the first; but it is shorter than the patients in many asylums have to walk to their meals, and it is not nearly so far as it would be supposing the blocks were placed in line. It must, moreover, be borne in mind that most of the patients in this block will dine in their wards.

The first floor of this block is devoted to the epileptics, suicidal cases, and other cases which may require constant watching by night. The doors of the seven single rooms have open panels for the better inspection of suicidal patients,—a strong glass pane is inserted over the door, with a gas jet near it to light up the room; the upper part of the wall is left open, and all other requirements of the Lunacy Commissioners have been attended to, so that no subsequent alterations will be needed. One of the attendant's rooms is so placed that it commands every bed in the dormitory; another attendant's room in like manner commands the single rooms, so that a special night attendant would be almost unnecessary for such cases.

No. 3 block on the female side contains the working patients. There is day room space on the ground floor for 65 patients, and sleeping accommodation for 16. The remainder sleep on the first floor. This ward is conveniently placed for those who work in the laundry and sewing rooms on the female side, and the corresponding block on the male side is close to the shops. The farm patients walk straight out of it on to the farm. A lavatory and shoeroom are provided for the farm patients.

At the end of the fireproof passage at the north-west corner, and facing the north, is the boiler and engine house. It will contain two boilers, a 12-horse engine and sufficient

space for a duplicate engine. There will be storage room for about 100 tons of steam coal. The main flue passes under the drying closets, and it is believed that this will be a material help in heating these closets, and thus save fuel. The chimney stack rises at the end of the bath room of No. 3 block, and, from the style of architecture employed, will prove an ornament to, rather than a disfigurement of, the building. In this block are placed the forge, engineer's shop, room for fire engine, mortuary, and *post mortem* room for females.

As steam machinery is now invariably used in asylum laundries, the washhouses, etc., are placed near the engine-room. The drying ground occupies the greater part of the west quadrangle, and is thus placed entirely out of sight of all the roads, walks, and approaches. An underground tank is provided for the storage of rain water for laundry purposes. The laundries, workshops, and airing courts have separate and distinct w.c.'s.

Next to the laundry block are the needle room, housekeeper's room, and the visiting rooms for friends of female patients.

The first floor contains the housekeeper's bedroom, and accommodation for the domestic servants, and for ten female patients employed at domestic work.

The stores for household coal branch off from the central corridors. Each store will contain about 100 tons of coal.

In the centre of the north façade is the block containing the committee rooms, superintendent's office, clerk's sitting-room and office, chaplain's office, clerk's bedroom, porter's room, etc. A fireproof room is attached to the clerk's office.

In the basement, which is on a level with the ground floor of the main blocks, are the surgery, office for medical assistant, pathological room, and porter's bedroom.

Passing east of the administrative block are the visiting room for male patients, the storekeeper's room, and the general stores. The latter have been so arranged that all stores, of whatever description, pass straight into the store-room, and the disadvantage and danger of opening gates and dragging heavy packages across corridors and passages is entirely avoided. The store-room is also conveniently near the kitchen, and has separate hatches for delivery of stores to the male and female departments. The meat-safe adjoins the central corridor, close to the kitchen.

Advantage has been taken of the rise of the ground to

obtain archways under the north corridors as entrances to the quadrangles for coal waggon, fire engine, &c. By this plan the continuity of the corridors is not broken, and the ground, being terraced to the north, conceals the archways. Close to the archway on the male side is the entrance to the beer-cellar. The various workshops are in positions analogous to the laundries in the female divisions. The shoemakers', tailors', upholsterers', painters', plumbers', and carpenters' workshops are placed in line, and communicate with each other. The partitions dividing these shops are only six feet high, so that the artisans can readily call to one another for aid in case of emergency; and the shops having a thorough current, will not be liable to become close. At the east end of the shops is a small washhouse for the foul linen on the male side. The block containing the bakery, flour-store, and brewhouse correspond to the boiler-house at the west corner of the asylum. All these shops being *en suite,* the storekeeper can easily supervise them without neglecting the stores. The east quadrangle is taken up by an extra airing-court for acute cases, to be hereafter noticed, and by the workshop yards. The mortuary and *post-mortem* room for males exactly correspond to those already described for females.

The head-attendant's room will be found at the north-east corner of the quadrangle, and in the centre of his work.

Nos. 1, 2, and 3 blocks on the male side being exactly similar to those on the female side, need no description.

The following table shows the distribution of the beds in various blocks:—

No. 1 Blocks	Single Rooms 42	in each	Block—	84
	Dormitories 58	„	„	116
No. 2 Blocks	Single Rooms 11	„	„	22
	Dormitories 24	„	„	48
No. 3 Blocks	Single Rooms 6	„	„	12
	Dormitories 61	„	„	122
	Total			404

In all asylums the female population is in excess of the male, and ten beds are, therefore, provided in the housekeeper's department for such patients as are employed in the kitchens, raising the grand total to 414 beds.

The attendants' and nurses' rooms are so placed throughout the asylum that they overlook the wards and dormitories.

The airing-courts are to the south of their respective blocks, but there is space for two others in the quadrangles near the drying-ground on the female side and working court on the male side, should it be considered advisable to separate the acute cases entirely from the others.

The chapel is placed to the north, and exactly opposite to the administrative block. It would here give a very pleasing finish to the north façade, and form a prominent feature in the main approach to the asylum. It would not in this position interfere with the land to be appropriated for farming purposes, and it would be found more easy of access than if placed to the south. A campanile rises from the south-east corner of the chapel.

The most convenient site for the superintendent's residence seems to be at the north-west corner of the estate. It could either be connected to the main building near No. 3 block by a corridor or remain entirely detached, as might be preferred.

By adopting the quadrangular arrangement of the blocks the elevations to the south, east, and west fronts are equally good; and it is especially noticeable that by placing the laundries, workshops, drying-grounds, and working-courts to the inside of the quadrangles the north elevation is also uniform, and has not that unfinished, straggling look which is found in nearly all English County Asylums.

It is a matter of the utmost importance that the airing-courts and all parts of an asylum occupied by the patients should be as little as possible overlooked by strangers coming to the asylum, for which reason the chief entrance is placed to the north.

The main sewer passes from west to east, through the centres of the quadrangles, and the subsidiary sewers are connected with it in ventilated man-holes, there being a clear fall of six inches into the drain leaving the man-hole. Every sewer will be laid in a straight line, and with a gradient giving a velocity of at least 2½ feet per second, which will be sufficient to keep the sewers clean and sweep away any stones or other impediments which may accidentally find their way into them. Dirt-boxes will, however, be placed under the ventilating grates to intercept any rubbish. In case of necessity the man-holes will enable workmen to inspect the whole length of sewer, and remove any impediment. The engine chimney will also be utilised for the ventilation of the main sewer.

No sewers pass under any part of the main buildings, and

where the main sewer passes under the corridors it will be bedded in a mass of concrete, by which means any contamination of the interior atmosphere of the asylum will be rendered quite impossible.

After leaving the asylum the main sewer will pass direct to the settling tank. It should be noticed that this tank is so designed as to achieve the result usually attained by building tanks in duplicate, it being arranged so that one half of the tank can be cleaned out by opening the sludge-valve connecting it with the sludge-pit, whilst the whole of the sewage is for a short time passed through the other half.

From the tanks the effluent water will be conducted to the farm, and applied wherever irrigation may be required, by means of a simple system of pipes and earthen carriers. As, however, it frequently happens that no part of a farm requires sewage, the formation of beds on the principle of intermittent downward filtration is recommended. Vegetables and root crops can be grown on these beds, which will purify the whole of the sewage at any season of the year without inconvenience.

The soil pipes will be discharged into trapped and ventilated brick-pits, having a concrete bottom, in which a proper channel will be formed to prevent the lodgment of any solid matter. From the heads of the soil-pipes of w.c.'s and urinals a ventilating pipe of large area will be carried above the eaves of the buildings.

All baths and rain-water pipes will discharge into trapped and ventilated gullies, and the water from the kitchen sinks will be discharged into double gullies of large size, also trapped and ventilated. The object of using a double gulley in this case is to intercept the fat, which is the most frequent cause of stoppage in small sewers.

The water-closets will be constructed on the self-acting principle, and will be of the form known as "hopper closets." The absence of a receiver renders the generation of foul gases impossible. The enclosed space underneath the seat will be efficiently ventilated, as experience of asylums teaches that it is very liable to become offensive. A permanent ventilator will also be placed at the top of each w.c., which will *not* be under the control of the attendants, and fresh air will be supplied by a Tobin's ventilator at a lower level.

The urinals will be ventilated in a similar manner. The floors will be formed of white glazed tiles, which will be carried up the side walls to a sufficient height. There will

be a proper receptacle in one corner for slop-water, and the urinals themselves will be of the form invented by Mr. Baldwin Latham, C.E.

Each block will be separately warmed by the high pressure system, the apparatus being fixed in the basement of the towers, and lighted from the outside of the buildings: there will thus be no danger from fire or explosion. This is the most economical and efficient system, and, moreover, the coils and tubes take up very little space in the day-rooms. Single rooms are heated by the same apparatus, but in accordance with the requirements of the Commissioners in Lunacy, fire-places are shown in the day-rooms, dormitories, and some of the single rooms, without which the plans would almost certainly be rejected.

Fresh air will be supplied to the wards on the Tobin principle; and in winter this air will be warmed before entering the wards by causing it to pass along the hot water pipes and coils. There will also be self-registering gratings (not under the control of the attendants), for the exit of vitiated air above every window. Special care has been given to the ventilation of the dining and recreation halls, for which purpose shafts are provided which can be heated in hot weather, or at will, by gas jets, to exhaust the foul air by causing an upward current. The impure air from the wards will also be drawn into shafts running close to the hot water cisterns. The kitchen, workshops, laundries, &c., are ventilated by opening louvres in the roof.

The main cold water tanks, each containing 10,000 gallons, are situated, as above mentioned, in the two principal towers, and these supply six service tanks, each containing 2,000 gallons, which are placed at the tops of the fireproof staircases for the reasons already stated. The aggregate storage of water will therefore be 32,000 gallons.

The water will be raised by a twelve-horse engine, which will also work the laundry machinery.

A large underground rain-water tank is placed near the laundry, and a similar one near the workshops, and suitable arrangements are made by intercepting chambers for the elimination of animal and vegetable matter. The water from these tanks is pumped by the steam machinery.

The laundry machinery consists of the usual washing, wringing, and mangling machines. A drying closet, heated by the waste steam from the engine, and by hot-air pipes from the ironing-stove, is also provided.

The hot water tanks will be heated by coils—the steam passing direct from the large boilers. The kitchen coppers will be heated by the same means, and a rain-water cistern will be placed near the kitchen for cooking purposes.

A second boiler has been provided, as it is absolutely essential; and space has been left for a duplicate engine and pumps.

In view of the rapid increase in the numbers of the registered insane, it may be as well to state in what manner the Asylum could be enlarged at any future time.

The dormitories on the ground floor of No. 3 blocks on each side could be converted into day-rooms by simply removing the beds, and sleeping-rooms could be obtained by a second floor on the dormitory and day-room of No. 1 block. Accommodation would thus be provided for another 60 patients at a cost of not more than £800, or about £13 a bed. Further accommodation could also be obtained, but at greater expense, by building a fourth block in *echelon* from No. 3 corridor, without in any way marring the design of the asylum, or interfering with the system of management. The kitchen, laundry, and other offices are on a scale sufficient for 600 beds.

The advantages claimed for these plans are :—

1. Cheap construction.
2. Easy supervision, and consequently economical working.
3. Fireproof passages between the blocks, rendering the spread of fire from one block to another an impossibility.
4. Any particular ward may be reached without passing through any other ward.
5. The absence of long corridors which have no other use except that of merely connecting one part of the asylum with another.
6. The entire absence of covered ways under the sills.
7. The water tanks are placed over the staircases, thus avoiding the expense of separate water towers on the one hand, or placing the tanks under the roof on the other.
8. All the day-rooms face the south.
9. Perfect sanitary arrangements.
10. The entire circuit of the asylum can be made by the Medical Officers without their being under the necessity of retracing their steps.
11. Additions can be easily and cheaply made.

CLINICAL NOTES AND CASES.

Insanity associated with Contracted Kidneys. By Dr. Savage.

Clara L., single, aged 35.—No insane relations. Governess. Has enjoyed good general health.

Of sober habits. Anxiety was given as the cause of her present illness, which dated from March, 1879. She became dull and depressed, negligent in her habits, and unable to follow her occupation. She passed from bad to worse ; she ceased to menstruate after April, and lost flesh. She was said to have had a severe blow on the right side of the head some five years ago, which rendered her insensible ; this was accompanied by fright, as it was inflicted by a robber. Before her admission, in August, 1879, she had had a fit, rendering her left side weak.

On admission she talked at times incoherently, at others she would not answer questions. She thought her friends were unkind to her ; she wandered about the house in an objectless way, and was violent at times, attempting to bite those near her ; she bolted her food ravenously ; she came out of her bedroom naked and micturated on the door-mat ; she had hallucinations of sight, was cataleptic at times ; she had hallucinations of hearing ; thought she was very wicked and a great hypocrite, and that God was angry with her. She was of middle height, thin and sallow, weighing 7st. 6lbs.

Pupils widely dilated ; sight, especially of right eye, very weak. For six months no alteration took place ; she was unoccupied and untidy, remaining where placed for hours. She ate most ravenously, and would eat till she vomited. She complained of pain in right side of head, and the eye-balls, especially the right, seemed prominent. I therefore examined her optic discs, and found most marked optic neuritis. This was most developed in the right eye, where some hæmorrhages were visible. At this time the vomiting became severe and the pain in the head markedly worse, but her mental symptoms were better, and she could tell us more of her feelings and history. The left arm and leg were very feeble, the arm being the more weak. At first the history of the blow and the other symptoms led one to suspect tumor cerebri, but Dr. Davidson, of St. Thomas's Hospital, having made a careful examination of the eyes, suggested that the neuritis looked like that due to renal disease, and after some trouble we were able to get the urine, which proved to be abundant, of low specific gravity, containing a large quantity of albumen.

The bodily weight had increased to 8st. 4lb. She was treated with iron and occasional saline purges. Her appetite continued ravenous, and we had great difficulty in preventing her eating to excess.

In February, 1880, the neuritis was very well marked, both discs

being swollen, and indistinct, veins dilated and tortuous; hæmorrhages and scattered white patch well seen in right eye. The heart's action was heaving and forcible, and the pulse showed high tension, so that seven ounces pressure were required to get a perfect tracing. On February 10 she had a fit—at least, she was found in a semi-comatose state; she had lost much power in the left side. Her speech was thick, and she was unable to swallow solids.

Her mental condition varied very little; she was in a state of partial weakmindedness, emotional, unoccupied, and incapable of self-control. She continued in this state, regaining very little power, till April 20th, when, at 7 a.m., she became suddenly convulsed, her head being drawn to the right side; frothy mucus escaped from her mouth, which seemed drawn equally on both sides. At 10 a.m. the breathing was stertorous; pulse feeble, 145; Cheyne-Stokes' respiration 12 a minute. This lasted a short time, but passed off before death, which took place at 4 p.m., without any return of consciousness.

Post-mortem 19 *hours after death.*—Body fairly nourished. No dropsy or œdema; calvarium thick; dura mater normal and free; arachnoid normal; pia mater somewhat adherent. The brain escaped, as from pressure, on the removal of the calvarium; the surface was pale, the convolutions being much flattened. Brain weighed 49½ ounces; the substance was very soft.

The lateral ventricles were greatly dilated, with serous fluid, so that each was large enough to hold an orange. No growth and no hæmorrhages.

Cerebellum normal; two small hæmorrhages in the median line of anterior part of pons, each the size of a split pea. Some atheroma of vessels at base. Heart large (with clot), 13½ ounces; great hypertrophy of left ventricle; liver and lungs fairly healthy, some emphysema in the latter.

Right kidney two ounces, left 2½; capsules adherent; surface granular; cortex wasted, mottled; spleen soft.

We have here a case that at first misled me, by its history and symptoms, to suspect a crass cerebral lesion in the form of a glioma due to injury, but the ophthalmoscope set me on the right track. Doubtless I ought to have discovered the albuminuria, but asylum physicians know the difficulties one has in obtaining urine of patients. The optic neuritis, associated with hallucinations of sight and also imperfect vision—which latter is not essential according to Dr. H. Jackson—is interesting; and I have seen at least one other case with neuritis and loss of vision due to syphilis producing similar hallucinations.

The mental symptoms were those of a feeble, badly-nourished organ, one imperfectly supplied by bad blood;

ravenous appetite was added, and must be considered along with vomiting, which is met with in such cases.

The most interesting point is the pathological one—as to how to look upon the excess of fluid in the ventricles. Was this a true dropsy, or was it due to old hydrocephalus? Dropsy was found nowhere else in the body, it is true, but the woman had been healthy, and mentally above the average. I should like to hear of the experience of others. We know that in some cases of general paralysis which have been described by Dr. J. Mickle, excess of fluid is found in the ventricles, but they do not exhibit such marked changes in the kidneys. The smallness of the kidneys and the hypertrophy of the left ventricle satisfy me that the renal disease was primary. If this is the case, and the dropsy of the ventricles is to be so considered as the only dropsy due to renal disease, I believe the case is unique.

I regret I was out of town at the time the post-mortem was made, but Dr. Wood and those present examined very carefully, and found no changes in veins or skull itself to point to venous obstruction or old hydrocephalus. At present I have not had time to examine the tissues microscopically, but do not expect to gain much further knowledge thereby.

The questions to be answered are—Was the insanity due to kidney disease primarily? Was the fluid in the ventricles due to the kidney disease, or to some venous obstruction or old hydrocephalus? Or was the case one allied to general paralysis, in which general degeneration took place in brain, kidneys, and other organs? At the same time, I must say that after examining the viscera of nearly 50 general paralytics, and having the kindly assistance of Dr. Sharkey, Pathologist of St. Thomas's Hospital, I am persuaded that it is rare to find advanced kidney disease in such cases, though the slighter changes are common.

Notes of a Case illustrating the Question of Criminal Responsibility. By G. Mackenzie Bacon, M.A., M.D., Med. Superintendent of the Cambs. County Asylum.

It may be of some use to record this case, not so much on account of its intrinsic interest as of its relation to the greater question of the unfair punishment of persons of weak or impaired mind.

At the present time the "plea of insanity" is only urged in

cases of grave crime, and is even then hampered with the condition of proving the patient's knowledge of right and wrong. But everybody knows that there is a much larger class of so called criminals who cannot plead ignorance of "right and wrong," but are, by the defects of their intellects, whether natural or acquired, incapable of controlling their actions, and not really morally responsible for their conduct.

The following case is one in point—

A male, born with a less amount of brains than is supposed to be the natural inheritance of the majority, emerges from childhood, and is then attacked with continued fever, which leaves him considerably weakened both in body and mind. Soon after he is attacked with mania, and is sent to the County Asylum, where he remains from Oct., 1866, till June, 1867. He returns to the asylum in Feb., 1869, and remains till the following June, suffering from a similar attack. He is then left alone in the world, his parents being dead, and his sisters married. He inherits a small amount of property, of which he is soon deprived by the greater astuteness of his companions, who take advantage of his mental inferiority to rob him, and also to lead him into mischief and dissipation. When deprived of all his possessions he becomes a sort of outcast, living in the rudest way, and gaining his subsistence as best he can by daily work. It does not take long to bring him under the eye of the law, and he is sent to gaol as a "vagrant" once or twice. One day, however, he ventures on some sort of bargain about some potatoes which were not his own, and the police not knowing quite what to do with him, locked him up. When brought before the Justices the latter were puzzled how to deal with him, and, after sundry remands, requested me to examine him and report as to his sanity. I gave my opinion that he was of unsound mind, and he was relegated to the assizes. Here, then, was a man with congenital defects of mind, further enfeebled by disease (fever), of confessedly peculiar mind, so as to be recognized by everybody as deficient, and with a definite history of two previous attacks of insanity for which he had been treated in a public asylum for several months, and considered by gaol officials and common consent to be "not right in his mind."

How was he treated?

The Judge (Mellor) sentenced him to six months' imprisonment, and said if he got worse he could be passed on to the asylum.

What followed?

The prisoner served his six months, though some allowances were made for him, as he was not thought quite right. His sister came to meet him on his discharge, and within an hour he displayed signs of insanity; he turned against her, his best and only friend, and behaved strangely, and, so much so, that two days after she went to the clergyman and took steps to have him removed to the asylum. He arrived there seven days after he left the gaol, and died within 24 hours from acute pleuro-pneumonia.

What a satire is this simple relation of facts on the action of the law! What crime had this poor man committed that he should be condemned to low diet and a *plank bed,* and to a treatment which probably succeeded in shortening his life? Lawyers are fond of talking of the need of administering the law as it stands, as though that were their highest conception of duty; but I should like to know how they could justify the course pursued in this case, and whether it is not one repugnant to common sense and humanity? Law cannot be respected if it commits such gross mistakes as this, and if law and nature are at variance, the sooner the difference is settled the better for society. It is to be hoped that the exposure of such absurdities as were committed in this case may arouse public attention to the follies and cruelties perpetrated under the sanction of the law, and for this reason I wish to call attention to this case. The details may be found in an abridged form below, quoted from a local newspaper:—

DEATH AT FULBOURN ASYLUM.

On Tuesday, Nov. 8, 1879, Mr. C. W. Palmer, deputy-coroner, held an inquest at the Fulbourn Asylum, on the body of James Jolley, aged 29, who died within twenty-four hours of his admission to the Asylum.

The following evidence was taken:—

George M. Bacon, Medical Superintendent of Fulbourn Asylum, said: I knew the deceased. He was last admitted to the asylum last Saturday about noon, upon the order which I produce. He had previously been in the asylum on two different occasions. The first time was on the 22nd October, 1866, and he then remained until the following June. On Saturday last he was brought here by the relieving-officer. He was in a weak and exhausted state, and could hardly walk alone. He was rather excited and incoherent, but recognized several people about the place that he knew. I took him into the wards, and gave the attendants directions what to do with him. He was put to bed immediately, and had some beef-tea. I saw him

an hour afterwards, and then he was eating some of the dinner such as the others had. I saw him again about eight o'clock in the evening, and again at a quarter to ten, when I gave the attendant, Wright, some brandy and milk to give him at intervals during the night. I also prescribed some medicine for him. About half-past three the following morning I was called up to see him, when I found he was sinking, with apparently no hope of recovery, and I left him, as nothing could be done for him. He was too ill when admitted to undergo a thorough examination, but I listened to his chest, and found he had got extensive mischief in his right lung. I made a post-mortem examination yesterday, and found that he had inflammation of both lungs. The right one was completely solid, so that no air could enter it, and it was also adherent to the chest walls throughout, owing to recent pleurisy. The left lung was in the first stage of inflammation and very much congested. The other organs of the body were healthy. The body was wasted, and there were several bruises on the arms and legs. I don't think they (the bruises) were more than a week old. I examined the head also: the skull was of an unusual shape, being much under the usual size, and very flat in front. I removed the brain and found it weighed only 40 *ounces, whereas the average weight of a person's brain of the deceased's age is* 48 *ounces.* I examined the deceased in gaol, and gave evidence before the Judge by whom he was tried in April last. Produced is the head-attendant's, Mr. Thorne's, report—which it is the custom to give me always—of the examination of the patient when admitted. The report stated that the deceased was excited, dirty, and thin when admitted. He had several bruises on his legs and his feet. The ankles were swollen. The disease of the right lung may have existed perhaps about ten days.

By the Foreman: I could not give any cause for the inflammation. The deceased was desperately ill. The fact of his being ill in gaol on low diet would tend to his being thin.

By the Deputy-Coroner: The cause of death was pleuro-pneumonia.

By a Juryman: The bruises were very small, and might probably have been caused by the deceased being held under control.

Edward M. Thorne, Head Attendant at the asylum on the male side, said: On Saturday last, about noon, the deceased was admitted to the asylum. I saw him in No. 1 ward. He was excited, dirty, and thin. He had the ordinary working man's dress on. I undressed him, gave him a warm bath, and put him to bed immediately. I immediately made the report produced to Dr. Bacon. I saw the deceased several times. He took a pint of beef tea between twelve and one. I saw him about three o'clock in the afternoon, and he was much in the same state. I did not see him after eight o'clock alive.

George William Felstead, Day Attendant, said: On Saturday last, about twelve o'clock, the deceased was admitted into my ward. I saw him bathed and put to bed. He was dirty, thin, and weak. After he was in bed he had beef-tea and other food given to him. He could

only take a little at a time. I continued in charge of the ward until eight o'clock, and during that time I saw him every ten minutes. I went off duty at eight o'clock, and S. Wright, Night Attendant, came on. The deceased seemed to get gradually worse while I was on duty. He was dead before I got on duty again.

By the Foreman:—I had no difficulty with him.

By the Deputy-Coroner: He had to be fed.

Samuel Wright, Night Attendant at the asylum, said: On Saturday night last at eight o'clock I came on duty. My attention was called to the deceased's state by the previous witness. The deceased was in bed, being very weak and ill. I saw him at half-past nine; the doctor was there then. Brandy and milk were ordered for the deceased, but I could not give him much as he was unable to swallow it. He was rather restless till about half-past one. After that he fell into a drowsy state. At a few minutes past three I saw he was sinking. I went and called Dr. Bacon. He came and saw the deceased, but could do nothing for him. The deceased died at thirty-five minutes past four.

Mr. Barnabas Gibson, governor of Her Majesty's Prison at Chesterton, said: The deceased was admitted into prison on the 3rd of April, but he was convicted at the May Assizes and sentenced to six months' imprisonment. His sentence expired on the 2nd of November; but, that being Sunday, he was discharged on the 1st of November. When he was admitted on the 3rd of April he weighed 145lbs. On the 1st of November when discharged he weighed 143lbs. He was a weak-minded and spare man. He was not put to regular labour. He chopped wood and picked oakum. During the six months he was in prison he was in pretty good health. The first four months his diet would be the third-class, viz., breakfast, eight ounces of bread and a pint of gruel; dinner, Sunday and Wednesday, four ounces of bread, eight of potatoes, and eight of suet pudding; Monday and Friday, eight ounces of bread, eight of potatoes, and three of cooked beef without bone; Tuesday, Thursday, and Saturday, eight ounces of bread, eight of potatoes, and three-quarters of a pint of soup; supper, six ounces of bread and a pint of gruel. After four months he would have an increased diet, viz., the fourth-class diet. He always ate his food uncommonly well, and was a hearty fellow. The last fortnight he was not looking so well, and I had him taken before the doctor. He was not taken to the infirmary at all. He was not punished by dietary punishment, but only by having his marks taken off. I saw him on the morning of his discharge. He did not look so well as he had done. He was thinly clad when he came in prison. He had no shirt on, and only a pair of knee breeches and stockings. I wrote to his sister before he left for a shirt and a pair of trousers. Prisoners can see the doctor upon application. The deceased knew of that, because he did ask for and did see the doctor.

By the Foreman : He was well clothed while under my care. The diet is weighed out separately.

By a Juryman : His sentence was six months with hard labour, but he did not have hard labour because I knew he had been here twice before. I consider 143lbs. a very low weight for a man.

Mr. Thomas Hyde Hills, surgeon, residing at Cambridge, said : I am the Surgeon of Her Majesty's prison at Chesterton. In consequence of the deceased having had a special examination in gaol before his conviction I saw him often, especially at first, without his complaining at all, and I have nothing particular to say about him. About a fortnight before he went out I saw him, and he told me he had a cough and a cold; he said he was hungry, and I noticed he looked thinner. I ordered him some medicine for the cold and increased his diet. I gave him a quart of milk, and he had 8oz. of bread and a pint of gruel extra, besides the fourth class diet. I saw him on two or three occasions afterwards, the last time the day before his discharge. He had nothing to complain of then, in fact he told me he never felt better in his life. His cough and cold were quite well, and had been for two or three days. In my opinion he was quite fit to be set at liberty. He was of weak intellect, but not sufficiently so for him to be confined in the asylum.

By the Foreman : I should say his lungs were all right when he had the cough and cold. I think the diet is sufficient for an ordinary man.

By a Juryman : It is not an unusual thing for a prisoner to say he is hungry. If he had any symptoms of insanity I should have referred him to the Governor.

Mr. B. Gibson said there was a special mode of removing any lunatic from the prison to the asylum.

Lucy Marshall, married woman, of Comberton, said : The deceased was my brother. On Saturday week last I went to the prison at Chesterton to meet him coming out, and took him clothing in consequence of a letter I received from the Governor. He was already dressed, and they (the two keepers) would not allow him to put it on. He seemed very ill indeed, and did not know how to walk. When we got into Market Street I found he had no shirt on, so I put one on him which I had brought. We went into the market, and the deceased kept complaining that he was weak and tired, and wanted to sit down. We went to Mr. Moden's. The deceased wanted some food, but when he got it he could not take it, so I gave him a small glass of gin and water to warm him. The deceased got home about seven o'clock, had his supper, and went to bed. He fell in a ditch while walking home, and two men got him out. He complained of his feet and legs ; he had a dreadful bad cough and cold. He did not rest all the week, night nor day, but kept wandering about ; I was afraid to be in the house with him. The cough and cold got worse. I went to see the clergyman on the following Monday, and in consequence Mr.

Roper, of Cambridge, examined the deceased on Friday, and advised him to be removed here. On Saturday morning I had to have some men to him. When he came out of prison his arms and legs were much swollen and in pain. On Saturday morning he was removed to the asylum, and my husband came with him.

By the Deputy-Coroner : I did not ask the keepers to allow me to put his shirt on. They said he had got his clothes on, and I took their statement.

By the Foreman : There was no water in the ditch. The deceased had not been taking any liquor, and had not the appearance of a man who had been taking drink. I had no difficulty to control him.

By the Jury : I lost him in Cambridge. He had to walk five miles home. He turned very bitter against me. He had very little food while at mine. He was with me all the week, except when he went out. He threatened me, and has got the poker to me. I had to use no force to him. I heard nothing about the bruises until he told me. The deceased, when he came out, said he had been treated shameful after we had been to see him. He said he had been strapped to a board, and had to walk up and down a passage without a shirt on. He also told me he was put to hard labour.

By the Deputy-Coroner : I gave him no money on Saturday. He gave me sevenpence for a cap, and fivepence for a pair of braces. I don't know whether he had any money when he came home.

By the Foreman : About twelve months ago he weighed twelve stone two pounds. Between that time and when he went to prison he led a vagrant sort of life, and slept in lodges.

By a Juryman : The deceased described the bruises as swellings.

Mr. B. Gibson recalled, said : The deceased would, during the first month of his imprisonment, have to sleep on a plank, and after then, about two nights a week, but it gradually ran out. He was not strapped down to any plank during the time he was in prison.

By the Foreman : He was on nothing but the plank with four or five rugs on top, or if he liked he could roll himself up in them.

By the Deputy-Coroner : He had 3s. 5d. when he went out.

The Deputy-Coroner, having addressed a few remarks to the Jury, the Foreman said he thought what had been said by the deceased's sister was a sufficient explanation to account for the inflammation of the lungs.

The Jury then returned a verdict of " Death from natural causes."

Chorea at an Advanced Period of Life. By G. Mackenzie Bacon, M.A., M.D.

I am induced to publish a brief note on the following case, as chorea is notoriously rare late in life. In the Journal for October, 1879, Dr. H. Sutherland recorded a case

in a female, aged 53. This case was associated with other nervous or hysterical symptoms.

In 1866 a married female, æt. 58, was admitted into the Cambridge Asylum, in a maniacal state, and suffering from severe chorea, which had existed six months. She was very thin, and anœmic. She was treated with zinc, arsenic, and other drugs, and fed with all sorts of nourishment, and wine, for some time, with no benefit, except that she gained flesh, and got more manageable, but the chorea improved hardly at all. In 1869 she got weaker, and died. I made a post-mortem, and found chronic arachnitis, a shrunken brain, and a large collection of serum in the ventricles. She was then 61 years of age, and had suffered from chorea uninterruptedly for nearly four years.

A Case of Epilepsy, terminated by Apoplexy, and complicated with Hæmorrhagic Cysts surrounding the Left Kidney. By T. B. Worthington, B.A., M.D., Sen. Assist. Med. Officer, County Asylum, Haywards Heath, Sussex.

Charles G., æt 37, married, a farm labourer, was admitted on the 22nd September, 1877, suffering from epilepsy. His parents are both living, and are not subject to fits; but one of his brothers has died of epilepsy, and another is afflicted with the disease. He is the father of nine children, all still alive, and several of whom are epileptics. When examined on admission, he was found to be a thin but muscular man; he had no thoracic disease, and his digestive functions were unimpaired. His mental state was returned as epileptic dementia, and he was incoherent, stupid, slovenly, and dirty. During his stay in the asylum, owing to his extreme irritability of temper, he often quarrelled with the other patients, and attendants. His fits were not very numerous, and during a period of six months, in which an accurate record of the number was kept, he only had 10 in the day-time, and 36 at night; but they were severe, and generally left him prostrate for some hours. He gradually became more demented, and during the last three months of his life looked extremely anæmic. His chest was twice examined, but nothing abnormal could be detected in his thoracic viscera. He complained on one occasion of pain in his left lumbar region, but when his abdomen was examined he said it was on the other side. His urine was clear, and he never passed any blood. He did not take his food well latterly, and often vomited after his meals. He was only confined to bed when suffering from great prostration, caused by the severity of the epileptic paroxysms. On the 11th February, 1880, he was about as usual, and out in the airing courts before and after dinner; he took his supper at

six o'clock, and went to bed at 7.30; he slept from 10 till 3 the next morning, when he had an ordinary fit, and at six he was returned, by the night attendant, as having had another; he had been awake, and had spoken in the interval. He never recovered consciousness after this, and presented all the symptoms of brain pressure; he had stertorous breathing, his pulse was slow and feeble, and he had total loss of reflex action. He only lived six hours.

Post-mortem examination 50 hours after death. The body was well nourished, and weighed 123lbs. There was no tumour in the abdomen externally visible.

The Lungs were slightly congested, and on the left side there were pleural adhesions.

The Heart.—The valves were competent, and there was no sign of atheroma on them, nor on the aorta, the arch of which was examined. The muscular structure was firm, and the left ventricle somewhat hypertrophied.

On opening the abdomen there were signs of previous attacks of peritonitis.

The Liver was large, smooth, and a section presented fatty degeneration.

The Spleen was normal in size and structure.

The Right Kidney was healthy, and weighed 4½ ozs.

On looking for the *Left Kidney* a large solid mass was found partially occupying the left hypochondriac lumbar and iliac regions; it was adherent above to the diaphragm, and had to be dissected off the lumbar muscles on which it was lying. When the connective tissue was removed from it, a distinct fibrous tunic was apparent, surrounding the whole tumour. A section in its long axis showed that it consisted of two cysts, each containing large clots of semi-organized blood. These cysts were perfectly distinct from each other, and situated between them was the left kidney, presenting no abnormalities of structure except that it was slightly flattened, and weighed 1oz. less than its fellow. The adipose tissue that surrounds the kidney had disappeared, nor were there any traces of the supra renal body. The blood clots weighed 2½ ozs. in the larger or superior cyst, and 1½ ozs. in the smaller one, which was situated in the iliac region. The weight of the whole mass was 24ozs.

The Brain.—The dura mater was opaque in places, but not adherent; the pia mater was very slightly congested.

The surface of the brain was dry, smooth, and had a glistening appearance; the convolutions were greatly flattened, but the sulci could be detected. There was a patch

of softening on the left tempero-sphenoidal convolution. There was no atheroma of the arteries of the base. The left lateral ventricle was completely filled with clotted blood and broken-down brain structure, weighing $3\frac{1}{2}$ ozs.; the right was distended with blood-stained serum. The clot was partially coagulated, the fibrin being deposited on the periphery, but the centre was fluid. The basal ganglia were softened, especially the corpus striatum, which seems to have been the seat of the lesion.

The brain weighed 39 ozs.

I think this case is interesting, from the lesions found (1) in the brain; (2) surrounding the kidney.

Cerebral hæmorrhage is an exceptionally rare form of death in epilepsy. I have carefully examined all the records of the autopsies that have been held in this asylum since its opening, and have been unable to discover a single case of epilepsy ending in apoplexy.

Russell Reynolds, in his exhaustive treatise on epilepsy, says:—"Apoplexy is one of the events which is frequently dreaded by epileptics and their friends; but although the epileptic convulsion is not rarely followed by profound coma and a general appearance of apoplexy—using that term in a symptomatic sense—it is exceedingly rare to find that actual cerebral hæmorrhage has occurred. No single instance of such an occurrence has presented itself in my own experience."

A case of great interest is reported in the "Lancet" of July 8th, 1876, under the heading "A Case of Epilepsy of Traumatic Origin; Hæmorrhage from Vessels at the Base of the Brain." It occurred at the West Riding Asylum, and is most fully recorded.

In this case the epilepsy was caused by a fracture at the base of the skull, and the hæmorrhage by friction of the larger vessels against the corroded osseous prominences. The whole brain substance was anæmic, and there was no trace of any internal clot.

A point worthy of notice is the fact of the extensive softening of the corpus striatum, where undoubtedly the hæmorrhage originated, causing no motor paralysis. The man was out twice the day before his death, and walked about without any assistance.

Niemeyer, in his chapter on cerebral hæmorrhage, states that the most frequent localities of hæmorrhagic effusions are the corpus striatum, thalamus opticus, and large medul-

lary masses of the hemispheres, and when, as in this case, they are in the vicinity of a ventricle, they frequently break through its walls, and the blood escapes into its cavity.

The flattened condition of the external surface of the convolutions from the pressure in the ventricles is remarkable, on account of the short period, only six hours, that the pressure existed, and shows how easily the brain structure *en masse* is affected by its blood supply. This condition is generally seen in cases where there has been long continued, gradually increasing pressure from tumours and other abnormal growths in the brain structure.

There was no trace of hæmorrhage external to the ventricle, and the remainder of the brain was, with the exception of small portions of the pia mater, white and anæmic.

That the arteries were not atheromatous is natural, as the patient was only 37 years of age.

The organized cysts, containing blood in a coagulated form, and so closely connected with the kidney, I am at a loss to account for in any way. That they had but little effect on the function of the gland is evident, as there never were any symptoms of renal disease; and on one occasion only was any complaint made of pain in the lumbar region. There was no sign of the tumour externally, nor when pressure was made on the abdomen could it be felt. It did not in any way affect the powers of locomotion. No blood was ever passed with the urine, which was clear and healthy. The anæmic appearance observed some weeks before death was due presumably to the hæmorrhage into these cysts, and remembering the fact of the cachectic look during life, when the tumour was found at the autopsy, it was at once mistaken for carcinoma, and, I regret, hastily removed.

I have searched all the books at my command, but have been unable to find a case similar to this. In the "Lancet" and elsewhere, numerous cases are recorded of cystic and malignant disease of the kidney, but none in which that gland was surrounded with cysts, which exerted a certain pressure, but apparently in no way altered its secretion.*

* Blood effusions on the inner surface of the dura mater and the brain are not exceedingly rare in Epilepsy, according to Trousseau, Echeverria and Charcot. The latter have also described ecchymotic extravasations always surrounded by normal tissues in the above regions, the endocardium, kidneys, &c., in epileptics dying in the *status*. In none, however, were they so considerable as in this case.—[Eds.]

OCCASIONAL NOTES OF THE QUARTER.

Extraordinary Case of Delusional (Homicidal) Insanity with Hallucinations of Hearing and other Senses, Religious Fanaticism and Murder of Child, the Mother being a Consenting Party.

The following very interesting paper by Dr. Charles F. Folsom, Lecturer on Hygiene and on Mental Diseases in Harvard University, is extracted from the "Boston Medical and Surgical Journal," for March 18th, 1880:—

Mr. F. is the next to youngest child of five, four of whom are in good health. There is no known insanity in the family. The father is still living, of very intemperate habits; the mother died of cancer. Mr. F.'s general habits are good; he has used tobacco, but never to excess. He was always strong-willed and very conceited.

When fifteen years old he enlisted as drummer-boy in the recent war, and served to its close; he had many hard marches, and was several times ill with dysentery. At the age of twenty-one he "experienced religion," having worked at "heeling" in a Lynn shoe manufactory since the war, with the exception of a year passed with a brother in the town of Natick. In Lynn he became acquainted with his wife, employed there stitching shoes. He worked so hard to save money to get married that he broke down in 1871, and had to take a vacation, upon his return from which he was married, at the age of twenty-five, a year after having had an attack of diphtheria. In 1875, business being dull, he removed to Pocasset, the home of his wife, and took a small house, nearly half a mile from his nearest neighbour, Pocasset being a village of three settlements, about a mile and a half apart, containing in all about eighty houses, and from three hundred and fifty to four hundred inhabitants. He employed himself carrying the mail between the railroad station and the post-office, for which he was paid one hundred and fifty dollars a year, took care of the Methodist church, and raised a few crops on a small piece of land, keeping a horse, and also one cow, whose milk he sold when he had any to spare. In the summer of 1876 he was overheated by exposure to the sun in haying, felt weak, nauseated, with a feeling of oppression about his head, so that he had to give up work, and has not been able to wear a stiff hat or a tight one since that time. His family physician remembers having heard him complain of his head a year later. He is a rapid, fluent speaker, very bright, of not much education, thoroughly kind, humane, affectionate, and extremely fond of his family, especially the younger daughter, who was his constant companion.

February, 1878, in the church one evening, he heard the Old Testament preached, and thought if it were all true, and men lived up to it, they would soon be in the poor-houses with their families. It made such an impression upon him that he had to go home, leaving a friend to put out the lamps and shut up the church, thinking that no one lived up to the religion which he professed to believe. On reaching home, he found a paper called the "Golden Rule," and in it a sermon on renunciation, by a popular preacher. He came to the conclusion that the only way to find out whether the Bible were true would be to live up to it, to follow out the letter to its logical sequence, and see whether God would support a man in it, as "the Spirit of God leads a man in the opposite to the natural direction." He began to discuss religious doctrines incessantly, and went about to those acquaintances with whom he had any differences, and said he wished all to be forgotten, as he meant to lead a new life of devotion to the Word and Spirit of God.

He "experienced religion" a second time at the Methodist camp meeting—the first having been in Lynn years before. He spent much time in poring over Josephus and the Bible.

He thought the Lord asked him to consecrate himself to his work, to the exclusion of every other duty, even to letting his family starve if necessary. He struggled with the question for several days, and then yielded, when he thought he was rewarded for his act of faith by the Lord not requiring him to do it. Again the Lord asked him if he would renounce his family altogether, and never again see them, in order to go and preach the gospel. The question at first "staggered" him, as did the former on consecration, but finally he consented, and the Lord rewarded his faith by not requiring him to do it, as in the former case, and by giving him clearer light to see the meaning of the Bible. He said he always talked with the Almighty as if he were a boy fourteen years old, and God always held him to his word.

In the summer of 1878 he had his "baptism by water" under the Adventist leaders, Wing and Brown, although he says he got his inspiration and communications directly from God. He had a great vision, beginning while he was asleep, although he is sure he did not remain so, for everything was very vivid and real, and he recollects getting out of bed to pray. A heavy black cloud settled down on him; he heard some voices plainly and others faintly, is not sure what they said. He was translated three-fourths of a mile to the house of his mother-in-law, and saw a terrible whirlwind, with noise of hail and thunder, so that the adjacent house of his brother-in-law was levelled with the ground. He was very much frightened. The Adventists soon became so demonstrative that they were forbidden to hold their meetings in the church, and afterwards were prohibited from using the schoolhouse for that purpose. On the departure of the Adventist leader from Pocasset, F. at once became the acknow-

ledged head of that sect in the village. There arose a bitter quarrel, and F.'s brother-in-law forbade his wife having anything to do with F. or his family, which he considered to be a fulfilment of the vision just related; and his followers thought him chosen of the Lord because of the vision and its fulfilment.

In December, 1878, the Lord required him to give up relations with his wife. He wondered whether the suggestion were from the Lord or the devil. He and his wife argued the point, standing in their night-dress in their chamber. He finally consented, and then, as in the two cases before, of consecration and renunciation, he found the Lord did not require him to do more than show his faith.

In these communications from the Lord there was no act of the will but they came beyond his power to bring them or prevent their coming. They were always accompanied with a peculiar, indescribable sensation, as if something were going from the ends of his fingers, a sinking sensation about the heart, and a feeling lasting about fifteen minutes which he could not explain, but it was not unconsciousness.

Nine weeks before the homicide he had another revelation that he should lead a life of celibacy. He and his wife both finally agreed to give up their relations for three weeks, to see whether the Lord really meant that. At the end of that time, for a trivial reason, he concluded the Lord meant for them to abstain, which they did for the remaining six weeks of their living together. At a meeting one evening, about this time, he had an uncontrollable fit of crying, and wondered whether it was a sign that the Lord meant him to renounce his family and go away to preach. He became irritable and impatient with his children, whom he really loved very much.

Three weeks before the murder he had his second great vision, one afternoon on lying down for a nap. A cloud settled down over him; his head and chest seemed as if afire; a tornado swept by, and he heard the sound of thunder (which Dr. Denny thought might have been suggested by the striking of the clock). He saw himself standing in a room in his night-dress, with a dim light from a candle. A voice said, "Jesus is here, Jesus is here." He says he is sure he was not asleep, but remarked that it was a quarter past three when he awoke. He could not understand the Lord's meaning, and could not sleep any more than if he were of glass, being in great agony.

Ten days later, and also ten days before the homicide, his wife's sister was at F.'s house, when her husband, a violent tempered sea-captain (not the same brother-in-law as the one already referred to), found her there against his orders. He had a gun with him, and threatened to shoot Mr. F. This made such an impression on him that he could not attend to his work, although he continued to carry the mail. There was an awful feeling as if God were actually in the house, and about to require some great

sacrifice of him. For the next ten days he ate only bread and cracker very sparingly, and drank only water, sleeping very little, scarcely an hour at a time, breathing so heavily in his sleep that he could be heard distinctly in the next room.

All this time, while nominally the leader of the Adventists, he considered himself far in advance of them all, as having direct relations with God, and being chosen to do a great work second only to that of Christ. He remained in the greatest agony to find out what the Lord meant by this vision, and in great fear from the threat of his brother-in-law to shoot him.

Four days before the murder he told a young girl, sick with consumption, that he could restore her to health if she would have faith in him; and the day before it he went to a sick Adventist and said it had been revealed to him that he should get well.

Three days before the murder he became convinced that the Lord meant him to go away and preach, but he did not know where. He had just money enough to go to Boston, and he told the postmaster that he meant to give up carrying the mail in a few days—a great act of faith, for the one hundred and fifty dollars a year from it constituted then his only income.

The next day his wife read in an Adventist paper the sacrifice of Abraham, and asked him if he could perform so great a sacrifice, if that was what the Lord meant to require. He was shocked, and thought it preposterous, and then felt it so absurd that he laughed outright. After having a little sleep that night, he began soberly to think whether he could do so, and laughed aloud again, the idea seemed so absurd. However, he soon concluded that some sacrifice was necessary, but did not know whether the Lord meant to take him, his wife, or one of his children. He felt that the one to go was to be taken by sickness and die, as did his first-born child, of diphtheria, some years before. He told his mother-in-law that if there was anything between her and God she had better make it square with Him, and give God the benefit of the doubt.

This brings us up to April 30th, the day before the homicide. His family physician had noticed undue excitement for the previous month, and that for a week F., instead of being loquacious as usual, had been taciturn and moody, even passing his friends without recognition. He had been living a life of intense religious excitement for six months, and had himself remarked an uncommon weariness and inability to work; indeed, he had said that he was getting prematurely old; and some former friends visiting him, several months previously, from Lynn, remarked that if he were not then insane he soon would be so.

During the day, a tramp had called for food, and upon being generously treated, left F. an old case knife, with a rough blade six and three-eighths inches long, one inch wide, and tapering to a point, the handle being of wood, five and one-eighth inches long, four

inches round, and bound at the end with tin. That evening F. and his wife went to the Adventist meeting, and he spoke fluently. On the way home they saw lightning, which both remarked upon as being unusually red, and a black cloud was thought to cover the moon. F. was sure that was a sign from the Lord. They went to bed and he awoke between one and two o'clock with the sensations he usually felt in his revelations. He was shown that the Lord meant to test his faith by asking him, as he did Abraham, to kill his beloved child. His wife told him he was wrong then if never before in his life, and tried to dissuade him from it.

He went to the room where he had occasionally worked at shoemaking, got the knife left by the tramp the day before, as specially ordained by God—in his mind—sharpened it, as he had seen pigs stuck clumsily, and wanted his child killed at once if at all, and then went back to his wife's chamber.

She still tried to dissuade him, but he assured her that all God wanted was to try his faith, and that, as on previous occasions, He would not require the deed to be done. She said, "Go, and God be with you," but neither then thought that the child was to be sacrificed, although F. was prepared to do it if the Lord so required. "One moment of agony," he said, and "then everlasting peace."

On finding himself standing in his night-clothes, holding his head with his hands, in the room dimly lighted by a kerosene lamp in the chair, he recognised the position as being identical with that of his vision three weeks before, and knew he had found its interpretation. He raised his hand to the highest, kept it up for a long time to give God plenty of time, brought it down and struck the bed. He then raised it again, and on bringing it down pierced the walls of the heart, when the child died almost instantly, moaning, and simply regaining consciousness a moment to say, "Oh, papa!" and not suffering much pain, as he prayed might be the case if the sacrifice should be required.

The elder sister, at first unconscious of the act, was then awakened and sent to her mother. She had only a vague recollection of the matter, and says, "Edie moaned dreadfully." F. lay quietly on the bed with the dead child, feeling a great sense of relief. Mrs. F. then went to the next room and said, "Oh, Charley! how could you do it?" He answered, "I promised the Lord I would, but thought He would stay my hand." He had hoped and felt that there would be a moment of agony in consenting to do it, and that then he would be the favourite servant of the Lord and he and his child would go out and preach a new salvation. He had been baptised with water and of the Holy Spirit and hoped for the baptism of fire.

He soon had another revelation that the child would rise before morning, and went quietly to sleep. After an hour of intense suffering on the part of himself and wife when they found the child did not rise, he had another revelation that she would do so on the third

day. Up to this time none of the other Adventists had any idea that such a sacrifice had been thought of. A neighbouring fanatic, Mrs. H., was sent for at eight o'clock in the morning, and her husband came two hours later. They were at first shocked, but soon were filled with the delusion as to the resurrection. F. carried the mail unconcernedly that morning, and then gave it up, and asked Mr. H. to take his place, until a successor should be appointed. During the day, he sent to all the Adventists and to the leading people in the town, including the physician, selectman, and Methodist minister, to come to his house, as he had a special announcement of great importance, which they supposed to mean his going away to preach, especially as he said it would be his last meeting in Pocasset. None but Adventists appeared, the meeting being in the middle of the afternoon. There were present: Mr. and Mrs. F., Mrs. D. and daughter, Mr. and Mrs. S. and daughter, Mr. and Mrs. W. and two sons, Mr. and Mrs. G., Mr. and Mrs. H., Mrs. S., Miss C., Miss W., Mr. and Mrs. H.—or twenty out of the twenty-three Adventists.

F. spoke fluently of the lightning and the cloud over the moon on the previous evening, and of his many revelations and visions, and then showed them the dead child, to their horror. He finally convinced them of her resurrection on the third day. When the meeting dispersed, Mr. W. told two carpenters working for him of the deed, but otherwise it was not mentioned until the evening, when Constable R. ascertained the fact of Miss D., whom he happened to visit. Mr. R. at once called on Selectman N., to tell him of the homicide, and was sent to Mr. H. to ascertain whether such was the fact. In the meantime, lightning again, Thursday evening, was interpreted by F. as another revelation from Heaven that he had done rightly.

The next morning the constable went with a friend to guard F.'s house, and the selectman drove to a railway station, several miles distant, to telegraph for the sheriff and medical examiner. On their return, Mr. and Mrs. F. appeared perfectly calm. Mr. F. told the story minutely, even stopping from time to time to have every word put down, but showed great emotion when speaking of the child's death. He told his family physician that he should kill the other child if the Lord required it, and his wife sat quietly by darning stockings, without any of the emotion shown by her husband, sure that whatever happened, the resurrection on the third day would fully justify the deed.

On the way to the jail, Mrs. F. sat in the car quiet and calm; Mr. F. sang religious hymns, and tried to harangue the passengers about his great mission as an evangelist.

Mr. D., the greatest fanatic of the others, was not at the meeting, and, on reaching home late on Thursday night, at once saw the nature of the homicide, and set to work to disabuse the rest of their delusions. Most of them were brought to their senses in a day or two,

but some remained deluded until the third day, when Mrs. F.'s mother went to the room where the child's body had been put, to see whether it had arisen. Mrs. F. thought the child would rise and the prison doors be opened on the third day; but when that did not happen, she, too, was convinced that her husband had acted from mistaken faith, and had simply murdered a daughter to whom they were both devotedly attached.

F. alone held to his delusion. When the child did not rise on the third day, he was not troubled in the least, as he said the word day was used in the Scriptural sense, and he did not know its length.

Previous to the murder, as afterwards, he was sure he was within a step of Jerusalem, of being where the apostles started; that he had in his hand the silver keys to the kingdom of God, and that he should have the baptism of the Holy Spirit—it might take a day to get it, or a thousand years. Daniel, Michael, Cyrus, and Christ were represented in him, and especially Jacob. The twenty-three hundred days mentioned in the Book of Daniel when Michael shall stand up ended on the day of the murder, and he was Michael, who also was Jacob. He never before felt so happy and full of peace as after killing his child.

Soon after going to jail, he had his third great vision, and "the third baptism, with fire," as a reward of his faith. He felt so cold that he could not get warm by piling on all the bed-clothes. It seemed to him as if he were in a "rush of water," and all afire inside throughout his body. He was dazed for several days, and since then his life has been filled with revelations and minor visions, one of them that the prison doors would be opened May 21st, with great phenomena from the heavens, and that the kingdom of God would be preached by him with his risen daughter, who would appear in a cloud of light, etc.

F. and his wife both refused counsel, saying that they were in the Lord's hands, and only consented to have lawyers appointed for their defence when they found that the Court would require it. It should be said, too, in passing, that the Adventist papers mentioned the homicide as an insane act, due no more to one form of religion than another.

I saw Mr. F. three times before the sitting of the grand jury in October. He appeared a man of high sense of honour, with a very keen general appreciation of right and wrong, neat and particular in his dress, very scrupulous in his habits, and of tender feelings. His great love of his family, especially of the younger daughter, and his devotion to them, were commonly observed and remarked upon. He could not refer to the killing of his child without completely breaking down, although, if asked if he did aright, he would at once break out into rapturous descriptions of his greatness, and boasted of his being so important a personage that his supernatural power was so felt by the other prisoners that they obeyed his slightest word—a delusion based

on the fact that when disturbing our conversation they kept quiet at his request.

The extravagance of his delusions, the very marked tremor of his hands and tongue, and the rapidity with which he rushed from one emotional state to another, suggested to me general paralysis of the insane; but the failure to detect any, even slight, inco-ordination of any of the finer muscles, the want of permanent impairment of the memory, the absence of tabic symptoms or increased sexual impulse, the efforts to avoid being seen when strangers came in, convinced me that such was not the disease in hand, and, indeed, a general paralytic, so long ill, could not have written such letters as several which were shown to me. The three great visions, probably somewhere on the obscure border line between consciousness and unconsciousness, with symptoms somewhat like an *aura*, made me think, but only for a moment, that epilepsy might be an element in the case.

I could not find any evidence of disease of heart, lungs, liver, kidneys, or brain, except the mental symptoms and indications of hyperæmia, at least partial, of the brain. I did not observe any pallor or congestion of the face, although the eyes were flushed. The brain was very tired, however, especially at my first visit, and Mr. F. could read only in snatches for the first five months of his confinement, without lying down to rest, and it was impossible for him to concentrate his attention. At times he was somewhat incoherent and illogical, and very easily lost the question put to him, but he was, as a rule, quite clear, and reasoned accurately. His pulse was, as I saw him, once quite slow, but commonly about 70, regular and weak. Generally he slept well enough, but lightly, after a couple of weeks of sleeplessness in the jail. Digestion not troublesome; no hallucinations of sight or hearing. He thought God worked through the other inmates of the prison to do things to help him, even when they were making profane or obscene remarks. He had apprehensions part of the time that other sacrifices might be necessary, but finally gave up that idea, although he was not quite sure even then whether some other revelation might be made to him to kill his wife or other child; and he would at any time do it if God so commanded. If he thought there was any danger of killing the other daughter, in spite of his faith in God, he would want forty thousand bars and walls between them. Several times, indeed usually, I found a little uncertainty about him, and that he rarely repeated the same statement in precisely the same way as before.

He had no care for the future, knowing that he was in God's hands, and all would be right. If set free, he would have nowhere to go, and would at once come back to prison—a curious inconsistency with his grand ideas, but probably due to his believing that he must await the Lord's time for the resurrection. He said he did not care for his wife's future, as she, too, was in God's hands.

Just before the homicide, he thought he was called to preach for

life, and was ready to give up his wife and children for ever for that purpose; but instead of that, God guided him to murder and Barnstable Gaol. Barnstable being in Cape Cod, and the Cape being called sometimes the right arm of the State, his incarceration is spoken of in the Bible, where it is said that God shall hold His own in His right arm. The Bible says, "He shall stretch out His arm like a swimmer," which referred to the great swimmer Boyton, and showed that the present is the time for the fulfilment of Scripture. He had a large marble to toss in his cell, and when it broke he said it was the ball in a great waste mentioned in the Bible. In fact, nearly every trivial act or event in his prison life was referred to him as being an illustration or verification of some passage of Scripture, and indicating that all the great predictions were being fulfilled. He knew he was right, and the rest of the world wrong in not believing him. In October, he came to the conclusion that he might not preach the Gospel to audiences, but still be the great light of the world. If he and his wife were hanged it would make no difference, for the great glory would come to pass in some way which would be shown.

In the October session of the grand jury, he was indicted for murder in the first degree, and his wife was set free. He still maintained his composure, but on close questioning, acknowledged that he hoped his wife would be sent to a more comfortable place than the gaol. Since his so-called baptism by fire and the Holy Spirit, he had constantly said that he had attained everlasting life.

Between August 15 and October 13, 1879, there was an improvement in his physical condition, and the confused feeling about his head had disappeared, so that he could read and write without weariness. Between that time and January 28, 1880, there was still an improvement in his condition, and he had almost ceased to have direct communications with God or revelations. Although asserting his personal bodily immortality, and repeating that he and his wife stood alone on the top of Mount Zion, he expressed a doubt as to the resurrection of the child, and feared that his wife was going to have a hard time of it for the rest of her life. A new idea had come to him that he had killed the child under the influence of the devil, the devil acting under God, and that thereby he had overcome the devil; that his life represented the struggle in heaven between the Archangel Michael and Satan. All murders illustrate this and bear on his case.

He was not allowed to plead at the trial, and the wife was objected to as a witness, on the ground of insanity. He seemed to me for the first time to show evidences of clearing up his mind, and told me that he expected to be sent to an insane asylum.

Mr. F. was examined by Dr. J. H. Denny, Dr. C. A. Walker, and Dr. J. P. Brown for the Government, and by myself for the defence. We were all agreed as to his insanity.

The testimony before the Court was substantially as follows, in reply to questions by F.'s counsel, Hon. A. W. Boardman and C. Allen Taber, Esq.:

Dr. Charles J. Wood, of Pocasset, was the first witness called. After testifying to his experience and his acquaintance with F., which had been intimate during the past seven years, he said that, as far as he knew, F. was an honest, humane and truthful man, a good husband and a loving father; a man attentive to business, prudent, sober, and had no vices except the use of tobacco. After his conversion, however, two years ago, a change came over him; his conversation turned wholly on matters of religion; he seemed to consider business pursuits as of secondary consideration, and neglected his farm. The homicide having occurred the first of May, the doctor was asked as to anything peculiar he had observed in F.'s manner during the ten days immediately preceding. He said that on the fourth day before the homicide, at the railroad station, he appeared to be completely absorbed in thought, and, entirely contrary to his usual custom, took no part in conversation; there was a great change in his whole demeanour, and he did not appear like the Charles F. whom the witness had known. On cross-examination, the witness testified that he had observed nothing about the defendant that showed a lack of general intelligence and understanding. His conversation on matters of religion was coherent and logical according to his own way of thinking, and his quotations of Scripture were profuse, correct and apt.

TESTIMONY OF THE GAOLER.

Mr. Isaiah C. Inman, the gaoler who had Mr. F. in charge since his arrest, said that when he first came under his care he was in a great deal of excitement, so much so that he was feverish. He remained in this excited condition of body and mind for some time. After that stage was gone through with, he came to another. He said he had received signs in various ways. He said one night he heard a noise in his pillow. He thought at first it was imagination, and he changed the position of the pillow, but the noise did not stop; he said, also, that at the same time he smelt a bad odour. This, he said, indicated the presence of bad spirits, and he pointed out Scriptural proof of this. On another time the wind rattled a window on the corner of the gaol building. This, he said, was a sign representing that he was a corner-stone. He continually referred to other signs he had seen and heard signifying his peculiar calling. His appetite has been good, and, as a general rule, he has slept soundly. On cross-examination, he said there was no want of general intelligence in Mr. F.; he showed no deficiency of memory, and quoted Scripture with great fulness and accuracy. He understood perfectly the nature of the various legal papers that had been served upon him in the case.

TESTIMONY OF MRS. S ——.

Mrs. H. S., of Pocasset, Mrs. F.'s mother, was next called. She testified that F. was sober, industrious, humane, a good husband, and

a kind and indulgent father. After his conversion he was not so avaricious for worldly gain as he was before. He felt that his first duty was to God. He was constant in attendance upon religious meetings, and was always ready to give his testimony for Christ. A marked change came over him during the ten days previous to the homicide. She detailed the circumstances of the visit by Captain H., F.'s brother-in-law, who threatened to shoot F. for leading his sister into the Advent faith. F. appeared to have been very much frightened, and was greatly depressed, lost his appetite, and was unable to sleep. This was during the period of the ten days referred to. He had a vision during this time, and heard the noise of a rushing wind and of thunder. He spoke of three baptisms, the baptism of water, of the Spirit, and of fire, and said during the week preceding the homicide that he had just passed through the second. He said he felt the presence of God in the house, and that he was filled with an awe that was almost fearful. He was glad to have people come to the house, as it relieved him of the pressure upon him. On cross-examination the witness testified that about twenty people attended the meetings. She did not know as she believed everything F. did, for she had not gone as far as he had. She believed in baptism by water and of the Spirit; she could not say about the baptism by fire, for she had not experienced it.

TESTIMONY OF DR. FOLSOM.

Dr. Charles F. Folsom, of Boston, was called. He testified that he first saw F. in August, and since then had seen him at various times, spending at each interview from half an hour to three hours with him. He told him of three visions which he had had. He said he considers himself at the present time as representing the Archangel Michael, and that the struggle between himself and Satan represented the struggle between Michael and Satan in heaven. He thinks that he is in a position that is occupied by nobody except Christ and St. Paul. He feels justified in what he has done, and says that the Lord will show to the world in due time that such is the fact. I should say to-day that he is decidedly of an unsonnd mind.

Q. I will ask you if his mind is capable of comprehending fully the charge in the indictment against him ?

A. Not fully, but within certain limits. He is able to understand the form and technicality of the proceedings, but I do not think he is capable of forming a reasonable judgment upon their importance or upon the result.

I think he would be of no aid to counsel defending him, in the challenging of jurors, the examination of witnesses, or in summoning them, or in any way whatever. I should say the form of his insanity is delusional mania. And in this particular case the special form of it is in regard to religious matters. I should not want to say at the present stage of the case how far the disease had extended, whether

it was simply trouble with the circulation and impaired nutrition, or whether it had gone further than that. I think his insanity is due to five causes, operating together. I will not say that either one, or either two, or possibly either three, would alone produce the disease, but I think that with the five operating together the chances are more in favour of mental disease resulting than not. Giving them in the order of importance which I attach to them myself, I should say, in the first place, hereditary tendency, which I consider in this case a very strong one. In the second place, religious excitement, which in the so-called emotional causes of insanity occupies the second place in point of frequency. In the third place, a mild sun-stroke which he had three years ago last summer, and from which, as I understand it, he has never entirely recovered. Fourth, I should say the fact of his having led a life of great excitement from the time when he was fifteen years old, when he enlisted as a drummer boy in the army, to the time of his going to Pocasset, four or five years ago, and of the change in coming into a little village of three or four hundred inhabitants, where his mind was deprived of the stimulus to which it was accustomed, and thrown upon itself. The fifth cause I should place in his physical condition. About eight years ago he broke down in health, and had to take a vacation, and about a year from that time he had an attack of diphtheria. These facts show that his power of resistance is not what a man would naturally have, and I don't think he has ever recovered the same physical condition he had before. In addition to this an important factor is the very serious fright he had nine days before the first of May. [The doctor referred in this to the threat F.'s brother-in-law made to shoot him.] During my examinations of him I noticed an extraordinary change from deep depression to very great exaltation, which I never saw in a sane man, and should not expect to. He would be much depressed and troubled, showing very great grief, and five minutes afterwards quite amused, and speak in a jocund, pleasant way. Generally speaking, however, during the first three visits which I made from August 15th to October 13th, his condition was pretty uniformly one of very great exaltation—so very great that I suspected a graver form of the disease than I at present think exists.

Q. Is his grief accompanied by any remorse?—*A.* No, sir.

Q. Any sense of guilt?—*A.* No, sir.

Q. Has he ever manifested or does he feel, in your judgment, any consciousness of having done wrong?—*A.* No, sir, not the slightest. On the contrary, he thinks he has done as the Lord communicated to him directly, as He communicated to St. Paul and Christ.

Q. Would you say, doctor, that his delusion controls his will, or does he?—*A.* I think, sir, that is just the distinguishing point between insanity and fanaticism. His delusion has got the control of him, whereas a fanatic, although inordinately devoted to one idea, still retains his judgment and power of self-control so far as to obey

the laws of society. As far as general intelligence is concerned I should not suppose that it was seriously affected. His delusion has got the complete mastery over him, to the exclusion of everything else, and he would not act in any way contrary to his delusions. So, although his general intelligence may be as good as it ever was, it is of little value. He could not be worse off, as regards ability to control himself or give a reasonable judgment about the homicide.

DR. DENNY'S TESTIMONY.

Dr. James H. Denny, of Boston, was the next expert called. He testified: I have examined Mr. F. with reference to the question of his intelligence and with reference to his delusion. I have formed the opinion that he is a man of good intelligence upon general subjects; that upon the subject of religion as applied to himself his mind is unsound in many particulars. I noticed that he was restless in his demeanour, beating the floor with his feet, and he would frequently smile without any apparent cause. There was evidence of overplus of blood revealed by the ophthalmoscope, and his temperature was abnormally high. There is a marked tenderness about the head on the lines of the sutures. I do not lay any stress on these evidences other than as corroboratory of other indications of hyperæmia of the brain, such as might naturally follow such cerebral congestion as results from exhaustion and sun-heat effects testified to, and the state of active delusion which has been manifested in connection with intense headaches. At the present he is labouring under delusional insanity of a religious type. He would not understand the indictment as applied to himself, because his delusions impair his judgment. I have no doubt that he is not in a proper condition to prepare for the defence.

To the Attorney-General: The specific delusions which I have observed in him are as follows: He supposes that he is the Spirit of Truth, the third person of the Trinity in his system of theology; that he himself will never die; that he is immortal, so far as this life is concerned; that when he is taken away from this world it will be in some manner different than by death; that he is the second Adam; that he represents in himself, in some way, the second coming of the Messiah; that he is one of the greater prophets, like Jeremiah; that he himself is the "elder brother" spoken of in the Scriptures. He believes that various passages of Scripture have been written with direct reference to himself and family, and not to others; that the world has been saved through him. In all of these delusions he has great system, and is extremely candid. He has told me that he has endeavoured to prove by every means possible in his power the truth of what was presented to him by the Spirit; that he required as the apostles did, and received as the apostles did, supernatural evidence of what he believed with reference to himself, and that when he received supernatural evidence he used every method possible to determine himself, as a thinking man, that it was supernatural and given by the

Spirit to him. He tested himself with reference to the odour that he smelt, which he supposed was frankincense, in the pillow that was spoken of by the gaoler. He tested himself with reference to the various sensations which he felt, the baptism of fire that he speaks of —a sensation which came naturally from the congestion of his brain and over-excitement of his nervous system.

To the Court: I have satisfied myself that these delusions were not simulated, and I feel perfectly sure of it.

To Mr. Boardman: I have never found in him any consciousness of wrong-doing, but, on the contrary, the most exalted sense of the right of his position, and his exaltation shows the course of his mind during the past two years. He at first felt he was called as an evangelist; then as one of the greater prophets; and then, in a still greater stage of exaltation, that he represents the Spirit of Truth, the third person of the Trinity; and, finally, he has accomplished the salvation of the world. There has been a steady progress so far in the exaltation of his religious ideas.

Dr. Folsom was recalled, and testified that F.'s insanity is not simulated. A man cannot feign this form of insanity so as to deceive a person who is familiar with it.

TESTIMONY OF DR. BROWN.

Dr. John P. Brown, of the Taunton Insane Asylum, in his direct testimony corroborated the other experts. On cross-examination he said: The leading delusion which F. manifested was that he was the promulgator of a new dispensation through the death of the child; that God had used him as an instrument in sacrificing his child, in bringing about a new dispensation for the salvation of the world. He stated to me at one visit that Christ's atonement did not include the salvation of children, and the sacrifice of his child was necessary in order to secure the salvation of children. That was the main delusion, but he changed the form of it several times. Once he said that he was the second Christ and God in man, and that he was the third person of the Trinity. He said that God had recently given him the power of discerning the spirit of evil in man; that if a person approached his presence, before he got near him he could tell, by this power, which was imparted to him by God, whether the man was possessed of a good spirit or of a bad spirit. He said it had been illustrated to him in a great many instances, and he made a comparison this way. He said, "It seems to me as though a certain substance passes from the individual and into me. It oftentimes seems as large as my hand, and sometimes it is of a dark colour." He would first have a mental impression and then a feeling in his chest. God asked him if he would be willing to give up and sacrifice all his property and family and everything on earth, whether he would be willing to have them swept away by God. He said when he had that mental impression he had a feeling at the same time of depression, a sinking feeling

at the stomach. Last evening he told me distinctly for the first time that since my last visit it had been made known to him that his body would be immortal, that he would live as he is now in this body eternally. I have not had the slightest idea that he was simulating, although I have borne it in my mind, of course, at each interview.

THE DISPOSITION OF THE CASE.

Attorney-General Marston then addressed the court, and said that he was entirely content, representing the commonwealth, to assume that the evidence given by the experts had come from proper sources, upon proper examination, and that it disclosed as well as could be disclosed to the mind of the Court what the condition of the prisoner was. Judge Morton said he felt bound to say that the testimony made it entirely satisfactory to his mind that the prisoner was not in a condition in which he could intelligently and prudently plead to the indictment. After explaining briefly the law and his interpretation of it as not giving him power, sitting during the vacation, to order a commitment to an insane asylum, he remanded the prisoner into the custody of the sheriff till the regular session of the court for Barnstable County, which would be about the 1st of May. He suggested, however, that the governor had power to commit. The Court then adjourned.

Mr. F. at the close of the hearing shook hands with quite a number of his friends in the court room, and was then conducted back to the gaol. He expressed himself as being satisfied with the result of the hearing, and will be glad to change his present quarters for some more comfortable if it is God's will. He was very careful however, not to acknowledge by the slightest concession that he considered himself insane in the least, but if he was to go to an asylum he rather preferred Danvers, as being near his early home. "I am not insane because they say so," he said, "and I would stay here for years rather than do anything to admit in any way that I had done anything wrong, or that I am insane. If I am convicted of insanity the Bible must be shut up." "It is time now for the Spirit of Truth," he says, "the third part of the Trinity. Up to this time Father and Son only have been known. I am the Spirit of Truth." "I represent Christ in all His parts—prophet, priest, and king." "It has been prophesied that all shall be gathered into one; that it is me." "I have a dual nature; both Christ and man is represented in me, the son of man on earth." "All good is represented by one person, and I am that person." "I am the result of Christ's teachings; Christ's teachings are perfected in me." "My wife and I are the first two persons who have ever stepped into the kingdom of God; the Bible is no more use for us; we have fulfilled it; we are saved, and cannot be lost. I feel sure that our names will be honoured above any other name except Jesus." "We are the door, and everybody must enter through us." Speaking with reference to Dr. Folsom's testimony, in which allusion was

made to F.'s belief that he was the Archangel Michael, "Has the doctor ever seen him?" he asked; "does he know how he looks?" And then he said, "I am the Archangel Michael; now let Dr. Folsom prove that I am not."

As already remarked, I thought I saw at the time of the trial evidence of some shaking in the firmness of the delusions, and was inclined to give a more favourable prognosis than I had formerly expressed; an opinion which I should say was not shared by the other physicians called upon to testify.

Three days after the trial, before leaving the gaol for the insane asylum, he destroyed all his writings, hymn-book, etc., except his Bible, which he said he would willingly give up. He said to me, before reaching the hospital, that he should never say anything more about his faith unless questioned. When interrogated by old friends whom he met in the court room, he expressed great annoyance, and was not willing to answer any of their questions. I overheard him say that he meant to get cured in the asylum, if he had delusions, as the doctors all thought he had. In the next breath, however, he insisted that he had done right to kill the child. A little while before, he had said that the political stealing of the seal of State in Maine was a representation of the loss of the seventh seal of the Bible.

The delusions of Mr. F. and his act are, of course, conclusive of insanity; to my mind, the character of the homicide alone is just as conclusive, as much so as if the man had jumped from the top of a church, expecting the Lord to arrest his fall. So far as his homicidal act is concerned he belongs to that large class of the insane who are described as reasoning well from false premises. As Dr. Ray says of them, their insanity consists "in being unable to discern the essential identity of nature between a particular crime and all other crimes, whereby they are led to approve what in general terms they have already condemned." No amount of evidence is of any value to Mr. F. on this point.

Mrs. F. is also thirty-three years old, a few months younger than her husband. Her mother is of a family in which there have been several cases of insanity, and she now has a sister in the insane hospital at Worcester, whose son has also been insane. She has three sisters and two half-sisters all well. Mrs. F. had, when eighteen years old, some convulsions attended with sudden loss of consciousness, which seemed from her description to resemble epilepsy. No physician had observed them. She sold her wedding presents and gave the money to a hospital for the sick (Consumptives' Home) late in 1878. Like the most deluded of the other Adventists, she came to her reason as soon as it was shown that her daughter did not rise on the third day, and she remained so for a month, suffering most intense mental anguish all of that time. Only Christ, she thinks, has suffered as much. But constant brooding over these matters, being shut up in gaol without occupation except from her thoughts, and, worst of all,

often receiving from her husband notes concerning his insane delusions, she finally was "baptized with the Holy Spirit," in a flood of light, and saw that the child would rise in three "prophetic days," that is, days of unknown length. I copied down many of her delusions, but they were simply the same as her husband's, of which he kept her constantly informed. Mrs. F.'s mother essentially followed her daughter in some of her delusions, chiefly as to the resurrection; and after Mrs. F.'s release from gaol, last October, a very few of the most fanatical formed a circle of believers around her on her return to Pocasset.

Mrs. F. really did little more than accept fully the delusions of her husband, after her month of feeling that the act was one of mistaken faith in God. After her release in October, she thought God had commanded her to go barefoot and naked, like Isaiah, to be a sign to the people, and did almost no act, no matter how trivial, until she had a sign from the Lord. After her husband was sent to the insane asylum, she altered her tone somewhat, expressing a desire to get away from the old associations, wishing to get employment to occupy her mind and make a living, saying that she needed rest, and hoping to have her other child with her. Public sentiment is now so strong against her in Pocasset that she cannot go back there.

Of course, these two are as clear cases of insanity as one could well see. I do not know of any form of human suffering more intense than delusional insanity, partial intellectual mania of this form, where persons are borne on by virtue of their delusions to commit acts from which they naturally shrink with the greatest horror. I certainly never saw human beings who had a fuller right to the deepest sympathy of their fellow-men than these two insane persons.

So far as the other eighteen Adventists who shared the delusions of the immortality and bodily resurrection of the murdered child are concerned, little is to be said. With the exception of three, who are ill balanced, they belong to the sensible grammar-school-taught, neat, industrious Americans of the rural districts of New England. Their delusion, in the midst of the realities of the practical life of our day, is more like the witchcraft delusion than any other which comes to my mind, and opens a field for most interesting philosophical enquiry too wide to be entered upon here. It would be difficult to find a more curious illustration of the fallibility of the human mind, especially among people who now are as totally at a loss as others to explain their singular mental freak. The most fanatical of the Adventist community, next to F., has swung to the opposite extreme, and would have the doctrinal churches and usual Bible teaching abolished.

Of course, the insanity of F. and his wife cannot be a matter of dispute among competent persons. Fifteen of their associates were as clearly simply fanatics. If I were required to positively place the other three, with my present knowledge, I should be in great doubt

on which side of the line between fanaticism and insanity to put them; for insanity, as compared with fanaticism, or even with sanity, is often merely a question of degree, depending upon the extent to which the power of rational self-control has been lost.

From the "Progrès Médical."—January 3, 1880.

The Service of Lunacy in the Department of the Seine—Reform in the Mode of Admission.

One of the most interesting points in the report of M. Bourneville to the Council General is that relative to the mode of admission of patients. This is how he expresses himself with regard to it:—

Mode of Admission of Patients.—At the present time all patients, save those who have the advantage of voluntary admission *(placements volontaires)*, must pass through the depôt of the Superintendent of Police, where they make a sojourn more or less long—sometimes amounting to two days. This obligation, very distressing to relatives, is often dangerous to the patients, especially to those who are yet not utterly bereft of reason, or to those suffering from certain forms of insanity, such as delusions of persecution. It constitutes besides a shocking inequality, which it is expedient to remove. Rich families have, in fact, the power of conducting directly into the *maisons de santé* their relatives affected with insanity. Why should it not be the same for poor families? Nothing more easy, however, than to put an end to this sad state of matters by authorising the families to remove their patients directly to the admission office of St. Anne's when they have completed the first formalities required by law exactly as they conduct them to hospital for an ordinary affection. It is high time to regard the insane as an ordinary sick person, and to remove the prejudices which still prevail on this subject.

If this measure were adopted by you and by the Administration, the depôt of the Prefecture would be made use of only for persons arrested for mental alienation by the police.

The revival of voluntary admissions has diminished the passage through the Prefecture by only a very trifling number of pauper lunatics; in fact, there were in 1879, 25 voluntary admissions at Vaucluse, 96 at Saint Anne's, and four at Ville Evrard. You see by these numbers that a reform is urgent, and that there are grounds for requesting the

Administration to extend voluntary admissions to all patients whose admission is desired by their families.

Situation of Epileptics in Special Sections.—As no modification has been made in the position of epileptics, notwithstanding the demand made in February, 1878, by the Council General, we believe it our duty to return to the matter.

Bicêtre and Salpêtrière possess each a section specially appropriated to adult epileptics and to epileptic and idiotic children. These patients form quite a special class, very different from that of other lunatics; in fact, most of them possess, if not soundness, at least a part of their intellectual faculties. Thus they have in the asylums more liberty, and they can from time to time go into the town accompanied by their relatives.

Many of them present improvement sufficiently marked, intervals between their fits sufficiently long, to allow of their returning to their families. But the latter hesitate often to take them back and the physicians to restore them, on account of the numerous difficulties afterwards encountered in their re-admission. Once gone away, if they relapse—if their fits become more frequent—it is necessary to begin afresh the steps already taken at the time of the first admission: physician's certificate, visa of the Commissary of Police, sojourn at the Prefecture of Police, transmission to Saint Anne's; finally, transfer to Bicêtre for men, to the Salpêtrière for women.

Your Commission wishes to invoke upon this interesting matter all the solicitude of the Administration in inviting it to consider whether, for patients undoubtedly epileptic, and who have been inmates under this designation in our asylums, it would not be possible to diminish the formalities and re-admit them directly into the special sections of Bicêtre and Salpêtrière. Our finances would gain, because the physicians would hesitate less to send away the improved patients if they knew that in case of recrudescence of the malady the latter would find the doors widely open for their return. A careful consideration of these patients warrants us in believing that a respectable number of them would be able to spend several months outside, each year, a proceeding that would benefit their health and diminish our expenses. We beg you, gentlemen, to invite the Administration to examine this question again, and to find a solution for it.

In 1878 there were 79 voluntary admissions of paying patients *(placements volontaires payants)* and 21 voluntary pauper admissions; in 1879 there were 105 voluntary admissions of the first category and 20 of the second. Now,

the Council General has decided that for the year 1879 (1880 ?) 330 places will be appropriated in the public asylums of the Seine and the quarters of the Hospice of Paris to the treatment of both paying and pauper lunatics—viz., 170 places for the former and 160 places for the latter. It is evident that little benefit has resulted from this advantage, which, however, is considerable, since it relieves the patient of the journey to the Superintendent of Police. Why has this been so? It is, we believe, because physicians are imperfectly acquainted with the formalities required.

For paying admissions there are required—in conformity with the law of the 30th June, 1838—first, an application for admission; secondly, a medical certificate setting forth the mental state of the person to be admitted, and indicating the particulars of his illness and the necessity for treating the person designated in a lunatic asylum and for confining him therein; thirdly, the passport or any other document establishing the individuality of the person to be admitted. In practice one can take without delay, and directly from his residence, to Saint Anne's, for example, a man who happens to become insane.

For voluntary pauper admissions the formalities are, on the contrary, more numerous. Besides the documents of which we have spoken, the family must provide itself with a certificate of indigence, and address the whole to the Prefecture of the Seine, adding thereto an application for voluntary admission. After examination of these documents the Prefect makes an order for admission. But as this decision is not taken at once, there thus results a delay which may be sometimes eight days. It follows that, in case of urgency, poor families are unable to have recourse to voluntary admission, and are compelled to pass their patient through the depôt of the Superintendent of Police.

The reform which we ask for consists, then, in the first place, in requesting the Administration not to be more exacting in the admission of paupers than paying patients. The pauper patient once admitted, there would be no further inconvenience than that the documents required by law should make a sojourn more or less long in the office of the Prefecture of the Seine. In the second place, it is necessary to obtain the direct admission of lunatics at the admission office of the asylum of Saint Anne, and the suppression, in consequence, of the journey to the Superintendent of Police.

Alex. Harbinson, M.D.

PART II.—REVIEWS.

Mind in the Lower Animals. By W. Lauder Lindsay, M.D.

In reviewing a book like this, one has to take into consideration not only the quantity, but the quality of the work. The subject must always be one of great interest for the physician and philosopher. The relationships of the diseases, both mental and bodily, of the lower animals to those in men have still to be considered.

The book before us doubtless contains a huge collection of facts, and collectors of facts must necessarily arise before those facts can be dealt with by philosophers. Lauder Lindsays and Darwins, therefore, have each their places in literature; but the collector can scarcely be considered as important, or, at all events, as high in the scale, as the philosopher.

This book may be considered a "fact-heap;" it wants a cementing bond to make it interesting. It might be compared rather to a Tower of Babel than to a pyramid—a vast mass of material without any definite shape.

It is disappointing to have to speak thus of a book so long expected and so earnestly looked for, and one feels, as a reviewer, that the intention of the book, and the labour bestowed upon it, deserve all credit. It is the life-long labour of an enthusiastic lover of animals. As we have said, it contains many interesting facts, either new or placed in new relationships, and is therefore important. The author has a few marked tendencies, which are exhibited throughout his volumes. He loves, almost worships, what I may still be allowed to call the lower animals, and does not think as highly of man as might have been expected. With the manner of the composition of the book there are faults to be found. It is too long; there are constant repetitions; the language is verbose to an extreme, synonyms being used in a most tiresome way. Another thing that makes the book anything but light reading is a tendency of the author to divide and sub-divide on every possible occasion; in fact, he reminds us forcibly of a teacher at one of the large medical schools in London, who was called by the students "Nineteenthly."

The book consists of two large volumes, the first volume

being devoted to the consideration of Mind in the Lower Animals in Health—a comparative psychology, with general considerations, including the methods of enquiry; then of Mind in its Normal Manifestations, as shown under the headings, "Morality and Religion;" "Education and its Results;" "Language;" "Adaptiveness;" "Fallibility;" each of these being more or less sub-divided. The idea of this division seems fairly satisfactory.

We shall have to consider more in detail the contents of the second volume, "Mind in the Lower Animals in its Abnormal Manifestations," including Preliminary Enquiries, Mental Defect and Derangement, and Animal Insanity. The concluding part of the second volume consists of practical conclusions, Man's treatment of the Lower Animals, and an appendix illustrative of the nature and variety of the data on which the author's generalisations have been based.

One would feel inclined to notice this appendix first, for, in a collection of this kind, everything must depend upon the value of the facts from which the conclusions are to be drawn. Doubtless Dr. Lindsay has taken a very large amount of trouble in gathering his almost innumerable facts; but the authorities from which he quotes differ very much in value. Some, such as the Percy anecdotes, are of at least doubtful value, whereas those from Darwin and White of Selborne may be considered as absolutely true. In the book itself, definite reference to the authority is not made, and this renders verification of the facts difficult. But doubtless the facts are fairly representative, and on the face of them bear the impress of truth, or the reverse. We shall consider the first volume very briefly, but it will be well to point out again how strongly Dr. Lindsay feels against mankind in general. He is never tired of pointing out the results to the lower animals of human error, ignorance and prejudice. Even the animals cannot be allowed to enjoy their names in peace, but the tyrant man must associate vices or virtues with their respective names—thus making use of the name of the bear to point out churlishness; of the sloth, laziness; of the ass, stupidity.

It is doubtless of the utmost importance that mind, as mind, should be looked upon without any prejudice in favour of man's mind, and that the scientific man should be equally willing to grant reason to some degree in animals much lower in the scale than himself; but if there is any truth in the developmental theories of animal life, not only is the rea-

son of man higher than that of the lower animals, but that of any sane man is higher than that of any lower animal. The animal, however highly gifted in some particulars, has not, and cannot have, the same mental ability that the developed man has. It is, therefore, childish constantly to refer to undeveloped savages as if they were infinitely below the higher animals in intellectual mental acquirements. It will be well, perhaps, to quote a paragraph from Dr. Lindsay on the use of the word "animal" itself:—

"The word 'animal' is both faulty and objectionable when applied—as it is commonly by phrenologists—to feelings or faculties, organs, constitution or nature in man, in contrast with those other mental qualities which are described as moral and intellectual. Thus it is used as synonymous with sensual, sexual, unintellectual, when we speak of an animalized man, or of a man as a mere animal, or apply the term 'animality' to man's lower propensities, in contradistinction to his humanity, his moral and intellectual nature. But in all the senses in which it is so variously used, it is at least quite as applicable to man as to other animals."

He strongly objects to the use of such terms as "cat and dog life," "a dirty dog," "a sly dog," or "dog-cheap," "a dog-in-the-manger spirit," "give a dog a bad name, and you may as well hang him," "an old cat," "vain as a peacock," "stupid as a goose." But he says man commits equal errors in the epithets which he applies to his brother man, which are, or are supposed to be, complimentary of animal virtues, as, for instance, "brave as a lion. "The lion, so far from being brave, is naturally a cowardly animal." And so, for many pages, he draws fanciful comparisons between the mental qualities of man and other animals.

Many interesting anecdotes of animal sagacity are given; but of late, in the pages of "Nature" and other similar periodicals, the scientific world has been deluged with a flood of interesting actions of pet dogs, so that veracity seems to have been sacrificed, in some cases, to a spirit of romance. As we said before, there is only a difference of degree between the sagacity of the lower animal and the reason of the higher, and therefore, granting memory and the power of comparing facts, one cannot be startled that animals should act reasonably.

The next part of the volume is of considerable interest from the evolutionary point of view, mind and its development being traced in the ascending zoological scale, first

through the invertebrata, and next through the vertebrata. Many interesting facts are given, exhibiting the various nervous functions seen in these animals. One chapter is devoted to the alleged psychical differences between man and other animals, and the next to the alleged intellectual and moral supremacy of man. Then follows a chapter on the interrelations of instinct and reason, succeeded by the unsolved problems in the psychology of the lower animals.

The second part of the first volume takes into consideration the normal manifestations of mind in the lower animals, and here, again, we must object to Dr. Lindsay's way of putting things—that he speaks of morality and religion as if it were possible that the same feelings should be developed in the isolated animal as in the society-forming man. We shall have hereafter to notice an extraordinary perversion of terms —at least, so we should consider it—that he makes in speaking of morality, religion, suicide, murder, crime, as occurring in the lower animals. He seems to us to take for granted more than he has any right to—that scientific men have degraded animals by the terms they have made use of; but he may, perhaps, damage his friends the animals by making use of terms to describe their actions which have hitherto been considered only to belong of right to the actions of man. We do not for a moment wish to make any essential difference between the perceptive and re-acting nervous organs of animals and man; but constant development, and perpetual selection, and survival of the fittest, which, in their turn, transmit by inheritance, have left man, even at his lowest, a long way in advance of the lower animal. It may be very well to say that some animals make use of tools, and that some men hardly make use of any tools. Yet the use of tools by animals is so exceptional, and the use of tools by man so general, that the distinction must be maintained. When he considers education and its results, he brings forward a large number of interesting facts, pointing not only to the capacity for education by man, but by experience, so that animals may educate themselves, and may even acquire knowledge by investigation, and, doubtless, may learn by the experience of others as well as by their own former failures. Cases are on record in which birds have learned, when surrounded by new materials, to build nests differently from their progenitors, and, again, their offspring have improved upon them, so that what is often spoken of as instinct must really be looked upon as experience inherited or acquired.

The next point to be considered is language, first as it occurs in lower man, next in other animals, and although one is willing to admit that most animals have distinct means of communication, so that the ant or the bird may be able to communicate, yet the difference between mere communication among animals and speech and interchange of ideas seen in the lowest man, must be looked upon as essential. Dr. Lindsay also considers the expression of the emotions, as represented by laughter and weeping. Notice is taken also of animal motives, and their interpretation by man, and here we would say that the author seems to consider that he, at least, has a perfect right to interpret the motives and actions of animals according to his own standard.

Next in order we have the "adaptiveness" of animals—their general adaptiveness, organisations formed by them, law and punishment as understood by them, the use of instruments and clothing, the power of calculation which some possess, the knowledge of the importance and influence of courtship and marriage, and even the power of understanding the benefit of foster-parentage.

The last division of this volume is devoted to the fallibility of animals, and contains many amusing facts; though, when Dr. Lindsay speaks of the practical jokes played and understood by animals, we must say that we are rather puzzled with the jokes.

> Man's pleasantries, or practical jokes, are at all times liable to be misunderstood and resented. Even by animals that are familiar with the player of the joke, though, as has been already shown, certain animals can and do distinguish between jest, joke, fun, frolic, pretence *and earnest*, reality, seriousness, there are others that naturally confound the two; or they may be at a loss, as children and even men so frequently are, to distinguish between them. There is an opposite result in such cases, especially in touchy, testy, captive animals; a dangerous and instantaneous loss of temper and patience, a sense of irritation likely to lead to acts of retaliation or punishment.

One practical joke, given on the authority of the "Animal World," is this:—

> A sheep, whose fondness for practical fun led it to watch for unwary human by-passers from the window of the second story of a granary, and when one was passing immediately underneath the window, this eccentric animal would drop itself suddenly upon him with all its weight, of course. In this case the mischief was gratuitous, but in other cases the practical jokes of animals take the very appropriate

form of the punishment of man for his misdeeds, perhaps for his practical jokes on them. The success and appropriateness of such punishment illustrate man's own proverbs or sayings about, "The biter bit," "Diamond cut diamond," or, "More than his match." Thus, the elephant, dog, and parrot sometimes inflict ingenious forms of punishment, well deserved, on boys or adults who have teased them.

The second volume will most interest the readers of the Journal.

In Chapter I. the mental phenomena occurring in acephalous animals is considered, and, quite unnecessarily, we think, the author protests against the brain being considered the sole organ of mind. We thought it was pretty generally understood and accepted now-a-days that, though the brain is the highest organ of mind, every atom of nervous tissue must be considered as part of the mind-organ.

In Chapter II. the defect, disorder, and degeneracy of the mind of man are very properly considered before similar conditions occurring in animals are taken notice of. A list of twenty-eight mental peculiarities, with bodily concomitants, is given, and here again, we would complain of the endless division, so that, not content with the modes of dividing idiots followed by any one writer, our author combines the classifications of many. Reference is made in this chapter to the idiot's preference for the society of animals, and the reputed power of acquisition of the animal language, sufficient to enable them to hold intercourse with their animal companions. Many cases have been described by authors of different ages that resembled the lower animals—the rabbit-man, and the monkey-man, and the goose-child, and the sheep-man, have been reported—but we are inclined to think that, in the majority of cases, imagination has been developed rather out of proportion to the facts. When Dr. Lindsay makes a statement like the following:—"There can be no doubt of the fact that, intellectually and morally, the human idiot is far below many of the so-called lower animals"—we think he is endeavouring to compare things that are not comparable—comparing the failure on the one hand with a success in quite a different class.

Our author speaks of the "bestial" phenomena exhibited by man, and at the same time objects to other people making use of the term beast, brute, and the like, as words of contempt; and, on the other hand, he credits animals, as we shall have occasion to note fully later, with virtues and moral characteristics which, at least, seem to us to be doubtful possessions on their part.

In Chapter III. the general considerations of menta defect and derangement are investigated. We quite agree with the author as to the importance of the comparative study of insanity, and the necessity of getting rid of mistakes, such as those arising from the confusion between madness, properly so called, and rabies, but we fail to see the necessity of such a division as this :—

1. Franticness, frenzy, fury, ferocity, furiosity.
2. Delirium and raving.
3. Rabies and hydrophobia.
4. Vice and viciousness.

This classification may be taken as a fair example of the uses that are made of classes by Dr. Lindsay. He uses words so nearly allied that some of them cannot be required, also terms which are obsolete, or of his own coining. Doubtless he is correct in speaking of the great difficulty of discovering animal insanity, and in stating that it must generally be considered as insanity of action, and that this can hardly be distinguished in them from anger, vice, excitement, and stupidity. If our author, in making so many subdivisions of his subject, enforced their importance by instances, one would be more able to follow his plan, but in most cases classes are formed, and no representative instances or examples are given.

On page 29 Dr. Lindsay remarks—"Much to man's credit, what he fails to detect is occasionally detected by animals themselves." So that here again he is able to point out the inferiority of man to the other animals.

The symptoms of insanity given by the author are numerous, and are so unscientifically selected that they fail to be of real value.

Next, he refers to the terminations of acute insanity in other animals, and we should be inclined to think that he has omitted a most important termination, which is partial recovery or chronic insanity. He merely gives recovery, dementia, and death.

On pages 33 and 34 a long list is given of the results to man of insanity of animals, and if it were not so long, we should be inclined to quote it in full. One or two examples must suffice :—

1. The upsetting of carriages of all kinds, and the killing of those who occupy them.
2. The fatal throwing of riders.
3. Deaths from real and from spurious hydrophobia.

4. Goring to death by bulls.
5. Fatal results of loss of presence of mind in man.
6. Murder by rogue elephants.
7. Plunder or destruction of man's dwellings and crops by the same animals.

And so on. Such refinement seems quite unnecessary, and only compatible with the desire to make a big book.

Other important questions are mentioned, and only mentioned probably because facts are not to be obtained in sufficient number, and of sufficient trustworthiness, such as "Liability of the sexes of the lower animals to insanity," "The relative liability of the domestic and wild animals," "The relative liability in different genera and species of animals," "The relation to the type of mind." It is rather startling to hear that insanity, apparently of the character of human insanity, has been described or referred to in such animals as the ant and the bee. Properly enough, he says the range of insanity in the animal kingdom has yet to be determined. The duration, as he says, is extremely variable, and, again, he protests against the duration being limited by man's habit of killing. It will be a questionably happy time for the animals when they enjoy asylums.

We next have to notice the author's reference to the symptoms of animal insanity. Without having any very definite classification before him, he goes through a number of symptoms, and gives illustrative cases of their exhibition. He begins with forms of mental defect, animal idiocy, want of various powers, and also dementia. It is pointed out that these conditions are produced by causes similar to those which produce them in men. Cases of mania and melancholy are referred to, and varieties of these forms of mental disease are also given, such as puerperal mania and nostalgia. Morbid impulse is treated as a distinct form of insanity, and, what we would most strongly object to, erotomania, kleptomania, dipsomania, are looked upon as at all events common in animals. We should consider that kleptomania and dipsomania distinctly involve the knowledge of property, the knowledge of vice and virtue, of indulgence and its consequences, of abstinence and its benefits, and we should doubt whether the animals are capable of these vices. That passion will override reason in the animals is to be expected, as it does in man, and yet the man is not, necessarily, considered to be insane. As to

theft, that it should be a form of mental disease merely as stealing, we doubt, and the fact that the goods stolen seem to have been appropriated without any motive cannot be considered of much importance till we know more about the motives of lower animals. A word that constantly occurs in this book is "theftuous." This word is neither pretty nor in ordinary use. Monomania of pride and monomania of fear are referred to, with delusions, but we think it scarcely necessary to investigate this part of the subject further. Certain forms of insanity have been described as volitional, and a division of that form of mental defect given by Dr. Lindsay contains "Disease or Enfeeblement of Will," "Insanity of Thought," "Insanity of Speech." A short chapter considers the perversions of the natural affections, and, without adding anything to our knowledge, adds something to classification.

In the sixth chapter artificial insanity is referred to, and the effects upon the lower animals of treatment by drugs and stimulants are given in full, as usual, a long list of the possible causes of such insanity being appended. Mechanical injuries and the ordinary traumatic insanity in the lower animals are mentioned.

Throughout the whole book one cannot help being struck with the kindly feeling of the author to the brute creation. This is a redeeming point in the otherwise tedious work of reviewing his production, and the sympathy for the brutes and the desire to render their lot happier must be plain to every reader. Wherever an abuse is to be found he finds it, and protests vehemently.

Under "artificial insanity" he refers to the dangerously mischievous blinkers of the horse, and he might have gone on to the equally dangerous bearing-rein.

The chapter on intoxication also gives Dr. Lindsay an opportunity to enlarge upon the vices of man, for not only does he drink himself, but he teaches the other animals to drink too. He points out the various effects of drink upon them, so that whereas some take a liking to drink, others, after a single debauch, have learned a life-long lesson. He would even go so far as to think that certain animals recognise tipsiness in their fellows, and punish them or play jokes upon them in consequence. One statement is rather astonishing, viz., that bears and asses have become tipsy from eating grapes. This may be true, as humble bees are said to be overcome by the nectar of the passion-flower.

Dreams and delusions are next referred to. We must, probably, all admit that animals, those of the higher orders at all events, dream. But we have been unable to verify the fact that parrots talk in their sleep. We cannot accept the statement on page 97 that there are not a few birds that talk more intelligently than whole races of men. Dr. Wilks' parrot went so far as to coin words, and use them appropriately, but they were few words indeed compared with the language of the lowest known races. Under "Delusions," reference is constantly made to sane and insane delusions, and the author would distinguish between them as follows :— 1. Their temporary or transient character. 2. Their corrigibility, or dissipation by the use of the senses and judgment. 3. Their not leading to insanity of action or behaviour. 4. The absence of other indications of mental disturbance. 5. The co-existence with, practically, perfectly bodily health. A long example is given of the horse frightened by a piece of paper fluttering on the road; but we think it rather a stretch in the use of terms to speak of all ignorance as if it were delusion. In this chapter we should rather object to the use of "delusion" to cover all classes of misconceptions, so that "hallucination of the senses," "illusions," and "delusions" all come under the head of "delusion." When fish are described as being startled at shadows on the water, surely this need not be considered a delusion, but due to want of experience? Among other symptoms considered are those of stupidity, and a protest is entered on the part of certain birds and beasts that have been considered specially stupid. Forgetfulness and stupidity may occur together, but are not necessarily co-related, and, because jays and magpies forget their hoards of booty, they need not be considered stupid. The ass finds a powerful defender, and his good qualities and achievements are placed under eight heads. The learned pig, also, has a friend and advocate. The causes of stupidity are mentioned. Dr. Lindsay, in this chapter, refers to the well-marked intelligence of sporting dogs; a dog will sometimes refuse to go with a bad shot.

Suicide is next considered, and we must very briefly dwell upon this part of the book. Self-destruction, whether accidental or intentional, is, doubtless, technically suicide; but that every form of accidental death should be considered as suicide, seems to us to be a mistake. That an animal may grieve, or refuse food, on the death of its master, or may lie

by his grave and die of starvation and cold, is possible, but that this should be thought to be suicide we must be permitted to doubt. Suicide should hardly be considered as such unless the animal has a distinct knowledge of death, and few animals indeed have a knowledge that death will follow certain actions, and will follow such actions to attain their end. Dr. Lindsay tells many marvellous tales—tales that ought to provide pictures for countless academies—of the heart-breaking of animals, and their subsequent suicide, That death due to panic, or to injury produced by fright, should be placed under the head of suicide is a mistake also. Animals are here credited with *ennui*, with a sense of decadence, of approaching death, of appreciation of death, and even of care for the dead. Some animals, no doubt, appreciate some evil, or have some inherited or acquired horror of the shambles or the slaughter-house, but this perception or dread is hardly to be associated with a definite knowledge of what death means. As animals are credited with suicide, so they are equally accused of crime, and it seems that they are as evil as man himself; that they commit murder, steal, keep slaves; only, as our author points out, they use their slaves better than man ever did. They are made guilty of burglary, poaching, rebellion, infanticide, mutilation, treachery, and, one would almost think, religious intolerance. At all events they are supposed to be deeply conscious of the evil done, and their moral iniquity. The physiognomy of the disease is discussed voluminously, the changes in look, changes in action, changes in disposition, changes in voice, changes of bodily function, changes in the sense and intelligence, being pointed out in a table as usual. Causation is next dealt with, and we leave this part of the subject with the same want of satisfactory knowledge of the causation of insanity that might have been expected, for although the animals do not mask their symptoms as men and women do, yet they are not likely to conceal any cause from his observation. The physical causes are first considered, under the headings of

1. Physiological.
2. Pathological.
3. Combined or general.

It is quite beyond our space to consider these. Isolated facts of importance or interest are discussed, but with very unskilled care. The effects of red, especially of scarlet, upon

a bull, are considered, and the author is of opinion that little or no effect is produced by the colour itself. We quite agree with Dr. Lindsay in the estimate he has formed of the treatment of insanity by coloured lights. Besides the physical causes, the moral causes, which are the more difficult to investigate, are determined and dilated upon. Our author is too fond of using a word in a scientific sense of his own that has been used by some other writer in a purely colloquial or general way. Thus, if an author has spoken of an animal as being delirious with joy, he takes it for granted that the animal was delirious.

Mixed causes of mental difference and disorder include, 1st, heredity; 2ndly, artificial life, with its accompanying injurious effects; 3rdly, privation; and 4thly, man's cruelty, neglect, or injurious treatment. Each of these heads is considered more or less in detail. The morbid bodily conditions produced by mental causes are also dwelt upon. The effects of emulation, disappointment, rivalry, fear, are well known, and instances are given of heart-break and death produced in animals from mental causes. Individuality is next considered, then what is called "sensitiveness" in man, and which occurs equally in other animals, and in them is a subject of the highest importance in relation to man's treatment of them. "Many of man's errors of treatment, much of his ill-usage of subject animals, unquestionably depend on his belief that other animals have not the sensitiveness of man, that they do not even feel physical pain. It is therefore of the utmost importance to show that the lower animals, like man himself, are sensitive, frequently highly or morbidly so, to impressions or influences that are either simply physical, purely moral or mental, jointly physical and psychical." On this basis the chapter is developed.

Perhaps the most important and most interesting part of the work is the practical conclusion, which we have not space to notice. We should say that the book contains a very complete and elaborate index, and also an enumeration of the animals referred to, giving a list of the species with their leading varieties, breeds, or races. The bibliography is also given in general, but, as we said before, there is no means of verifying the exact spot referred to in each individual case. Thus, to refer to "Pierquin," or "Percy Anecdotes," or "White," is very indefinite, and, in fact, prevents the reader from verifying the reference.

We must say that the intention of the author has been

higher than the possibility of performance. This is not in any way meant as a slight upon his abilities, but we think that he has attempted too much; that the field which he has begun to cultivate is too large for any one man to make good use of. The immense amount of labour bestowed upon this work deserves the gratitude of the scientific world, however much its usefulness and readableness have been spoiled by its volume and by the excess of classification which is visible everywhere. Of course the author was quite justified in making many classes to guide himself, and to be prepared to fill up every possible gap with illustrative cases, but the misfortune is that though the skeleton is there, the clothing is wanting. The time may come when this book will be re-written, and we are quite sure that if it be then reduced to half its present size, a most useful and interesting volume will be the result.

The Care of the Insane and their Legal Control. By John Charles Bucknill, M.D., F.R.S., &c., &c.

This is a revised and enlarged reprint of the articles on Lunacy Law Reform, which appeared last year in the "British Medical Journal," and which have already attracted so much attention, and excited so much discussion. The opinions expressed in the book are strong and radical, and Dr. Bucknill properly claims to speak with the authority "of a very varied experience of thirty-nine years, during which he has enjoyed the largest opportunities of observing the care and treatment of the insane in every part of the country, both in public and private asylums, and in domestic life." Assuredly, no living man has had the same experience.

The greatest of the questions at issue is this—Are private asylums to be allowed to continue or to be abolished? If we did not regard this Journal as unsuited for being the arena of such a discussion, and if we did not know that all our readers are already well acquainted with all that has been and is being written on the subject, we should certainly have devoted much space to this and the other problems dealt with in this remarkable book. Dr. Bucknill is most earnest in the causes he advocates, viz., the abolition of private asylums, the transference of all the insane who have property to the direct jurisdiction of the Lord Chancellor, all the paupers to that of the Local Government Board, and the abolition of the Board of Commissioners in Lunacy in its present form. His earnestness,

indeed, at times carries him away, for his language is strong up to the point of being laboured. The headings of the chapters, perhaps, savour rather more of the lay press than of that calm wisdom which the weight of years and of official experience might have been expected to bring to the author. "The Prerogative of Asylumdom," "Why this is a Certificate," "The Power of the Keys," "Under which King Bezonian?" "Wear Rue with a Difference," convey more of paradox than of information. In one other matter only we would venture to criticise the manner of the book. We think the tone Dr. Bucknill assumes in speaking of the Commissioners in Lunacy almost suggests to his readers a personal dislike. Nothing, no doubt, could be further from fact. But the author is so terribly in earnest that any institution that stands in the way of the carrying out of his views is treated with scant regard for its feelings. The Commissioners may not have come up to an ideal standard, and they undoubtedly owe their existence to the Parliament and not to the Crown; but we can't see that these are reasons why they should cease to exist. Parliament and statutory law now govern the realm and all that it contains; it is simply quixotic at this time of day to talk of reviving the ancient power of the Crown as the legal guardian of the insane. The Commissioners under their statutory powers have done more for the insane in fifty years than the Crown had done for five hundred.

This part of Dr. Bucknill's argument we regard as of no force whatever. It is to Parliament and its statutes that we must look for all improvements in our Lunacy Policy for the future, and we cannot see why an insane man with property is in so utterly different a position as the man without that the one must be handed over to a different guardianship from the other. The author's argument against the present position of the Commissioners is, without doubt, the weak point of the book.

But we have done with criticism. The book is a landmark of the time. It expresses in the most forcible way one aspect of a great social and medical question. It will be treated with marked respect. It should not be allowed to excite angry feelings in those who differ from the author's views. Let us have the other side of the question as vigorously and fearlessly, and, above all, as honestly put. The Private Asylum question is not yet ripe for settlement. One

very important and not uninterested party has not yet had its say. The sane British public has not yet spoken on this part of the question. The disposal of the insane is a most important matter, and the doctors' opinions on the subject may be very valuable, while the specialists and Parliamentary hobbyists may help much in the solution of the problem; but when all is done the public that has to pay the bill must give the order.

Insanity and Homicide. Des Homicides commis par les Aliénés. Par le Docteur E. Blanche. Paris, 1878.

On the consideration that the old professor might be laden with sins, the would-be murderer of the philosopher Kant, when about to strike the fatal blow, turned away, and, soon after, murdered a child whose five years' experience of life was not likely to be so heavily burdened. So at least the story goes; and the briefly-told incident involves a multiplicity—not to say a conflict—of emotions and ideas, such as murder only can call up.

De Quincey, tracing with his quaint humour the connection between philosophy and the "fine art" of murder, refers to the "good taste" of the "amateur," in not murdering an old, arid, and ardent metaphysician, who, but for the *accident* of a "peevish morality" would have been a dead man before his time had come. We do not know what became of the accomplished "artist," but we can readily imagine an investigation being held as to the state of his mind "at the time he committed the act," and later on. Had his responsibility been gauged by our English legal test or dictum, "a knowledge of right and wrong," we fear that he would have fared badly, and that he would have been "hung" (as Royal Academicians would say), and therefore served as a further illustration of "high" art.

Fortunately, now-a-days, the test referred to may be characterized as *only a dictum*, and lawyers themselves have come to recognize the expediency of bringing their guiding principles on this subject more into accordance with the practical teachings of psychological observation.

"I concur most cordially in the proposed alteration of the law, having been always strongly of opinion that, as the pathology of insanity abundantly establishes, there are forms of mental disease in which, though the patient is quite aware he is about to do wrong, the will becomes overpowered by

the force of irresistible impulse." Such is the strong opinion expressed by the present Lord Chief Justice of England; and while it must be a matter of satisfaction to medical psychologists that the scientific interpretation of diseased mental conditions has on this point carried conviction to a mind so judicial and so ripe in legal experience, it behoves them to have their knowledge and their evidence on the subject worked out as clearly and definitely as possible.

On this ground we welcome the work before us, by Dr. Blanche, a medical expert of eminence and authority, as a contribution to that department of mental science which deals more especially with what may be termed its medico-legal pathology.

The limitation of responsible mental action to the mere knowledge of right and wrong, is no feature of the French Criminal Code, which declares that—"there is neither crime nor misdemeanour in an action, otherwise culpable, committed at the moment when the accused was in a state of insanity."

Hence, the opinion and the cases given by Dr. Blanche are not hampered by the metaphysical fog in which English jurisprudence has hitherto dished up the plea of insanity in criminal cases.

The English dictum having been shown to be to all intents and purposes in abeyance, we are enabled to start very much on the same footing as other nations, in practical investigations bearing on the subject.

Dr. Blanche tells us that his memoir has for its object to give an account of the deeds which are committed by lunatics, and which, when committed by a responsible agent, are called crimes: it is, in fact, a chapter taken from the history of dangerous forms of insanity. Proceeding to deal with these forms, he says, that the mania of persecution is certainly the one where the tendency to homicide seems to be most logically indicated, and that the murder in such case might seem to be excusable on the grounds of legitimate self-defence. Yet it is not among these "persecuted" ones that the largest number of insane homicides are found: and why? It is because a new element has to intervene before they undergo the impulse; for these hapless "persecuted," resigned to their fate, have not the energy to begin the struggle.

Side by side, and of quite different types, there are found patients overtaken by the same mania of persecu-

tion, but subject to critical exacerbations. Usually calm, they become excited without any other cause than a cerebral change, of which they are unconscious. These attacks are more or less recurrent, variable in duration, and, above all, of unequal severity. They may manifest themselves by outward and visible signs, and gestures, and words, or they may be concealed under a latent agitation which broods without exploding. Whatever be the mode of expression, the origin is the same. When the cerebral excitement is subdued, the patients return to a settled condition and cease to be dangerous, until the return, often possible to foresee, of similar disturbances. The homicide is instigated by an impulse sudden in appearance, but in reality not unexpected, with the accession of signs of encephalic irritation, and destined to be extinguished if the occasion has failed, or if the period of calm has returned. Persons subject to alcoholism—as at certain times, and in different degrees, these "persecuted" nearly all are—furnish the most complete example of these paroxysmal derangements. They also are tormented by enemies who are not content with following them about, but who seek their very life: they are tortured by frightful hallucinations, and they wander about wildly, uncertain what physical or moral course they are pursuing.

Doubtless there are "persecuted" individuals not drunkards, who show at times the same appearances as those subject to alcoholism. Hallucination both of sight and hearing proves in them the existence of a very active cerebral excitement, due to a congestive force, under whose pressure they are driven beyond themselves, and jump from a passive to an active state, and therefore go on from mere thought to action.

In order to find out how far a patient may be dangerous, Dr. Blanche insists upon the necessity of making a special study of these paroxysms or crises, which, although so changeable in themselves, and so varied in aspect, are nevertheless capable of recognition when attentively investigated.

We look upon this as an important matter, and one that ought never to be lost sight of in enquiries into states of mind in criminal cases. It is not enough to find out how far a given patient is dangerous. It not unfrequently happens that, soon after the paroxysmal explosion, in which an attack of the "persecution" mania culminates and exhausts itself, the individual becomes, as Dr. Blanche points out, comparatively calm; and on his arrest for an act of criminal import,

there may be present only such physical and mental appearances as, to the surgeon's eye, betoken nothing more than a natural flushing and excitement, which speedily pass off. If the quiescent condition continues up to the time of the trial, the surgeon may say, and with truth, that he has seen no evidence of insanity in the man since his admission into prison. It therefore by no means necessarily follows, that, because a man shows no signs of insanity while awaiting trial, he was not insane at the time he committed the act. In this way, if no reference is made to the previous history of the individual, the jury are apt to be misled as to their finding; and that finding itself, and the possible subsequent sentence, may not be proved mistaken and unjust until, in the course of imprisonment, the individual's insanity is demonstrated by the recurrence of paroxysmal maniacal attacks, more or less severe and fugitive, which are sure to show themselves.

Coming to the Epileptics who commit homicide, our author divides them into three classes.

In the first class are those impulsive epileptics who, with shining eye, fiery countenance, clouded vision, and scarcely conscious enough of their acts to carry them out, throw themselves upon a passing stranger, with knife, hammer, or cudgel in hand, and slay him if, perchance, he be not permitted to escape from the unexpected assault.

To the second class belong epileptics with a crisis not convulsive, but latent and prolonged, who are on the look-out, and seem to pre-arrange their attack, but who in reality have not yet come to that stage at which they will be "ripe for violence." These are the ones that are to be seen walking about for hours before they act, with aspect strange rather than frightful, and doubly dangerous because they are half-masters of themselves.

In the third division are placed epileptics with *petit mal*, in whom, apart from the eclamptic seizures, there is developed a persistent mental perversion. These, the most formidable of all, act in accordance with a purposive and patient determination, and do not make an outburst as when the congestive state of the brain, manifested by the usual signs, has acquired an intensity sufficient to determine the final violence.

It is likewise to an impulsive strain become irresistible that certain suicidal lunatics give way, who kill that they themselves may be deprived of life; who commit murder under an impulse stronger than their power of resistance. The motives

which these homicides allege after the deed in explanation of their act, are not to be depended upon; in reality they obey an impulse produced by a cerebral over-excitement which, for the time being, is most intense, and of which they have been unconscious.

Dr. Blanche is no doubt correct in stating that but little dependence is to be placed upon the motives for murder alleged by lunatics of this description, for they are usually quiet, reticent, and "deep;" but we question the matter of their being unconscious. To kill that they may be killed implies a purpose and a volition on their part, which are incompatible with unconsciousness, and which are little likely to be forgotten. Indeed, that they are not so forgotten is proved by the fact that such patients hint at, or tell, later on, the object they had in view in committing the murder; or else how are we made aware that they did it in order that they themselves might be killed? The very knowledge that the law normally hangs the murderer led them to murder.

Our author then goes on to speak of other pathological conditions in which a man, under the influence of a chronic cerebral lesion, is subject to exacerbations, which are more or less transient, and which accord with the acute conditions of epilepsy and alcoholism. In fact, such a one is neither a drunkard nor an epileptic, and it may be that, although he may have never given any indication of labouring under a delusion, the moment the acute or subacute attack shows itself, there is developed in him a transitory proneness to commit the most terrible outrages.

Patients of this sort, he goes on to say, are not rare, and it is they who give rise to the greatest difficulties with medical men when consulted by the courts of law. In order to understand the nature and progress of their malady, and to dare to exonerate them from a responsibility which would appear so evident, it is necessary to picture in our mind the evolution of homicidal impulses in cases where insanity fills up the intervals which come between the paroxysms. It is then seen that the symptoms are the same, and that the uninterrupted and uniform character of the mental disturbance, occupying a restricted position, has only a secondary importance.

In summing up the conclusions to which his observations has led him, Dr. Blanche denies the existence of a special form of mental alienation, deserving the name of Homicidal Monomania. In this he will receive the support of nearly all alienists who have directed their attention to

the subject. Homicidal monomania is to medical men the grand nineteenth century limbo in criminal lunacy. As a phrase, it was a successful creation of the French school, but although it has in its time served a useful purpose, as a matter of fact, and in the light of later research and opinion, it is found wanting, and, as our author maintains, it has no existence. There are yet homicidal acts committed by undoubted lunatics of which the *raison d'être* is anything but clear, but by careful investigation of the individual history, and by following up the cases and scrutinising the indications betrayed during successive accessions of mania, the number of such homicides is found to be very small—so small, indeed, that when the original delusion cannot be isolated or traced out, we are not so ready to deny its existence as to feel that we have failed to detect it.

In support of his statement, Dr. Blanche goes on to repeat that homicide may be committed by lunatics suffering from various mental affections, provided that the patient may be subject to those paroxysms of excitement called congestive, and sufficiently intense to prevent them stopping short at the mere thought (of murder), and to cause them to go on to the act itself. These attacks, variable in severity and duration, are marked by signs which ought to awaken suspicion.

Alcoholism and epilepsy are put down as representing the maladies with mental derangements, in which is observed most commonly the onset of these attacks, which are carried to the highest pitch. These also are the forms where homicide is most frequently found to supervene. The delirium or mania of persecution, and the suicidal monomania (but why should there be a suicidal any more than a homicidal monomania?) alike offer frequent enough examples.

Here the mania of persecution ranks third in point of frequency as leading up to homicidal acts. For our own part we would place it first in this respect.

In the first place, we do not think that murder is less frequently committed by patients labouring under the mania of persecution than by epileptics; and in the second place, if it could be shown that the actual number of homicides committed by the "persecuted" is less than that committed by epileptics (taking the total number in each class as the same), we do not see that such a demonstration would also prove that the potential murderous disposition and energy is comparatively less in the former; indeed, we think it would not afford proof of this. And why? Besides the continual annoyance (rendering friends more willing to place him in

an asylum) that the "persecuted" lunatic is to those about him, even before he takes to carrying weapons about ostentatiously, there is the important fact, repeatedly referred to and insisted upon by Dr. Blanche himself, that the approach of the paroxysms in the mania of persecution is signalled by characteristic symptoms which enable the crisis to be foreseen and steps to be taken in time to guard against homicidal acts by the exercise of supervision at home or in an asylum.

No doubt in the interval between the attacks a "persecuted" lunatic sometimes wears the resigned aspect of a martyr, or complains in the milder remonstrant tones of an injured innocence; and no doubt the ferocity of a homicidal epileptic, when he has the steam up, is, perhaps, scarcely to be equalled within the range of possible human action; but the question is not, Is the risk attending a given homicidal epileptic more or less dangerous than that in the case of a given "persecuted" lunatic? The question is, Which class more frequently displays homicidal tendencies, and, therefore, which is the more dangerous all round, the epileptic, or the "persecuted" lunatic? We believe the latter.

The book contains numerous cases and official reports, with commentaries of much interest and value, which we wish it were in our power to reproduce at some length. We must content ourselves with brief epitomes of the general character of some of the cases.

F., a woman, aged about 48 years, made an attempt to murder the priest of her parish by shooting at him with a pistol during the performance of mass. Mania of persecution; had formerly been convicted of robbery; illusions of the senses. Reported irresponsible.

Jean B. had a congenital malformation of the head and was subject to erysipelatous attacks of the face. At the end of one of these attacks he was seized with acute mania and removed to an asylum. At the request of his wife he was set at liberty, but had scarcely returned to her when he again became maniacal and murdered her, under the influence of delusions and hallucinations. Soon became calm. But the after-history shows recurrence of attacks of the mania of persecution. Declared to be irresponsible, and removed to an asylum.

Antoine L., congenitally of weak intellect, had led a wandering life, during the early part of which he had shown signs of being of a distrustful and suspicious nature. Entered into business with M., and shortly afterwards, having retired from active work, betrayed signs of mental disturbance

and irritation that had not shown themselves while he was engaged in the business. Accused his late partner of having wronged him and deceived him, the charges being groundless. Was restless and suicidal, and finally murdered M.

The case of D. shows well the growth of delusions and the variable nature of attacks of mania. Now he blames his wife for his failure in business, he himself being steady and over-anxious to succeed; now he gets excited on the birth of his child, blaming it as an additional expense. Blamed his wife as being unfaithful, and said the child of which she was pregnant was not his, and tried to make her abort by kicking her. One day he walked about for a long time on the bank of the Seine with one of his neighbours, whom he looked upon as one of those who deceived him; he afterwards avowed that it was his intention to throw him into the water. Takes to drink, becomes more suspicious and irritable; believes that he is being poisoned; has distinct ideas of destroying his wife, of whom he was intensely jealous; and finally succeeds in taking her unawares and murdering her.

The case of R. is that of an epileptic with vertiginous attacks, hallucinations of sight, and derangement of intellect. Has no convulsive attacks. Nocturnal incontinence of urine. He has paroxysms of impulsive mania, and finally murders a priest. Remembers exactly what he did during the paroxysm. Irresponsibility.

In the memoir, several cases are recorded where the responsibility is described as "limited;" but the doctrine of limited responsibility is one that we cannot hold with. A man must be held to be either the one or the other—responsible or not—for his acts.

It is because we appreciate the nature of the work done by Dr. Blanche that we have ventured here and there upon a criticism. As a contribution to the pathological study of mental diseases in relation to homicidal acts, no one can read this memoir without learning much. Without professing to be complete, it is full of suggestive teaching.

French Review.

Decaisne, Des Paralysies Corticales du Membre Supérieur, Monoplégies brachiales. Paris. 1879. (Thesis, p. 74.)

This thesis is a collection of thirty-five cases, No. 2 of which is interesting. A phthisical patient, 54 years old, became suddenly paralysed on the left side, and at the same

time speechless. In three hours the aphasia disappeared, and the control of the left leg returned in sixty hours, but the power of the left arm was only regained by degrees from the shoulder downwards after a period of twenty-two days.

Death ensued on the forty-second day, and a patch of softening ($1\frac{1}{2}$ by $\frac{1}{2}$ cm.) was found on the surface of the right anterior gyrus centralis (involving its entire thickness) at the point of junction of the upper and middle thirds, and on the adjoining base of the second frontal convolution. A second patch was found about the middle of the lobulus parietalis.

The author's other cases are of little practical value, and certainly do not correspond to the usual definition of monoplegia. In one of his own cases (No. 23), for instance, there was paralysis of the abducens of one side, and of the rectus internus of the other side, and also hemiplegia (lesion of pons?), and this he adduces, even without an autopsy, as "cortical monoplegia."

EDWARD G. GEOGHEGAN.

German Reviews.

Beiträge zur Acuten und Chronischen Myelitis (*Contributions to the Study of Acute and Chronic Myelitis*). Von E. LEYDEN: Zeitschrift für Klinische Medicin. I., 1.

We have before us the first numbers of a new periodical for clinical medicine, edited by the two Berlin professors, Frerichs and Leyden. In his preface Frerichs tells us that the object of starting their "Zeitschrift" is to supply the want felt for an organ, which shall "represent the idea of *unity* in clinical medicine, and embrace the whole field of pathology and therapeutics together with the sciences which tend to develop them." While the "Deutsches Archiv für Klinische Medicin" exists and flourishes we cannot see how a want can be felt for such an organ. But nobody acquainted with the Berlin character can fail to recognise the vanity which makes it imagine it should lead all the rest of Germany in everything.

The first article is by one of the editors, Prof. Leyden. Its subject matter is five cases of chronic myelitis fully recorded, with finished and coloured lithographs displaying the lesions of the spinal cord found in each case. The following conclusions are drawn:—(1.) All five began as acute and subacute myelitis, and gradually went into the

chronic form. (2.) This chronic form presented the anatomical structure of sclerosis. (3.) They all began in the dorsal portion of the cord, and were, accurately speaking, cases of myelo-meningitis dorsalis posterior. The anterior columns were but little affected, and the anterior cornua intact. From this dorsal lesion they spread, as—(*a*) secondary ascending and descending degeneration, which only became limited to the typical systems at some distance from the original lesions; (*b*) peripheral myelitis extending upwards to the medulla and downwards to the lumbar region—not after the manner of a systematic degeneration, but more irregularly like the spread of an inflammatory process; (*c*) as disseminated (insular) sclerosis. (4.) The symptoms may be divided into two classes according to the stage of the disease. In the acute stage we have rapidly developed paralysis, tetanic convulsions of the limbs, pain (especially in the dorsal and sacral region), sensation of constriction, lancinating pains, versical disturbances, and bedsores. In the second stage (if the patient survives) we find a gradual improvement in the general condition—bedsores heal, but the paralysed extremities are often convulsed, reflex action increases, and spastic symptoms and contractures set in. (5.) After the second stage has been reached the condition may at first appear to remain stationary, but there is a disposition to advance, and after some time, generally years, death ensues either from intermittent disease or bedsores. (Erb mentions the further complication of the optic nerves in myelitis dorsalis—"Arch. f. Psychiatrie" x., 146; and Feinberg narrates a case of spastic spinal paralysis, where he found nystagmus, one of the most prominent symptoms of insular sclerosis, thus supporting Leyden's view of the connection between myelitis and sclerosis—"Berl. Klin. Wochenschr.," 20, 1879.) (6.) In two cases the disease was referred to fright and stoppage of the menses. The third case was from over-exertion and cold, and the fourth and fifth followed small-pox.

EDWARD G. GEOGHEGAN.

Ueber Regeneration und Degeneration des Rückenmarkes (Regeneration and Degeneration of the Spinal Cord). Prof. EICHORST, *ib.*, p. 284.

Eichorst divided the spinal cord in three puppies about the junction of the dorsal and lumbar regions. One of these was smothered by the mother after twenty-one days,

and exhibited no signs of regeneration. The second puppy regained the use of its limbs, so that when one and a-half months old it could go sixty yards without interruption. Its gait was slightly atactic. The ends of cord were re-united by cicatrical tissue, which contained numerous nerve-fibres. This tissue is fully described in the original. The third animal was killed 131 days after the operation, not having exhibited a single symptom of regeneration, and the ends of the cord, where it was divided, were found distinctly apart.

E. G. G.

Gedanken ueber die Socialwissenschaft der Zukunft von Paul v Lilienfeld. Vierter Theil, Die Sociale Physiologie, Mitau 1879.

This is the fourth part of Paul v Lilienfeld's learned work on "The Social Science of the Future." We reviewed the third part (Die Sociale Psychophysik) last year. The present volume shows the same extensive learning and comprehensive mind, but the questions with which it deals are somewhat beyond the scope of the "Journal of Mental Science." The nearest to our class of subjects are the chapters on "The Social Physiological Struggle for Existence," and "The Social Physiological Law of Inheritance." Naturally a philosopher like Mr. Lilienfeld, whose speculations cover so wide a field, cannot be expected to be an original investigator, so his views are derived from the study of the best authorities, and generally supported by long quotations. The book is thus full of information of a trustworthy character. The chapters upon "Socialism" and "Free Trade" are especially interesting. The author still keeps up the view of analogy between physiological and social subjects, though he does not try to run it so closely as in the preceding volume. Mr. Lilienfeld's fondness for stating his views in an abstract manner will no doubt impede the diffusion of his works, at least in this country; but no one can really study them without being impressed with the enormous amount of thought and reading which they display.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *German Retrospect.*

By William W. Ireland.

In addition to the works quoted in the Journal for January, 1880, p. 576, the following periodicals have been used in making the German Retrospect :—

"Archiv für Psychiatrie und Nervenkrankheiten," ix. Band, 2 und 3 Heft, und x. Band, 1 Heft. Berlin, 1879.

"Allgemeine Zeitschrift für Psychiatrie," xxxv. Band, 6 Heft, und xxxvi. Band, 2 und 3 Heft. Berlin, 1879.

"Jahrbücher für Psychiatrie," 1 und 2 Heft. Wien, 1879.

"Centralblatt für Nervenheilkunde, Psychiatrie und Gerichtliche Psychopathologie." Coblenz. Numbers from June, 1879, to 15th January, 1880.

"Der Irrenfreund," Numbers 8, 9, 10, 11, and 12. Heilbronn, 1879.

On the Origin of the Internal Carotid.—Dr. Otto Binswanger ("Archiv.," 2 Heft, ix. Band) publishes observations upon this subject in prosecution of the researches of Dr. L. Meyer and Dr. Schäfer. Dr. Meyer pointed out a tendency to degeneration and dilatation of the internal carotid, as the commencement of its course in 31 cases of the insane, and Schäfer observed that these changes were not peculiar to lunatics, but were to be found in bodies of people of all ages who had died of various diseases.

Dr. Schwalbe, of Jena, has also paid special attention to the anatomical relations of the division of the carotids and the first part of the trunk of the internal artery, and come to conclusions similar to those of Dr. Binswanger. This pathologist has examined the carotids in two hundred cases. He calls attention to the two ways in which the carotid divides into its external and internal branches. Either both vessels come off as if the main trunk branched equally into two, or the external carotid holds on the course of the common carotid, while the internal goes off at nearly a right angle, and takes a bow-shaped course backwards and inwards.

He found that the internal carotids had a bulbous dilatation in almost all grown-up people.

It was difficult to reduce the enlargements to any rule, but their form seemed to have some connection with the method of division of the common trunk, and also with the origin of the upper thyroid artery. Sometimes the enlargement commences with the common trunk, and is extended into the two arteries; sometimes it begins with the internal carotid. The bulbous enlargement is not observed till the first year of life. It may be regarded in a certain sense as a pathological appearance. Since it constitutes a weak point in the

artery, and under unfavourable conditions is enlarged by the degeneration of the middle coat into an aneurism.

On the Function of the Spinal Cord.—Professor Schiff, of Geneva, who has been studying the spinal cord for twelve years, made an exposition at Baden-Baden of his methods and his conclusions. The abstract, which appeared in the "Centralblatt für Nervenheilkunde" (15th November, 1879) was communicated by himself.

The description of his method of research is too long for our space and cannot be condensed. His preparations show the great difficulty, and many sources of error, of the attempts to effect cross-sections of the cords in living animals, so as to spare particular cords and not to injure the grey matter. It is necessary also to avoid confounding the result of the bleeding following the sections with those of the solution of continuity of the nervous substance.

It is also very important to keep the animals alive long enough to be able to distinguish the permanent from the immediate effects of the section.

He found that when in dogs the separation of the continuity of all the columns of white matter was effected about the last dorsal vertebra, the hind legs appeared for the first few hours to be paralysed, and to have lost sensation, or only a trace of feeling remained; but by-and-bye the sensibility to pain returned, and when the posterior columns were left entire, the sensibility to touch and voluntary movement of the hind legs and tail also came back. The movements were somewhat uncertain, but did not fail in any joint, and the feeling of pain was complete.

Even when the grey substance was more or less injured, the power of motion and feeling returned, and Dr. Schiff regards it as an established result that the sensibility and voluntary motions of all parts of the posterior extremities are maintained if a very small portion of normal grey substance remain entire. If a cut be made a centimetre above or below this narrow isthmus of grey substance the conduction of nervous influences is still maintained. The conducting isthmus may be in the middle or in one of the side halves of the cord; but if the isthmus be very narrow, and consists of the lateral extremity of the grey horns, sensibility is only maintained in one side of the body below the section.

Dr. Schiff rejects the views of those who hold that the fibres which diverge from the grey substance consist only of connective tissue. His observations confirm the views of Stilling that these fibres are nervous processes which ramify outwards and then return to the grey substance. It is by overlooking the structure of this nervous sling that some experimenters have concluded that they had no more to do with the grey substance when they had cut through its central part, and hence they concluded that feeling was conducted through the lateral columns alone. If we do not distinguish in vivisection between the feeling of touch and that of pain, and fail in recognizing the retardation of the conduction of sensibility, we might fall into the

error that all sensation is conducted through the lateral columns, and thus create a source of discord between pathological observation and physiological experiment. He regards it as very probable that the longitudinal white fibres of the antero-lateral columns do not conduct any sensory impressions to the brain and only serve for voluntary motion. Dr. Schiff states that he has succeeded in destroying, about the level of the first lumbar vertebra, the whole of the grey substance, including the lateral horns, leaving the continuity of the antero-lateral columns uninterrupted. In these cases there were still voluntary motion of the hind legs—at least, above the knee ; but all sensibility, even for the strongest interrupted currents, transmitted through transfixed needles, was completely and finally lost if the posterior columns were cut.

Condition of the Eyes during Sleep.—Dr. Ludwig Plotke ("Archiv." x. Band, 1 Heft) has made renewed investigations upon the position of the eyes during sleep. The old view was that the eyes were directed upwards and inwards, and the pupils contracted. Rählmann and Witkowski found that the visual axes were not always convergent during sleep, that the eyes took various positions, and that the pupils do not alter with the movement of the eyes. They found that the pupils contract most when the sleep is deepest, and that even in profound sleep light causes the pupils to re-act just as in the waking condition. Touch and sounds caused the pupils to dilate even when light was directed upon them. The pupils widen before full consciousness is re-established in the mind of the subject. On the other hand, Sander observed no movements of the eye during sleep.

Dr. Plotke has examined the condition of the eyes during sleep in about 500 inmates of the Poorhouse at Breslau. He found that children were the best subjects, as they were less apt to awake when the eyelid was raised than grown up people. The following are the principal of his conclusions : The pupil is contracted during sleep—the deeper the sleep the more contracted it is. When light falls upon the eye the pupil contracts ; it contracts less when the sleep is deep, and when the sleep is very profound it does not re-act at all upon the stimulus of light. The pupil dilates when excitation is applied to the auditory or sensory nerves, and all the more readily the less deep the sleep is. At the moment of awakening the pupil dilates most widely, and is not prevented from so doing by a bright light. The contraction of the pupil during sleep is owing to the activity of the sphincter muscle of the iris; the dilatation is either owing to direct inhibition or suspension of that activity. He found that when the iris was dilated by atropine it still contracted during sleep, though it did not become so narrow as in the other eye to which no atropine had been applied. The cornea in sleep becomes dull, probably on account of the almost entire cessation of the movements of the eyelids, for in sleep the eyelids do not entirely cease to move, but when they do so their motion is often independent of one another.

Crania Progenea.—Dr. Fraenkel (Zeitschrift xxxvi, Band, 2 and 3

Heft) gives the results of his inquiries after Crania of this kind in the Asylum at Bernberg. People with this peculiarity have the lower jaw so elongated that the teeth either protrude beyond those of the upper jaw, or rest permanently opposite to the upper row. The cases already described by Meyer were either idiots, or had some deficiency dating from childhood. Dr. Fraenkel met with 24 cases out of 140, of whom few were idiots; but eight were epileptics; four general paralytics; and four were affected with *mania a potu.* Other deformities were noticed to accompany that of the lower jaw, especially a strange shape of the outer ears, flatfootedness, abnormal narrowness of the palate, and squinting.

The Cranial Capacity of the Insane.—Dr. Meynert has made a number of careful craniological studies on 128 skulls of lunatics who had died in the General Hospital at Vienna. He found that the capacity both of the male and female skull in lunatics is greater than that of the normal skull, but that this superior cranial capacity was not accompanied by a greater brain weight. ("Jahrbuch für Psychiatrie," 11 Heft. 1879).

Insanity in Childhood.—Dr. Kelp, in an article upon Insanity in Childhood ("Irrenfreund," Nr. 8. 1879), describes the following two cases:—

A girl of ten years of age, after an attack of general convulsions, fell into a cataleptic condition, in which she remained stiff and immovable in one position, and muttered unintelligible words, which bore upon objects of which she was casually thinking. At other times her condition changed from excitement to rigidity and depression.

A girl, eleven years, suffering from epileptiform attacks, heard during them a deep voice calling on her; then another quite different one followed, which made itself heard for hours at a time, only sometimes interrupted by the first, which kept up the conversation. The second voice represented a wholly different person. All the questions were rightly answered in connection. The voices of the good and evil spirit spoke to one another. While the last was speaking the features of the girl took a wild, demoniac expression. The patient recovered as a voice cried, "Go out of this girl, thou unclean spirit."

Changes of Temperature in General Paralysis.—Dr. Croemer records in an article of above fifty pages in the "Zeitschrift" (xxxvi. Band, 2 and 3 Heft) his observations on the changes of temperature of patients affected with general paralysis. He believes that the curves of temperature of a patient suffering from this disease are so characteristic that one might indicate its existence from a carefully compiled table of the varying temperatures.

He describes three forms of general paralysis. In one of them the maniacal disposition is prominent, and meningitis is the prevailing morbid process; another form is of a melancholic character, and apoplectic lesions may be expected; and in the third there is great mental obtuseness, and atrophy of the brain is observed. In the first

form, the maniacal, the temperature is generally higher, but there are great rises and falls during the day.

In the melancholic form the temperature is lower, and there are fewer rises and sinkings and daily variations. In the third form the temperature never rises high nor falls low till the period of sinking, when a declining temperature indicates the near approach of death.

Dr. Croemer found that :—

1. As a rule the temperature of general paralysis is lower than that of healthy patients, and indeed lower than in other diseases

2. The curve of temperature rises and falls daily. The variations are less marked when the mental condition is quieter. They oscillate up and down in the melancholic and fatuous form of general paralysis. Where the difference of temperature is great from day to day we have the paralytic attacks, whether accompanied with epileptiform convulsions or temporary excitement characterised by mental disturbance and restless movements.

3. Towards the last stage of paralysis the temperature becomes higher, it then sinks. This implies the appearance of extensive paralysis coming and disappearing.

4. Paralytic attacks are always accompanied by a rise of temperature. The greater the intensity of the convulsions the greater the rise of the thermometer.

As a rule the temperature is low before the attack, and sinks lower in the first few minutes. This is regarded as an evidence of the irritation through which the fits are excited.

5. In those patients in which the paralytic appearances are severe the general temperature is high. The same holds good in those cases in which there is paralysis of the vessels with stagnation of the circulation. The author concludes with a list of the most recent contributions to the thermometry of the nervous system, which has appeared in Germany and France.

The Changes in the Brain and Cord in Hydrophobia.—Dr. O. Weller (" Archiv für Psychiatrie," 3. Heft, ix. Band) observes that till within recent times no lesions had been observed which could explain the terrible symptoms of hydrophobia. In text books on pathology, published but three years ago, the only morbid alteration described as following this disease was hyperaemia of the brain and its membranes. Even original observers like Forel and Schultze, who had examined the bodies of men and dogs that died of hydrophobia, stated that they found no change in the central nervous system.

Dr. Moritz Benedikt, of Vienna, seems to have been one of the first to indicate the peculiar lesions in hydrophobia, or lyssa, as it is called by the Germans and Italians. His results are thus summed up by Dr. Weller :—

1. There was hyperæmia and widening of the vessels, and extravasations with deposits of red and white corpuscles in the surrounding tissue.

2. There was effusion of lymph in the tissue of the brain, and

little hyaloid abscesses arranged in a racemose manner in the substance of the brain, and granular disintegration of the nervous substance, with little spots of pigment girding round the vessels. Similar alterations in the brain were described by Kolesnikoff and Wassilief; and Gowers and Cheadle discovered hyperæmia and extravasations in the pons and medulla oblongata.

Dr. Weller has himself examined seven brains and spinal cords of people who died of hydrophobia in the epidemic at Zurich: his preparations were subjected to a careful chemical and microscopical preparation both in the fresh and hardened condition. He found hyperæmia visible to the naked eye in the brain and pia mater; but the congestion was greatest in the medulla oblongata and spinal cord. Extravasations of blood were also seen under the microscope, and the vessels were shown to be surrounded with a lymphoid effusion. Dr. Weller describes, scattered amongst the effusion of lymph, masses of yellow fatty matter, which are very well represented in a coloured lithograph. They are circular, oval or polygonal bodies reflecting light strongly, and with a sharp outline and colour, varying from pale yellow to golden. Their size varies from 0·0015 to 0·01 of a millimetre. They are unaffected by acids or weak alkaline solutions, but are slowly transformed by alkalis and are promptly dissolved in ether and chloroform. These corpuscles are found in great abundance in the brain and spinal cord accompanying the vessels and hanging on or about them like grapes on the stalk.

Dr. Weller has never seen any similar products in other diseases of the nervous centres of man or the dog. He has sought for them in cases of myelitis in the dog without success. He therefore feels himself warranted to treat these yellow fatty corpuscles as pathognomonic of hydrophobia. Similar deposits have been described by the Continental writers already cited, but apparently after a less decided fashion.

Dr. Weller sums up his results as follows:—

1. Hydrophobia localizes itself in the form of an inflammation commencing from the vascular system. This inflammation is characterized by exudation around the vessels and infiltration of the tissue sometimes in particular spots and sometimes diffused. At the same time there is observed a peculiar fatty body in the perivascular spaces. This is probably a result of degeneration of the nerve elements.

2. The inflammation is to be regarded as the first stage of an acute myelitis and encephalitis. The process lasts too short a time to allow of it passing to softening as in ordinary acute myelitis, the disease soon ending in death.

3. The short duration of the disease is owing to the part which it more particularly seizes upon, the medulla oblongata and the nuclei of the glossopharyngeal vagus and spinal accessory nerves.

4. In man the morbid processes seem to be confined to the spinal cord and the medulla oblongata; but in the dog the inflammation also affects the brain.

Sclerosis of the Hippocampus Major in Epilepsy.—Dr. Ludwig

Pfleger ("Zeitschrift" xxxvi. Band, 2 and 3 Heft.) has paid special attention to the occurrence of contraction and sclerosis of the cornu ammonis in epilepsy.

While Demonstrator of Anatomy at the Vienna School of Medicine he never noticed a single example of this morbid lesion; but while at the asylum at Ybbs, out of 300 dissections, he saw 23 cases of atrophy with sclerosis, and two of atrophy alone. These subjects were all epileptics; but the lesion was also found in a case of general paralysis and in the brain of an insane and hysterical old woman.

Hemkes stated that the atrophy and sclerosis of the hippocampus was only found in those epileptics who had been seized with fits before they were twelve years of age, and that all these had suffered from some acute or chronic disease of the brain with severe cerebral symptoms. While unable, in many instances, to collect the history of the patient, Dr. Pfleger's own observations tended to confirm the view that where the lesion appeared the epileptic fits were severe and of long standing. The hardening and contraction of the cornu ammonis occurs in about half the epileptics in asylums. He thinks that this lesion is due to derangement of nutrition following on alteration in the manner in which the blood circulates in the head during the epileptic attacks. This, however, does not seem very clear.

Concussion of the Spine.—Dr. H. Obersteiner ("Separat-Abdruck aus den Medizinischen Jahrbüchern," iii., iv. Heft. 1879) gives the result of his observations and enquiries upon this injury. After the spinal region has been subjected to violence or gunshot wounds, or the severe concussion attendant upon railway collisions, the functions of the cords are impaired without any marked anatomical alterations. The principal symptoms are more or less paralysis of the bladder, and rectum. Sometimes the affection is followed by myelitis. In 63 cases collected by Dr. Obersteiner, 20 (31·7 per cent.) made a complete recovery, and 18 died (28·6 per cent.). He thinks the mortality could have been stated as higher had the other cases been longer kept under observation. Recovery often occurs late, sometimes after many years.

The symptoms do not all disappear at once; sometimes the paralysis of the bladder remains after all the rest. The pathological anatomy of the subject has not been thoroughly studied; he thinks the concussion produces some molecular change in the molecules of the spinal cord which may either retrograde to the former healthy condition, or progress to myelitis or degeneration of the cord.

On Combined Primary Disease of the Columns of the Spinal Cord.—Dr. Westphal has sent us two articles on this subject, reprinted from the "Archiv für Psychiatrie" (Band viii, Heft. 2, and Band ix., Heft. 3). The learned professor suspects it to be possible that readers may think his clinical cases reported at too great a length; but he assures them that the thing cannot be helped, and if after this warning they go on reading, why it is their own fault. At any rate, they can look at the illustrations, which are good.

Some of Westphal's cases illustrate the extension of disease of the spinal cord to the lateral columns. When this extension is indicated by the failure of muscular power, or by actual paralysis, there is agreement between the observed pathological lesion and the explanation of physiologists; but unhappily these two classes of observations do not always agree. Drs. Friedreich and Schultze examined the spinal cord of a man who had died of typhoid fever, after suffering from loco-motor ataxia for twenty-three years. There was no real loss of muscular power, except, perhaps, a little in the flexors of the femur, although the antero-lateral columns of the cord were found affected. Dr. Westphal is not disposed to admit that, in this case, the disease of the antero-lateral columns were so far advanced as that of the posterior columns ; if it had been so the command of the muscles would have been seriously impaired. In fact, Friedreich found that a greater number of nerve fibres were entire in the antero-lateral than in the posterior columns. But Westphal himself has studied several cases where, in addition to ataxia, there was paralytic weakness of the lower extremities. He points out that along with the atrophy of the muscles, there is also a disappearance of the fatty tissues of the affected limb, and this cannot be attributed either to chronic myositis or to the alteration of the nerve cells of the anterior horns.

Moreover, the excitability of the muscles to electricity and the reflex action still remain. Unfortunately, the spinal cord in these instances were not subject to an examination through the microscope. Dr. Westphal is disposed to believe that the real cause of the diminished muscular power lies in the diminished energy of the motor impulse.

In opposition to Charcot, the Berlin Professor gives us the result of his observations that combined disease of the posterior and lateral columns is not followed by spastic contractions. If the disease of the posterior columns has involved the lower portion of the cord, and those parts of the cord indicated as the deep organs of the spinal nerves, the only lesion found was to the degeneration of the posterior tract. Similar instances have been described by Fürck, Leyden and others. This last observer regards such cases as pseudo-paralysis owing to weakness of nervous power or diminished impulse of the will. He thinks it a confirmation of this view that paralysis bearing this character is commoner with women suffering from ataxia than with men, as women are more disposed to yield to any impediment to locomotion. Dr. Westphal, who does not accept this explanation, starts the question whether the muscular weakness is owing to alterations commencing not in the spinal cord, but in the muscles themselves. He gives, as the result of his pathological observations upon the lesions observed both in those who have suffered from paralysis beginning in the brain, that we never meet with a granular degeneration in the posterior columns of the cord along with a grey degeneration (sclerosis) of the antero-lateral columns, and a grey degeneration of the antero-lateral column is never met with if the posterior column show a granular degeneration. In other words, the

character of the degenerative process, whether granular or sclerotic, is always the same in both columns. Westphal finds that spastic spinal-paralysis, *i.e.*, paraplegia with rigidity, contractions, tremors, and heightened reflex action may accompany a variety of lesions; it may be the result of primary disease of the posterior and lateral columns as well as of sclerosis and inflammation of the cord about the upper dorsal region. It may follow disease of the antero-lateral columns in connection with the disease of the posterior column, if the latter involve the lower parts of the cord. Spastic spinal paralysis may also, as Charcot has pointed out, accompany degeneration of the cord occurring in patches.

Grey Degeneration of the Cord with Disseminated Sclerosis.—Dr. C. Westphal ("Archiv ix. Band, 2 Heft.) describes a case where grey degeneration of the posterior columns of the spinal cord was found to be combined with disseminated sclerosis of the other tracts, as well as the grey substance of the cord. This combination is so rare, that Dr. Westphal claims the honour to be the first to produce an undoubted example, and we must now modify the proposition that degeneration of the cord and partial sclerosis do not occur together. The subject was a man 46 years old at the commencement of the disease, which lasted four years. There was degeneration of the posterior dorsal region and disseminated sclerosis throughout the cord with rigidity of the quadriceps following on passive flexion of the knee joint and absence of tendon reflex.

The man had also fatty disease of the heart, with hypertrophy and dilatation of the left ventricle, and inflammation of the kidneys and bladder.

At the end of his article, Dr. Westphal observes that the statement that the tendon reflex fails in those cases in which the degeneration of the posterior columns has involved the dorsal region even when the lateral columns are also affected, is one of the best-established data in the pathology of the cord.

The Tendon Reflex Centre in the Cord.—Dr. Sanator, of Berlin ("Centralblatt für Nervenheilkund," 15, October, 1879), gives, as the results of his careful experiments, that,

1. In the rabbit and the dog the centre reflex of the tendo Achillis lies in the lumbar part of the cord between the fifth and sixth lumbar vertebra. On section of the cord at this place the reflex ceases.

2. When the posterior columns alone are cut about this level, the reflex phenomenon is still manifest.

3. The phenomenon is scarcely affected by the section of the anterior horns about the same height.

4. It is only when the outer part of the lateral columns are cut between the fifth and sixth lumbar vertebra that the reflex of the tendo Achillis is destroyed. These experiments do not seem to agree with the observations of pathologists in tabes dorsalis.

(*To be Continued.*)

2. *French Retrospect.*

By Dr. T. W. McDowall.

Annales Médico-Psychologiques, November, 1878—Sept. 1879.

The Progress of General Paralysis in the Hereditarily Insane.—By *Marandon de Montyel.*—The introduction of this paper deals at considerable length with the question of the action of hereditary tendencies in the development of mental diseases. We had not thought that it was now necessary seriously to discuss the belief that insanity is a chastisement of sin, and a just punishment of those who have wandered from the ways of our Lord. In regard to prognosis, most will agree that hereditary tendency to insanity and other nervous diseases diminishes the probability of ultimate recovery. But Dr. Doutrebente has stated that among such, *les candidats à la folie*, general paralysis tends to become chronic, to remit and even to continue for 10, 15 and 25 years, although its mean duration is usually believed to be from 2 to 3 years, or only 13 months, according to Calmeil. It is naturally enough asked, "How is it that in general paralysis alone the disease is ameliorated, whilst in all other diseases the tendency to incurability and death is increased by inherited morbid tendencies?" Dr. Doutrebente is equal to the occasion by saying, "We think the time is not far distant when general paralysis will no longer be considered a form of insanity, but a morbid entity, an interstitial encephalitis, which may be complicated by any form of insanity, without thereby constituting a distinct species. He also says, in his paper on the "Different Forms of Remissions in General Paralysis:" "It is not hereditary, at least in the same way as insanity, and it is not usually met with in families tainted by a progressive morbid heredity, especially towards insanity," and he agrees with M. Lunier that it is due to a special form of heredity, one of temperament, normal and non-morbid.

These opinions are attacked by M. Montyel with more energy than elegance, and he quotes various authorities to show that the relation between general paralysis and mental disease is not one of coincidence. He cannot believe that general paralysis has a special law of heredity, and that those with a hereditary tendency to the ordinary forms of insanity enjoy a certain immunity in regard to it. In trying to settle the question by observation, he found that it is necessary to distinguish between patients who have contracted their disease alone through the influence of hereditary tendency to mental disease, and those who have added to this influence one not less powerful, excess of all kinds.

Although the numbers are rather limited, still, as far as they go, those collected by M. Montyel are distinctly against the opinions of Dr. Doutrebente. From an examination of the records of all the lunatics of the Haute-Garonne, admitted to the Toulouse Asylum, since its erection in 1858, it would appear that the duration of the disease was as follows:—

Less than 1 year	5	
„ „ 2 years	12	23, or 78·4 per cent.
„ „ 3 „	6	
More „ 10 „	6	6, or 21·6 per cent.

Only those cases were made use of in which the hereditary antecedents were beyond question, and amongst those who died all were excluded who succumbed to intercurrent diseases.

Is the progress of general paralysis, the same in the "héréditaires," whose lives have always been sober and regular, and in those guilty of sexual and other excesses, or who have broken down in their struggles with want and misery? In 16 cases in which the disease was alone caused by hereditary tendency to mental disease, the duration was—

Less than 1 year	4	
„ „ 2 years	5	13, or 81·3 per cent.
„ „ 3 „	4	
More „ 10 „	3	3, or 18·7 per cent.

Mortality among Children of Epileptics.—By *M. Martin.*—From statistics collected at the Salpêtrière, in 1874, and from others published by Boucher and Cazanvielh, &c., it was found that 19 epileptic parents begot 78 children, of whom 55 died very young, the majority of convulsions. Of the 23 surviving, 15 only were healthy at the time of the enquiry, and they were all very young. The extremely important conclusion may be drawn from these figures that almost all the descendants of epileptics are dead, or affected by epilepsy before puberty, and that amongst the small number of survivors, they being exceedingly young at the time of examination, the majority died during the next few years.

This extraordinary mortality among the children of epileptics explains how Esquirol and others, when examining *adult* epileptics, so seldom succeeded in finding a hereditary tendency to the disease.

Double Murder by a Child.—By *Dr. Mordret.*—As the events recorded occurred so long ago as 1875, and as most English readers are already acquainted with the case, it is only necessary to state that the full details, as furnished by Dr. Mordret, are exceedingly interesting. The girl, only 12½ years of age, is a typical moral lunatic or imbecile.

Remissions and Dementia in Certain Cases of General Paralysis.—By *Dr. Baillarger.*—We have of late been driven to the opinion that the great amount of attention which has been devoted to the study of the symptomatology of general paralysis, as a means of classification, has been good labour wasted. The method is wrong. Observation should be directed to the association of the varieties of general paralysis with localised anatomical lesions, for it is almost certain that under the name "general paralysis" we include several distinct lesions of the nerve centres. The long discussions as to whether the disease should be called general paralysis, paralytic insanity, or paralytic dementia, are exceedingly tiresome, and not instructive.

They remind one of the metaphysical hair-splitting of the schoolmen of the middle ages.

Two years ago M. Baillarger wrote, trying to show that the remissions which occur in the course of general paralysis are nothing but recovery from attacks of mania or melancholia, which precede or complicate this disease. To this it is objected that "patients covered with sloughs, extremely wasted and exhausted, unable to stand on their legs, and in a state of complete dementia, sometimes regain their power, get back the greater part of their mental powers, and remain so for years." The object of the present paper is to examine the real nature of those rare cases of remission in which the symptoms of dementia have predominated from the beginning of the disease. The following are the conclusions arrived at :—

1. Melancholia, with paralytic stupor, or simply paralytic stupor, may assume most serious symptoms, and simulate advanced dementia, and, nevertheless, be followed by remarkable remissions after several months.

2. When symptoms of dementia, with some delusions, develop rapidly during the first stage of general paralysis, they may not belong to a genuine dementia, but to a pseudo-dementia, constituting a special condition not yet sufficiently examined.

3. The existence of dementia at the beginning of general paralysis is frequently erroneously diagonised from certain special characters, or because it is supposed to be masked by manical or melancholic delirium.

4. The constantly varying, absurd, contradictory delirium of general paralysis is not a proof of the existence of dementia, and may be explained by a special condition comparable to certain cases of drunkenness.

5. Pseudo-dementia in general paralysis cannot, at present, be distinguished from true dementia, except by its rapid invasion and by signs of stupor.

6. There are no genuine remissions in simple, chronic, and progressive paralytic dementia.

The Nature of the Muscular Disorders in General Paralysis of the Insane.—By *Dr. J. Christian.*—It has long been well-known that in this disease there is no paralysis in the ordinary sense of the word, but only an ataxia with more or less muscular weakness. Dr. Christian has been at the trouble to measure this feebleness by means of the dynamometre. He examined 22 paralytics; 9 were from 30 to 40 years of age; 9 from 40 to 50; and only 4 more than 50. In all the cases the disease was of long standing. On each occasion he measured the force of each hand, and it so happened that in all the 22 patients the right was the stronger.

The individual differences were considerable as might have been expected. But they are of little real importance, since they exist also, and to the same degree, in healthy persons. Attention, however, must be paid to the difference in muscular power in paralytics of

the same age, and specially to its variations in the different stages of the disease in each patient.

The patients were weighed every time they were tested with the dynamometre, and thus he estimated the progress of the marasmus. He observed in general that when the weight of the body increased the muscular power did so also ; the very opposite often occurred, and it was, therefore, impossible to establish any relation between the variations in weight and muscular power.

It would be important to make such observations during the whole course of the disease. Unfortunately Dr. Christian has had the opportunity of examining scarcely any but chronic cases. The majority had been affected for months, some for years.

The results obtained are given in tables, and the following are the conclusions :—

1. The means obtained are, in general, less than in health. Only 5 times in 44 did the mean exceed 50, the healthy standard. It may, therefore, be concluded that in general paralysis there is a real enfeeblement of the muscular power, such as is observed in all chronic affections, and yet this enfeeblement is not well marked, as only 7 times did the dynamometric force go below 20.

2. There is no constant relation between the diminution of the muscular force and the progress of the marasmus. Even after an interval of many months, during which the marasmus became marked, the dynamometre gave the same results.

3. The disease, called general paralysis of the insane, is at no period of its evolution a paralytic affection. Until the end the patient preserves the *will* of contracting his *muscles*, and the power of contracting them forcibly.

Alcoholism in the Parents a Cause of Epilepsy in the Children.—By *Dr. Hyppolyte Martin.*—As the result of careful enquiries into the history of the epileptics at the Salpêtrière, Dr. Martin states that they could be divided into two classes. In the first the drunken habits of the parents were considered as certain, and it included more than two-thirds of the cases ; in the second, they were doubtful in some, and only suspected in others.

The 60 epileptic girls of the first group had had 244 brothers and sisters ; of that number 48 had been affected by convulsions in early childhood, 132 were dead, and only 112 were alive at the date of the enquiry. It should be added that amongst the survivors the majority were still very young, and in some the nervous system was more or less seriously affected.

In the second class, 23 epileptic girls had had 83 brothers and sisters, amongst whom 10 only had had convulsions, 37 were dead, and 46 were still alive in 1874.

These figures confirm all that has been said as to the baneful influence of alcoholism in the parents on the nervous constitution of their children.

Clinical Cases.

1. By *M. Foville.—Congestive Mania.*—M. R., æt. 25, belongs to a family with well-marked neurotic tendencies; one of his sisters was insane, and he has always been nervous and irritable, and, when annoyed, he was like a madman. Six months before admission he began to suffer from very intense gastralgia, accompanied by vomiting and genuine symptoms of hysteria. His doctor was struck by his state of exaltation and general mental condition. Nevertheless, the symptoms of gastralgia disappeared, but his character became more and more irritable, and occasionally his memory was markedly defective. Fifteen days before admission delusions first appeared, and they were from the beginning of a distinctly exalted character. As his excitement increased, and he did not sleep, he was brought to the asylum. Although his wife said that there was no affection of his speech, still, there were distinct fibrillar movements of the muscles of his lips and cheeks when he spoke, and his pronunciation was wanting in precision.

In about six weeks he began to improve, and at the end of three months he was discharged recovered, and he continued well three years afterwards, the last time he was heard of.

2. By *M. Foville.—Transient Symptoms of General Paralysis in an Epileptic.*—This case was recorded so long ago as 1862, and would not be considered so unusual as it was then. Shortly, the history is: Aged 45; epilepsy of more than 40 years' duration; right hemiplegia; hallucinations of hearing; voices suggest ideas of riches and grandeur; impediment in speech and exalted delirium disappear in a few days.

3. *General Paralysis of Syphilitic Origin.*—By *M. Fournier.*—This case was first published in the *Progrés Médical*, and it appears also, if we are not mistaken, in his book on cerebral syphilis. The details need not be given, as it is only one of numerous cases with which all observers are now familiar.

4. Case of monomania with consciousness or *Folie du doute,* reprinted from Esquirol's "Traité de Maladies Mentales."

5. *Paralytic Dementia following Progressive Muscular Atrophy.*——By *M. Baillarger.*—M. M., æt. 47, was admitted to the Salpêtrière in 1857. Ten years before she began to present symptoms of atrophy of the muscles of the arms. The atrophy had been gradual, but somewhat more rapid during the last year, and on admission it was most marked on the right side. No mental symptoms appeared till the beginning of 1857, when loss of memory was noticed; then distinct mental weakness.

When admitted she appeared to be in a state of stupor; when she tried to speak, the muscles of the lips, cheeks and tongue trembled convulsively. The pupils were unequal, the left more dilated than the right; the face congested; the gait easy, but slightly unsteady; the body inclined much backwards; the arms pendulous, and in constant involuntary motion; the head was similarly agitated. She appeared to be already in an advanced state of dementia, did not know

where she was, &c. A fortnight after admission she rapidly became more feeble, and died.

6. *Exalted Delirium following Scarlet Fever.*—A girl, aged 17, had an attack of scarlet fever, preceded by severe pain in the head, and accompanied by profuse fœtid discharge from the ears. During convalescence she became delirious, and was removed from hospital to the Salpêtrière. Here she presented no signs of insanity, and denied that she ever had done so. She afterwards acknowledged that she had not spoken the truth, and gave a detailed account of her delirious ideas, all of which she distinctly recollected. In six weeks she was discharged, well in mind and much improved in bodily health.

Lunacy in France in 1876.

In directing attention to the abstract by Dr. Motet of the report presented to the Minister of the Interior by Dr. Lunier and others, we wish to refer to the original report as containing an excellent summary of the history of lunacy legislation in France, Spain, &c. The report is an immense work; to produce an abstract of it would be a great labour, and the result would not be satisfactory. The tables must be seen to be thoroughly understood.

Incendiarism by a Young Girl.

It has lately been suggested that the English method of enquiring into the mental condition of prisoners might be improved. That is doubtless true, though the entire adoption of the French plan would seem open to obvious objection. Should any one question this, he need only read the report on this case, and he will see that the proposed remedy may be worse than the disease. Certainly the case is a very difficult one, but the report is far too long and diffuse. The facts indicating insanity observed by the experts are so meagre and unsatisfactory that we do not believe that any English jury would have acquitted the prisoner with no other evidence in her favour, and we question if any English specialist would have taken the view of the case which MM. Dionis des Carrières, Lefèvre and Rousseau did.

The facts are these: A young girl living in a farm-house set fire to the buildings on several occasions. She denied all knowledge of the cause of the outbreaks until she thought she was discovered, when she confessed her guilt. She took the greatest precautions to avoid detection, and her only excuse for her wickedness was that she could not help it. So far as is known, she never exhibited any symptom of insanity or imbecility before or since; yet the following conclusions were arrived at by the experts appointed to examine her mental condition:—

1. Eugénie Vigreux suffers from an arrest of intellectual development which forms one of the degrees of imbecility.

2. This tendency to degeneration is complicated, in some unknown way, by a state of mental disorder which has assumed the form of monomania of fire-raising.

3. In the execution of the crimes of which she is accused, the initiative was not hers; she obeyed a force which dominated her reason and will, and rendered all resistance on her part impossible.

4. She should be considered irresponsible.

Clinical Cases.

1. *General Paralysis of Syphilitic Origin.*—By *M. Rendu.*—In 1864 the patient contracted a chancre, which was followed by the usual constitutional symptoms. In May, 1875, his health became deranged; he became sleepless, and had vivid dreams. In a few weeks his memory began to fail; he became impotent. At last his character became entirely changed. He was irascible and fantastic, alternately excited and depressed. In September, 1875, he had all the early symptoms of general paralysis. Iodide of potassium was prescribed, but could not be taken on account of irritability of the stomach. Mercurial inunction was then tried, but the immediate effects seemed to be that he became quite mad. The treatment was, however, continued, and in about twelve days he began to improve. His reason was completely restored in two months. The symptom which continued longest was dilitation of the left pupil. For two years, in spite of all treatment, he suffered from marked polydipsia, but at last it disappeared also. He continues well in every respect.

2. *General Paralysis of Syphilitic Origin.*—By *M. Rendu.*—M. X. was admitted to the Asylum Beaujou in 1875, in the following state:—He is depressed and cannot settle to any mental occupation. There are disorders of sight, characterized by a kind of persistent fog; trembling of the tongue and lips, inequality of pupils, and constant headache. When he walks the titubation and unsteadiness are not ataxic, but paraplegic. There is incomplete but diffuse anæsthesia; also impotence. No incontinence of urine, but habitual constipation.

Two years before he had been treated in Germany for so-called general paralysis with some transient benefit. In a few months he relapsed, and became even worse than before; there was much depression, and the affection of speech was very marked. There was no trace of exaltation. The adoption of an anti-syphilitic treatment was followed by rapid improvement and ultimate recovery. Inequality of the pupils was the last symptom to disappear. He had become infected with syphilis some 15 or 16 years before his mental illness appeared.

Congestive Mania. Beneficial Influence of Profuse Suppuration.—*M. A. Foville.*—The only point calling for attention here is the rapid recovery which occurred in a very troublesome case of mania after the appearance of a large abscess over the right knee, followed by a large carbuncle on the back.

General Paralysis.—*M. Lunier.*—This case is very interesting as being one of those about whose existence we are decidedly incredulous—one of paralysis lasting more than 20 years.

M. H. was first admitted in May, 1853, to Charenton, when Calmeil certified him as suffering under general paralysis. He escaped next day. He was next admitted in August, 1859, but recovered so quickly that he was discharged in less than a month, Calmeil certifying him free from any symptom of mental disease.

Third admission, 21st April—11th Sept., 1862; fourth, 28th Sept., 1865—28th Jan., 1866; fifth, 13th May—17th Oct., 1869; sixth, 11th Sept., 1870—27th April, 1871; seventh, 24th June—25th April, 1876; when he died of pneumonia.

It must be admitted that the mental symptoms were those of general paralysis, but the only physical symptom present was difficulty in speech. This case does not settle the question, as no post-mortem examination was made.

Congestive Mania.—M. Baillarger.—In this woman, æt. 63, there was strong hereditary tendency to insanity. Her attack of mania was characterized by exacted delusions, impediment in speech, &c. When the excitement disappeared so did the affection of speech. She recovered completely in six weeks.

Medico-Legal Report on a Case of Attempted Parricide.—The chief feature of interest is the suddenness of the homicidal attack. The man had long been slightly insane, idle, irregular in his habits, and constantly at enmity with his father because of some difference about money. One night he returned home and found that his parents were in bed, but the fact that their door was fastened seemed to excite in him immediately a state of furor, in which he broke the door, wounded his father, and attempted to injure his mother. It is particularly stated that he was not drunk at the time. As is usual in such cases, he exhibited no remorse, expressed no regret, was quite indifferent to the consequences of his actions; in fact, he seemed to care for nothing and nobody.

The Relation between Syphilis and General Paralysis.—Dr. A. Foville.—A very full abstract of this paper appeared in the last number of the Journal.

New Researches on General Paralysis.—By *Dr. Christian.*—The writer is in despair because, after all that has been written on this disease, we know so little about it. He believes that we must seek to obtain a true knowledge of it by returning to clinical observation.

The first two divisions of his paper are devoted to the repetition of the well-known facts that in general paralytics there is no real paralysis, but only a state of ataxy, and that the muscles do not undergo fatty degeneration, but retain their contractibility to the end.

In his third section he says that if it is easy to prove that the voluntary muscles preserve their properties it is not so easy to do so with the muscles of organic life. What more simple and more convenient than explaining, by paralysis of the sphincters, the incontinence of urine and fœces, by paralysis of the pharynx, the difficulty or impossibility of swallowing? And how can such a universally

received opinion be upset? In trying to explain the real cause of incontinence of urine in general paralytics, he says:—

"We generally observe that the paralytic is dirty during the period of excitement, but when this comes to an end, and for many months afterwards, the function is performed normally; or else, if there is incontinence, it is only occasional. But this is not so when the disease is advanced, when the dementia is complete, and when the paralytic dirties himself habitually. But even then we can see that he is only wet at intervals. Two or three times a day he will wet his bed, but if we take the precaution to change him immediately he will remain clean for several hours.

"The paralytic is, therefore, only dirty through absence of mind and forgetfulness; it is only casually that he has paralysis of the sphincter.

"What has just been said of micturition is equally applicable to defæcation.

"As to the difficulty in swallowing, it is not necessary to attribute it to paralysis of the muscles of the pharynx, which does not exist, but to the simple fact that the patient forgets to swallow. The paralytic is very voracious, and fills his mouth with food, which he allows to accumulate there. He does not make the necessary effort to swallow, and is thus choked mechanically."

Seeing that Dr. Christian hopes for the advance of scientific medicine by clinical observation, we feel inclined to state our experience, it being in some respects at variance with his. Especially do we dissent from his explanation of choking in paralytics. It may be true in some cases, but certainly not in all. If a man, be he paralytic or not, stuffs an enormous piece of food into his mouth, he will be choked simply because the æsophagus is too small to allow the passage of the mass. But this is not the usual manner in which paralytics perish by choking. Let us say he is eating bread. In his haste he scarcely chews it, but swallows it nearly dry. Its physical condition retards its progress down the æsophagus. Before it nearly reaches the stomach another mouthful follows, and so on until the æsophagus is packed with dry bread. But the paralytic does not seem to feel this, for he continues to eat until the food packs the pharynx and obstructs the larynx. This we have proved by post-mortem examination. It is a mistake to say that the paralytic forgets to swallow. As a rule he swallows too rapidly. Besides, once the morsel is beyond the back of his tongue, it is beyond his will. Swallowing is such a complex reflex act that it is difficult to say where the defect may be which leads to the choking.

As the result of his observations, Dr. Christian concludes that in general paralysis the whole muscular apparatus preserves its intrinsic qualities. This, he says, is perfectly demonstrated by clinical observation. It is also equally plain and certain that the intelligence is gradually destroyed. A paralytic ends by becoming a complete dement.

"We may conclude, therefore, that the organs of intelligence are

destroyed little by little. But it is not possible to suppose that the motor centres are the seat of the same destructive process, for if the motor centres were affected in the same way, the loss of movement would proceed parallel with the loss of intelligence; the muscles would cease to have the power of contracting, as when the cerebral tissue is destroyed by a hæmorrhage.

"The idea which strikes me is that the motor centres, far from being destroyed like the intellectual ones, are at most only irritated in a secondary way through their relation to the seats of disease.

"Certainly this is only a theoretical view at which we arrive by theoretical induction; we have as yet no direct evidence to support it"—a curious conclusion for an author who believes in clinical *observation* as the chief means to advance knowledge.

The paper may be summed up in the following propositions. It is probable that what is new in them will be very cautiously accepted:

1. General paralysis is not in any way a paralytic disease.
2. It should be considered as a primary cerebral disease, an interstitial encephalitis.
3. It begins in the intellectual centres, which are progressively destroyed.
4. The motor are not destroyed like the intellectual centres; they are only irritated secondarily. So also the disorders of motility are only secondary. They have no independent existence; they are always proportionate to the intensity of the cerebral disorders.
5. The direct cause of the muscular disturbances is intellectual enfeeblement and the fibrillar trembling of the muscles.
6. This fibrillar trembling appears to be due to an alteration of the muscular plasma, caused by a special inflammation of the brain.

(*To be Continued.*)

PART IV.—NOTES AND NEWS.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

A Quarterly Meeting of the Medico-Psychological Association was held in the Hall of the Faculty of Physicians and Surgeons, Glasgow, on Wednesday, 24th March, 1880. There were present, Drs. Grierson, Melrose, (Chairman); Yellowlees, Glasgow; Clark, Morningside; Maclaren, Larbert; Robertson, Glasgow; Rutherford, Lenzie; Ireland, Larbert; McLeod, Carlisle; Professor Gairdner, Glasgow; Drs. Grieve, British Guiana; Christie, Glasgow, &c.

OVERCROWDING IN PAUPER ASYLUMS AND ITS REMEDIES.

Mr. MACLAREN, Larbert, said—My reason for introducing this subject is my belief that there is at present a large amount of overcrowding in asylums, and that many of those who have not already done so, will ere long have to face the question of how they can best obtain additional accommodation for their patients. I propose to give, very briefly, a short sketch of my own experience in the Stirling District Asylum. This building was erected about eleven years ago, with space sufficient for 200 patients. The general plan of the ground

floor of the main building was as follows:—The dining hall was in the centre, and from it a corridor extended to each wing, and from the corridor doors opened into day rooms and dormitories. At the centre portion of it, and opposite to a large day-room, there was a block containing water-closets, dressing-rooms, lavatories, and a general bath-room. For some years the asylum was found sufficient for the numbers sent to it, but shortly after I took office as its superintendent in 1876, it was found that as the average number resident was steadily increasing from year to year, some means must be taken to provide more space. Several plans were suggested and considered, but what I finally proposed, and what was carried out was this. Along the whole length of the corridor, the partition wall dividing it from the adjacent rooms was removed, and the space formerly occupied by the passage was added to the various apartments which had opened from it. The space alluded to as occupied by lavatories, &c., were also in this same process completely gutted, and one large room formed of it. To supply these necessaries—water-closets, &c.—a brick wing was erected in a remoter part of the asylum, apart from the building, but attached to it by a passage with cross ventilation. Thus the whole plan of the building has been altered. Not only have the rooms been greatly enlarged, but, as they now extend in their breadth through the whole depth of the asylum, they have, instead of light from only one set of windows, an abundant supply from two sides, and in the case of the larger ones, from three. An infinitely more bright and cheerful aspect has thus been afforded. As each room, too, opens directly to and from the one on either side of it, both the attendants and patients are kept more easily under supervision. Every one, in fact, is under the eye of everybody else, and this is a great improvement on the state of matters which existed when a long and rather dark corridor served as the means of communication through the asylum, and when each room was cut off from those around it. All the doorways were enlarged when these alterations were made, and they were all fitted with ordinary handles except such as lead directly to the outside. The irritating use of the key in the daily work of the establishment is in this way avoided, and yet no unreasonable risks are run nor temptations offered to the patients to attempt escape. In less than four years the space acquired by these alterations has been completely occupied, and is now crowded, and we are face to face with the question of how more space can best be obtained. Leaving out of the question methods of relief to overcrowding entirely external to the asylum, such as boarding out fatuous patients in lunatic wards of poorhouses, &c., I think I am justified in saying that there are four chief methods of finding additional space. 1st. An addition may be made to the existing building in harmony with, and an extension of the original plan. 2nd. A detached wing or series of wings could be built, but with an attachment to the main block. 3rd. A separate or supplementary building might be erected entirely apart from the original plan; or, 4th. A series of cottages could be built in parts of the grounds, and small colonies of patients formed in them. My own opinion is that, in any asylum where there are not more than four or five hundred patients, if there is no objection to the original plan, the best way is simply to enlarge it. A supplementary asylum is expensive, inasmuch as an additional staff of officials is necessary, and it is also likely to be more expensive than the other plan in respect of the cost of its erection and general furnishing. We recently at Larbert put up three double blocks of cottages, with the view of putting married attendants into them, but since the overcrowding began, I have been using them for the accommodation of a few patients in each. These patients are away there by themselves, and they certainly are extremely happy, but of course this is a plan that could only be adopted to a very limited extent. I venture to think that the whole subject is worthy the attention and discussion of the meeting, and my few remarks are not meant to be in any degree exhaustive of the matter, but have rather been made with the view of eliciting opinions from others.

Dr. YELLOWLEES said that the idea which Mr. Maclaren had carried out was not new, but it was a nice adaptation in an old house of a new principle, and was certainly an admirable way by which to obtain additional accommodation. But another question arose out of the discussion, viz., how far is it advisable to enlarge an asylum? He had experience of 570, and found that to be a severe tax on one's energies when there were many admissions.

Dr. RUTHERFORD said that, in his opinion, an asylum for 600 patients could be most easily and economically administered. When the numbers much exceed 600, too much of the medical work had to be deputed.

Dr. ROBERTSON advocated an extension of the system of boarding-out in suitable cases, stating that the City Parish of Glasgow had at present 32 cases boarded out with cottagers, chiefly in Highland districts, and that his experience of the system had been very satisfactory. No unpleasant incident had ever occurred in connection with such cases. The average cost of each patient was about 6s. per week, and by means of the Scotch lunacy system, the supervision of such cases was very effective and satisfactory.

Dr. IRELAND said that, as a matter of fact, only eight per cent. of Dr. Robertson's cases were boarded out, there being 435 lunatics chargeable to the parish, of whom 400 were in asylums, and 32 boarded out. He was exceedingly doubtful whether the system could be extended, for the reason that we would soon reach the limits of those persons who are willing to receive such boarders. Those who are compelled by circumstances to take a madman or an idiot into a narrow cottage, must be poor and wretched, unless philanthropists of the first water. Were it proposed to board out say one thousand more lunatics, he feared suitable people would not be got to take them, whereas the increase of asylum accommodation was only limited by the paying powers of the community.

Dr. YELLOWLEES said that boarding-out could afford but slender relief to the overcrowding in pauper lunatic asylums. With all the care which Dr. Robertson had given to the subject, only eight per cent. of the lunatics of his parish were so disposed of. Suppose they eliminated the idiot class—which he hoped would come some day—the relief would still be very small. The increase demanded some more decided relief than either of these means afforded. To extend or enlarge asylums beyond a certain extent was a sad mistake. If an asylum was to be an hospital for the insane, it ought not to exceed from 500 to 600 patients; it was impossible for a man to know about his patients if that number was exceeded, and even with that number the superintendent and his assistant would be thoroughly taxed. He believed it to be only a question of time, when they would be obliged to provide chronic asylums for the treatment of the chronic and incurable insane, and he deprecated the ruin of our present district and county asylums by their becoming overborne with the multitudes of chronic insane folk who really needed very little medical care. What had been done in London must be done in other parts of the country. They must endeavour to have the terrible incubus of chronic cases removed by getting districts to combine in erecting chronic asylums. That he believed to be the only true solution of the question of overcrowding.

Dr. ROBERTSON said he was not quite so clear as to the advisability of having extensive chronic asylums erected throughout the country. His main objection rested upon the fact that the patients would be far removed from their friends, who would thereby be put to great expense in visiting them. He suggested that they might have a separate block in the grounds of the district asylum, so that virtually they would have a chronic and an acute asylum within the same grounds. The chronic cases could be placed under the care of assistants, with an occasional visit from the superintendent. In that way, he thought, the wants of the different districts might be fairly well met.

Mr. MACLAREN then gave an account of a case of feigned insanity, which he had had under his observation for some time. The man was sent to the Stirling District Asylum from prison, to which he had been consigned to await his trial for certain serious offences. After a short period of incarceration, he

became first violent and afterwards silent, gloomy and despondent. On account of these symptoms it was thought necessary to send him to the asylum. He was a tall, dark, powerfully-built man, with a pale, evil-looking face, and a slightly suspicious glance. He preserved an obstinate silence, but indulged in a number of wild gestures and gesticulations when addressed, and made a demonstrative and rather theatrical display of terror at the simplest objects, such as the gloves or walking-cane held in the hand of the person speaking to him. After a period of careful observance of the man, I began strongly to suspect that his insanity was not real, and that his symptoms were feigned. What he seemed to be aiming at was a reproduction of the symptoms of acute mania; not that this term may have been known to him, but he appeared to go upon the lines of the popular idea of wild insanity. Many things, however, gradually developed themselves, which greatly marred the consistency of his personation. In an insane man the manifestations are almost unceasing, and continue as active when he is alone as when he is in company. In this man's case, the symptoms only started into activity when he was personally addressed. If left alone, he would sit quiet and anxiously brooding. Sleeplessness as well as restlessness is a constant accompaniment of acute mania. Patients labouring under it can be heard all through the night dancing about their rooms, and drumming noisily on their walls and doors. This man, on retiring to rest, at once fell into a profound slumber as if worn out with the strain of his assumption during the day. Many other differences there were, even more obvious to personal observation than capable of easy narrative here. His whole manner, bearing, and demeanour were utterly unlike the actual display. The careless, happy-go-lucky expression of the person labouring under mania is one of the most striking features of the attack. In this man the expression was altogether different, and as he sat with his pale, moody, anxious face, and even suspicious glance, as of one expecting a blow from a hidden enemy, so far from looking like a man whose wits were wandering, he was a very type and embodiment of one whose every faculty was on the alert.—Mr. Maclaren then described various other points in his case, all having the same bearing. Ultimately the man, on hearing it remarked frequently that his symptoms were unlike the actual display, began to alter them, and after a little, abandoned all except persistent silence. This, too, however, he in time failed to maintain, and the result entirely justified the opinion which had been formed as to the true reading of his case.

After some remarks, a vote of thanks was awarded to Mr. Maclaren for his paper.

Dr. IRELAND read a paper entitled, "Remarks and Notes upon a Visit to the Branch Asylum at Newark, U.S.A., for Adult Imbecile Women." (Original Articles, page 216).

Dr. ROBERTSON said they were indebted to Dr. Ireland for having directed attention to this subject. He could corroborate what had been said as to the evils arising from the class of imbecile young women associating with the community. He had watched many cases of girls growing up to womanhood, and who had ultimately become chargeable to the parish. In an economical point of view, the care of imbeciles, and especially of imbecile women, was a most important question. This was beginning to be recognized in Scotland. It was the intention of the Glasgow District Board of Lunacy ultimately to devote their asylum at Bothwell, which was now being completed, to the accommodation of imbeciles, and he supposed grown idiots. A difficult question in a legal point of view was the degree of imbecility which would warrant the withdrawal of liberty—for it was a question of degree.

Dr. RUTHERFORD expressed surprise at the proportion of idiots as compared with lunatics. He thought that not more than ten per cent. of ordinary asylum idiots would be found to be congenital imbeciles.

Dr. YELLOWLEES said he also was staggered by the figures as being contrary to what he inferred from his own observation. He deprecated having idiots in lunatic asylums, but so far from the idiot being injured by the lunatic, he

thought that the very opposite held good. He believed, however, that the worst specimens were to be found in lunatic asylums, not the innocent defenceless creatures Dr. Ireland pictured. He would like to know whether, in the event of a county or district resolving to provide adequately for its idiot population, it would be necessary to have two separate institutions, a home for the adults, and a school for the children?

Dr. GRIEVE—In the Metropolitan District there are now training schools for idiot children as well as asylums for adults.

Dr. YELLOWLEES—How can the number of idiots and imbeciles in a district be obtained?

Dr. IRELAND—By the census returns, but I believe the number to be much underrated in these returns.

The CHAIRMAN thanked Dr. Ireland for his interesting paper.

Dr. GRIEVE then read a paper on "Insanity in British Guiana."*

A vote of thanks to the Faculty of Physicians and Surgeons for the use of their Hall, terminated the proceedings. The members and their friends afterwards dined together at St. Enoch's Hotel.

THE CHAIRMAN'S REPORT AT BROOKWOOD ASYLUM.

The Annual Report of the Surrey County Asylum at Brookwood introduces a very novel and not agreeable feature.

Besides the Medical Superintendent's Report, there is a special, most careful, and elaborate report on re-admissions, intemperance and its relation to re-admissions, and a proposed change of diet; the questions are discussed in a broad and satisfactory way. The astonishing part of the matter is that the Chairman sees fit to print a counter report as an appendix. This is greatly to be regretted, for this plan opens a door for endless opportunities for annoyance and discomfort to the authorities. It seems to us an unfair advantage is taken, and a last word is given without chance of reply. By the way, the Chairman, as a layman, may be supposed to act from ignorance and not design; but it is rather astonishing that he should, on page 100, eleven lines from the bottom, refer to the opinions he has obtained as to the uses of skim milk, as those given by the most eminent members of the medical profession at the four largest hospitals in London.

To begin with, neither St. George's nor the Middlesex can belong to the first four, and the only member of the medical profession quoted is Dr. Owen Rees, who, for years has left Guy's, and is on the honorary staff. The names of the other authorities are not on the Medical Register.

Dr. Brushfield satisfactorily disposed of the question of re-admissions, by showing that at Brookwood such re-admissions were below the average.

Dr. Brushfield also seems to us to have right on his side in selecting English asylums, for every asylum physician who has visited other asylums, has seen the special peculiarities that render comparisons open to objection if not carefully made. Thus, in the North Wales Asylum, beer has been done away with and milk substituted, because the patients when at home are not used to any stimulant, and the habits of the people of one division of Great Britain differ sufficiently to require separate examination.

We quite agree with Dr. Brushfield that any satisfactory comparison of the use of stimulants in asylums must include all stimulants, whether for ordinary, sick, extra, or staff diets.

The question of skim milk also requires full consideration. We should think

* This will appear in an early number.

that, for the cases suggested by Dr. Brushfield, it is not only sufficient but preferable; for drinking abundantly of new milk will be found not to suit so well as skimmed, which is more easily digested, and can be taken in larger quantities. Prejudice and custom at least (and who can disregard them?) have firmly fixed the opinion that an Englishman can't do without his beer.

The most important conclusions are that the average cost of all stimulants at Brookwood is far below the average of asylums; that the cost is lower than at the neighbouring asylum, and that in asylums where beer is done away with in ordinary diet, the cost for extra stimulants is high. These facts seem to us to show that Dr. Brushfield is not arguing without facts in his favour. But apart from that, the action of the Chairman is open to criticism on account of its being without precedent, because he enters on the discussion of medical questions, because a Chairman has no separate authority apart from the Committee over which he presides, and because the proceeding is calculated to undermine the authority of the official head of the administration.

SOCIETÀ FRENIATRICA ITALIANA.

The Third General Congress of this Society will meet at Reggio d'Emilia, from the 23rd to the 29th September.

Dr. Biffi, Corso S. Celso, Milan, is the Honorary Secretary.

ANNUAL MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION, 1880.

The thirty-fifth Annual Meeting will be held in the College of Physicians, Pall Mall, London, on Friday, July 30, 1880, under the Presidency of George W. Mould, M.R.C.S.

Appointments.

Atkinson, R., B.A., F.R.C.S., appointed Junior Assistant Medical Officer to the Worcester County and City Lunatic Asylum.

Trew, W. S., M.B., C.M., appointed Junior Assistant Medical Officer to the Warwick County Asylum.

Fullerton, R., B.Ch., appointed Junior Assistant Medical Officer to the City and County Lunatic Asylum, Stapleton, near Bristol.

Taylor, H. G., M.B., M.R.C.S.E., etc., appointed Assistant Medical Officer to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, *vice* Playfair, resigned.

Walmsley, F. H., M.D., appointed Resident Assistant Medical Officer to the Leavesden Asylum.

Dr. J. R. De Wolf, late of Halifax, Nova Scotia, requests that all communications for him should be addressed to the care of J. Sandifer, Esq., 186, Strand, London.

ERRATA.

P. 81, line 28, for structures *read* action.
P. 88, line 20, for 5050, 4950, *read* 5050.
P. 105, line 38, for 100 and 150, *read* 133 and 200.

THE JOURNAL OF MENTAL SCIENCE.

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

No. 115. NEW SERIES, No. 79. OCTOBER, 1880. VOL. XXVI.

PART 1.—ORIGINAL ARTICLES.

Presidential Address, delivered at the Annual Meeting of the Medico-Psychological Association, Friday, July 30th, 1880. By GEORGE W. MOULD, M.R.C.S.

A question that has been prominently before the public for the past few years, and which has not always been discussed with the cool reason so weighty a subject demands, is the control, custody, and treatment of the insane community known as private patients; and for the purpose of present argument I class those patients as private patients whose cost is defrayed without aid from the State—either in the matter of board, lodging, or attendance; for though private patients who reside in hospitals for the insane receive this aid, the building in which they reside is provided from special funds (and most hospitals have a small income from invested funds or annual subscriptions), it amounts to very little, and is absorbed in the free cost, or mitigation in the cost of maintenance, of a few patients. In speaking of lunatic hospitals, I leave out of the question the great Hospital of Bethlem, where the maintenance of the patients is entirely defrayed from the funds of the charity.

Private patients may thus be divided into two classes: Those who reside in public asylums, hospitals or their affiliated buildings, and may be termed private patients exclusively under public trust and direction, and whose responsible officers do not apparently derive any direct benefit from the funds paid for the maintenance of the patients.

Secondly, those who reside in houses provided by private enterprise, and whose proprietors are directly dependent on the sums paid for the care and maintenance of the patients, and who naturally expect to be reimbursed for the outlay

they have incurred for the reception of the patients and for the cost incurred in their treatment.

Now if patients of unsound mind were free agents, could come and go as they liked, or choose their own abode, there would be very little to say in the matter—if they were not content with one place they could go to another. But our Legislature has not at present given them "local option," but after mature and careful consideration has decreed that those who are bereft of reason shall for their proper care and treatment be placed under certain formal restrictions in assigned localities, and shall be guarded with the most jealous and watchful supervision; in fact, in its great anxiety for the sacred liberty of the subject, it has given a power to individuals under the form of lunacy certificates which the patient only too frequently considers unjust, however carefully and equitably all the legal conditions may have been complied with. It is against the exercise of this delegated power by personally interested individuals that exception is taken, not so much that the power is actually abused, but that it is liable to abuse; for to the honour of the specialty, in all the searching enquiry that took place before the Select Committee of the House of Commons, no instance of illegal detention was proved, though many instances of people who imagined they had been unjustly detained were brought forward. Full examination, however, failed to substantiate these charges in any single instance, plausibly as some of them were stated. All who read the evidence carefully must have come to the conclusion that if the reception and detention of lunatics was so liable to abuse, and the temptation and reward so great, it showed a singularly honest purpose in those who have the power that they discharged their trust so faithfully.

Amongst the many earnest men who took part in the enquiry, I think the pride of place may be assigned to our late President, Dr. Lush, for the searching but courteous and considerate way in which he elicited evidence from all sources, especially the aggrieved ones; and it was peculiarly fortunate that a man so well versed in the subject should have been on the Committee, and it is a matter for great regret that consideration for his health should have necessitated his retirement from the House of Commons at the present time, when his ripe experience would so materially have assisted in the elucidation of the vexed question of the amendment of the lunacy laws. The proposition at

present before Parliament, backed by the authority of the well-known name of Mr. Dillwyn and others, does not pretend to reform the lunacy laws, but principally relates to the acquisition by public bodies of the rights and privileges at present held by the proprietors of the private asylums. Unfortunately it is in a great measure a permissive bill; its objects are good, but the power to be obtained is too weak. It does not boldly state that public bodies to whom the care of the insane is entrusted shall purchase the interests of the private asylum proprietors, or shall (except in the Metropolitan districts) provide the necessary and proper accommodation for patients in the higher and middle classes, who are able to pay for such accommodation, but it says may do so. Now in my opinion simple permission is actually fatal to any active exertion. Legislative permission was given some time ago to build asylums for habitual drunkards, and permission was given to habitual drunkards to go and reside in them; but at present there is no sign of any such public buildings, neither do the habitual drunkards appear to be in any extraordinary hurry to get into such houses, and it will be the same with regard to public asylums for private patients; unless some department of the State is compelled to provide for the patients, they will be left unprovided for, so far as the public is concerned. It is quite time this subject was dealt with in an authoritative manner; and if the general consensus of opinion is that private asylums, as at present ordered and constituted, should cease to exist, they should be dealt with in a liberal, just, and comprehensive manner. I do not presume for one moment to say that they should cease to exist. I well know that up to the present time they have, in by far the greater number of instances, made excellent provision for those patients whom the State has utterly neglected to provide for. Full power has been given by the State for detention, but no proper abiding place has been found, and had it not been for the public spirit and generous charity of those who founded our few hospitals for the insane, the private patients would be entirely dependent on private enterprise for their accommodation; and it is an interesting, but suggestive, fact that the enlargement and extension of the lunatic hospitals of the present day is almost entirely due to the profits derived from the remunerative payments of the wealthier patients who reside in them, and not to individual or general public benevolence, and I fear—nay, I know—that but little is to

be expected from this source; the munificence that aids in all other ills and wants that flesh is heir to, passes this, the direst calamity of all, silently by.

A further question for consideration is wherein does the constitution and management of a proprietary asylum and a public hospital differ, and how far do such differences interfere with the well-being of the patient? I think it must be allowed that the whole grievance of the indictment against proprietary asylums (that is, of the well managed ones) is that, the proprietors having a direct interest in the detention of the patient, it is a continual battle of pocket *versus* principle and principle *versus* pocket. This is not a very exalted view of human nature, neither is it a true one; but it does obtain, and it is necessary for the confidence of the public that it should be fairly met, freely discussed, and the remedy, if necessary, be applied with strict impartiality, and full consideration given both to the interests of the patients and the asylum proprietors. Further, there can be no doubt, from the fair and open manner in which the latter have courted full enquiry, they are quite prepared to stand or fall upon their respective merits.

It is admitted that the treatment of the patients in private asylums, with a qualified resident medical staff, does not differ in any material degree from that pursued in a public hospital—each depends for its success on the estimation in which it is held by the public, and that favour is only obtained, as all such success is obtained, by the educated skill, energy, and liberality of those immediately and directly responsible for the management. The longer I reside amongst private patients, the more convinced I am that successful asylum management is in a large degree personal, and that confidence is given or withheld from the asylum physician just as it is with the physician in ordinary practice, and without this existing very fully, no marked degree of success can be gained either by the hospital or private asylum. To my mind this is one of the grave difficulties that stand in the way of the proposal to merge the private asylums into the public ones, and so limit the choice of those under whose care a patient may be placed. We are all familiar with the likes, dislikes, and prejudices of so-called reasonable patients in ordinary medical practice; but how much more strongly does this exist in our specialty amongst the unreasonable ones? for in the latter case we have a double force to deal with—the patient who, in the

first instance, has no actual power in the disposal of his person, but who has too often a very forcible way of expressing his wishes and inclinations; and in the second place we have the friends and relations of the patient who are often morbidly sensitive in all that relates to the surroundings, the treatment, and the comfort of the patients. If we could get rid of all this feeling and prejudice about the insufficient evidence for reception, the undue or unjust detention of patients in asylums, by transferring the custody of all patients from private to public trust, it would be a very simple and even remunerative matter to the State at once to purchase all the private asylums, and convert them into public hospitals—such of them as were capable of being so converted—and to find proper provision for those patients whose misfortune it had been to reside in unsuitable residences. But we must in common fairness remember that we have in public hospitals quite as many patients who are convinced of the injustice of their detention, and though you may demonstrate to them in the clearest and most logical manner that you can have no possible personal interest except for the patient's welfare—to the said patient's mind a motive does exist which is beneficial to the detainer and prejudicial to the detained.

It must be admitted that hospitals for the insane have, without any State aid, made great progress in public estimation during the past few years, especially those hospitals where a large outlay has been incurred to meet the requirements of the middle and higher class of patients, as at Northampton, Cheadle, Barnwood, Coton Hill, The Retreat, and Wonford House—the two first named having especially large and increasing incomes. Admitting that the State is prepared to legislate on the question of providing public asylums for private patients, and believing such action would seriously deteriorate the value of the property of private asylum proprietors, and that they have a claim to compensation—on the ground that they have been induced to invest a large capital in providing accommodation for patients for whom the State has made no provision, and that it would not be just or expedient to close them summarily (and perhaps not even when public asylums are provided), as in some modified form they would continue to supply an acknowledged public desire for the pseudo-privacy that mental disease craves for—I would suggest for consideration that up to a certain date—

say one year—after the passing of an Act, any proprietor of a private asylum shall have the option of selling the freehold, leasehold, or by whatever tenure it may be held, of his asylum, with the furniture, &c., to the Government, or such authority as may be designated by the Act, the value to be determined by the usual course of arbitration; value to be given, in addition, to the proprietor for deprivation of his source of income; the valuation to be based upon the average profits of the last three years, or upon the total yearly income of the asylum, with defined allowances and drawbacks. The State would have to provide a certain amount of capital for the purchase. The management of the asylum would be continued under public trust, or the patients removed to a more suitable building, and the freehold or other interest in the grounds and building sold. This arrangement would, if carefully carried out, make fair return upon the outlay at once.

Any asylum proprietor who elected to continue the occupancy of his asylum after the date fixed would be allowed to do so, but it would be entirely at his own risk, and he would have no possible claim on the State. The asylum would be subject to the same rules and regulations, so far as the management was concerned, as the State-aided hospitals or asylums; would have to provide equal accommodation for patients under certain penalties. The public would have the option of using such asylum if they thought proper to do so. The competition would be a healthy one, and the eternal law of the survival of the fittest would be allowed to operate. If the accounts of all private asylums were audited by a private auditor, as in the case of hospitals and county asylums—the expenditure for food, clothing, furniture, salaries, wages, and other expenses separately stated, distinguishing the cost of lodging and maintenance from the charge made for skilled medical and other attendance, and these accounts further sanctioned by the Commissioners or some other authorised public officer, who should certify that a proper sum had been expended on the maintenance of the patients—there would then be very little difference between private and public asylum management; for though it would undoubtedly show that private enterprise was better paid than public service, I think no one can deny there is wide room for improvement in the more liberal recognition of the latter.

The order of admission and the medical certificates are the great stumbling blocks we encounter when it is found

necessary to place a patient under proper control, and as at present obtained they are no doubt faulty, but are easily capable of amendment. Why medical certificates should be the result of the separate instead of the conjoint examination of two medical men I never could understand. I know it is stated this form of procedure was framed to prevent the collusion of the certifiers; but surely it is easier to certify what does not exist when only one is present at the examination of the patient than it is when all that takes place must be recorded by another, and it does appear utterly paradoxical that though it is necessary in urgent cases in ordinary medical practice that the consultant physician should have the full benefit of obtaining from the usual medical attendant of the patient details of every symptom that can possibly throw light on the case, yet in the case of a lunatic patient he should be required to find out for himself, generally at very insufficient notice, indications that require careful consideration and discussion.

Granted that a certificate or warrant of reception in some form is desirable, if not necessary, in the case of a patient who is to be deprived, even temporarily, of liberty, could it not be given in some less objectionable form than the present certificates of lunacy? Disguise it as we will, the patient, when able to think at all, looks upon it as a degradation, and the relatives only resort to it after every possible means have been exhausted, and will often piteously plead, "Cannot we be spared from signing a document so distressing to our feelings now, and which we know will be felt so keenly by our relative on recovery?" Surely it is not necessary to treat even this painful disease by a hard and fast Act of Parliament. I can call to mind more than one instance where the law, though not actually broken, has certainly been evaded by a relation taking a house or apartments and residing in nominal charge of a patient without taking any part in the treatment, which has been conducted with all the necessary appliances of skilled nursing and medical attendance, so as to avoid what the law states shall not be done—that is, make any profit out of the board of the patient. The relief in such instances, both to the patient on recovery and to the relatives during the progress of treatment, has been intense, and the gratitude pleasant to witness, simply from the natural feeling that the patient has not been for all time branded as a legally certified lunatic.

I would not for a moment advocate that a patient subject to even modified forms of control should not at once be reported to such an authority as the Commissioners in Lunacy, who should in their discretion depute a medical man of position to visit and report for their satisfaction that the treatment pursued and the surroundings were suitable and proper for such a case, and that such treatment should be carried out for a definite time only.

Though it has been my fortune to be sometimes in opposition to the strict application of legal authority in the treatment of patients, I have invariably exercised any departure for the benefit of the patient in the modification of some official code that has pressed hardly on the patient. I most fully acknowledge, and state without the slightest reserve, my sincere conviction of the immense power for the well-being of the patients possessed by the Commissioners in Lunacy. A marvellous change in the treatment of lunatics and the administration of asylums has been brought about since the formation of the Lunacy Board. I well know they encourage all that their long and varied experience tells them is for the good, and check all that their authority allows them to do what they consider would not conduce to the best interests of the patients and the good government of asylums generally.

I admire the patience and welcome the courtesy I see them exercise in their investigation of the special troubles of individual patients; but if I may be permitted I would venture to suggest that their visits to asylums should vary somewhat from their present form. What is needed, in addition to the unexpected and formal visits now paid, is that they should at some stated time meet and advise personally with the committee and superintendents of asylums. The interests of the Commissioners, committees, patients, and superintendents are identical, and all should severally feel that such is the case, and that there is no conflict of authority and no marked divergence of opinion. I understand it is proposed to increase the number of Commissioners, appoint a paid chairman, and make up a separate department of the State—an excellent suggestion, which I trust may be carried out. The chairman should certainly have a seat in one of the Houses of Parliament, as he would be the better able to bring forward any measure proposed for the better regulation of the lunacy law, and would be, moreover, directly responsible to the authority of

Parliament. The active personal supervision of the English Commissioners might at once be doubled if they visited singly, as in the case of the Commissioners in the sister kingdoms and the Lord Chancellor's visitors in this country. I never could understand why the Commissioners visit in couples except as a kind of limited liability company so far as their responsibility is concerned, or as a sort of mutual protection society in the past dark ages of asylum management.*

The visitation of Chancery patients by the Lord Chancellor's visitors is apparently all that is necessary, so far as it relates to the comfort of the patients and their immediate surroundings; and as these patients are principally chronic cases, with well marked delusions, the question of the necessity of their being under control does not so frequently arise. Their property is well cared for, and a sufficient portion of the income is expended on the patient. The Superintendent of the asylum in which the patient resides is happily relieved from the vexed question as to the necessity of the detention of the patient, and it would be a welcome relief to him if he could be still further relieved from this judicial function in the case of other patients, who have not the benefit of the direct authority of the Visitors of the Court of Chancery.

Unfortunately the process of placing the person and property of a patient under the protection of the Court of Chancery is slow, expensive and cumbrous; and, however suited to the wants of a chronic patient, would be impracticable in cases where the derangement is only temporary.

Everyone who has charge of private patients, especially of patients engaged in active business pursuits, must have experienced the very pressing necessity of some immediate method whereby the ordinary business transactions of the patient can be legally carried on during temporary enforced detention. It would be a great boon to all concerned if, say a County Court Judge's order could be obtained, for a short definite period, to be further extended if necessary, for the appointment of a person to manage the estate or business and to have full power to recover and pay debts during the enforced absence of the patient. At present a certified patient, either individually or through any representative, is utterly

* I ought to say that since this was written I had an opportunity of conversing with two of the Commissioners on the subject of single visitation to asylums, and they stated that the presence of two Commissioners aided very materially in the decision of matters submitted to their consideration.

powerless to enforce or discharge any claim that may be made upon him; and is under the still further disadvantage that judgment may be served upon him, and his goods sold to pay his debts, though he cannot recover debts due to himself.

There is another matter that causes considerable inconvenience to private patients who are convalescing or who require change. They cannot travel out of England, even over the borders into Scotland, on the ordinary certificate of leave of absence on trial, without the necessity of being re-certified on return; consequently it is impossible to send a patient out of England under legal control. Patients should be able to travel anywhere in the United Kingdom on the ordinary leave of absence, and special permission to travel abroad for a definite time, and stated places should be given, the certificate still remaining in force.

Commissioners in Lunacy should have the power to allow patients in private asylums extended leave of absence for change to suitable houses at a distance, either at the seaside or elsewhere.

I recently visited at Bognor an excellent house, which had cost the proprietor of a private asylum ten thousand pounds, and he could not place a patient in it from the fact that a proprietor in the neighbourhood objected to patients living in his vicinity, and the Commissioners had no power to give the necessary permission for patients to reside there, though they were fully aware of the benefit that would be derived from the change, and would gladly have given permission could they legally have done so.

Some eighteen years since, with the liberal aid and cordial co-operation of the Committee of Visitors, I established, in connection with the Royal Hospital at Cheadle, three villa or cottage residences, built in the asylum grounds; and subsequently, in addition, rented ordinary dwelling-houses, with suitable surroundings, for the purpose of placing in them patients whom I believed, from their chronic or convalescing condition, would derive benefit from the change from the ordinary routine of asylum ward-life. All asylum physicians constantly experience the injurious effect a large number of chronic cases collected together have upon the comfort and convenience in the treatment of the more acute cases, and the serious interference with the means of classification. In most chronic cases hope of cure is past, and the patients are simply to be taken care of, and the necessary supervision ex-

ercised over them in the mildest and most convenient form. It would appear, at first sight, that the easiest and most economical mode would be to place a large number together where they could be attended to by a small number of attendants, and this perhaps is the most economical; but when large numbers are congregated together, even in the best managed places, there must of necessity be some excitement, noise and discomfort. And it is generally accepted that the greater freedom you can accord a patient, consistent with safety, the less irritation and excitement there is, and it constantly occurs that a patient who is noisy and troublesome in a hospital ward amongst numbers of others settles down into comparative quiescence in a cottage house with its more homelike freedom. I do not, of course, claim originality in the placing of cottages in the grounds of an asylum for the treatment of patients, as it was adopted years ago by Dr. Bucknill, at the Devon Asylum; but I venture to urge the adaptation of it outside the grounds of the asylum, as a practical solution of the increasing difficulty now existent in providing sufficient accommodation for patients of both the private and pauper class.

I have had photographed several of the houses at present occupied by my patients, as I thought they would the more readily illustrate my proposition. You will see from the accompanying photographs that they are ordinary dwelling houses that have been previously occupied by families, and not in any way specially designed for the reception of insane patients. They are taken either on lease or at an annual rent as may be the most convenient, and would of course revert to their original use without any deterioration in value if not required for patients. They vary in annual value from eight to three hundred and fifty pounds. They are readily and efficiently worked by the asylum staff, and in my opinion if such houses were attached to the county asylums as well as the existing hospitals for the insane, to be rented where convenient, and to be built were not, they would relieve the State from the cost of a very large number of patients, whose friends could and would very gladly pay moderate and remunerative rates for such separate accommodation.

The extra trouble and responsibility thrown upon the Medical Superintendent would be met by a small quarterly charge made upon each patient, which, though little in itself, would amount in the aggregate to a fair sum, and thus, without entailing any increase charge on the rates, in some

degree add to the utterly inadequate pay many medical superintendents receive for their onerous and responsible duties.

County asylums would, of course, obtain money from the rates for the purpose of providing and furnishing such buildings as I have described for the treatment of private patients; but in the case of hospitals the State should be empowered to advance money at a low rate of interest as is now done to other public bodies, and in this way provide accommodation for a class of patients whose urgent need has hitherto been supplied by public benevolence or private enterprise.

I think most asylum superintendents are of opinion that private patients, with their necessary special class privileges, should be entirely separated—so far as the building is concerned—from the pauper patients maintained solely by the rates. Where they live together any distinction, however slight, shown to the one class is a source of jealous annoyance to the other. Whereas when they are separately lodged and boarded, the work of the one and the pay of the other is of the greatest possible mutual assistance. In some of the Scotch asylums this mode of separate treatment is now in force with acknowledged good effect. In the annual report recently published by Dr. Clouston, of the Edinburgh Royal Asylum, at Morningside, this is shown with a marked and very gratifying result, and he states he should like to materially extend its advantages. It is the same at the Crichton Institution, Dumfries, and at the Glasgow Royal Asylum, under Dr. Yellowlees' superintendence. I believe the only county asylum in England with such separate accommodation is the Cornwall County Asylum, at Bodmin; and, so far as I am aware, it does not obtain at all in Ireland.

To carry out such work in a wise and liberal sense it will be necessary to accord much more freedom of action to the public asylum and hospital superintendents. As the law, or rather the interpretation of the law, is accepted at present, the public asylum physician is at a great disadvantage compared with the private asylum physician, for the former is practically debarred from visiting in consultation with the medical man of the patient, or taking under his care for treatment any private patient. He has the knowledge gained by long and varied experience, a trained staff of nurses immediately available, a deputy resident physician to take his place during any temporary absence, a public anxious to avail

themselves of his services, and a local committee willing to allow his skill to be called into requisition, with a full knowledge that services thus rendered cannot in any possible way be a disadvantage to his other resident patients. Most hospitals for the treatment of ordinary diseases have an extra staff of nurses available for the service of the general public. What a boon this is to the patient, and what a relief to the medical man in attendance! Why should not public hospitals and asylums for the treatment of mental disease have a similar staff at their disposal? How many an unfortunate patient now doomed to be a certified lunatic, might, by the timely assistance of educated and skilful supervision, be spared this painful ordeal. To say that hospital or asylum patients would labour under any disadvantage from nurses being thus temporarily employed on external patients is simple nonsense. The staff would, as in ordinary hospitals, be amply sufficient to meet all requirements, both in internal and external working. The nurses derive positive benefit from the change and variety of occupation, and the extra remuneration cheerfully paid by the patients is a welcome addition to the funds of the asylum, available and of course used for the benefit of the resident patients. Should it be found necessary to place the patient in the asylum or one of its annexes, there would be a further advantage that the family medical man would see the patient from time to time, and thus in a measure lessen the uncomfortable feeling that obtains with patients and their friends that they are entirely committed to the hands of strangers. I do not think we can encourage too much the visits of the medical profession to see and consult with us on their respective patients, and to observe, if not share with us, the responsibility of treatment. It would help to dispel a good deal of what is sometimes ignorantly considered the mystery of asylum treatment.

Certificates signed by legally qualified physicians, in good faith, in a legal form, after due consultation, should be an actual and effective bar, and indemnity against any possible action at law. That the proprietor or superintendent of an asylum should be equally protected from any action at law for receiving and detaining a patient on the authority of an order and certificates that have apparently complied with all the legal requirements. It is not only necessary that such certificates should be a defence, but should absolutely be prohibitive of any action being brought, for, unless this is the case, the proprietor or superintendent must incur very heavy

cost, though he may gain the action, as witness in a recent case, Nowell *versus* Williams.

After the certificates are signed an order of admission from a public officer, as in the Scotch asylums, should be obtained; this would relieve the friends or relatives of the patients of a painful responsibility. The medical officer of an asylum should retain the present power of discharging a patient; the power of detention beyond a certain defined period should rest with the Commissioners, Lord Chancellor's Visitors in the case of Chancery patients, or some such authority outside the governing body of the asylum, but no discharge should take place without previous consultation with the medical officer.

Pensions, or at the option of the pensioners, commutation for a sum of money, according to the Government life tables, should be fixed and compulsory. Service in any asylum to count continuously. If the pension is derived from local rates, each district in which pensioner has served to be charged *pro rata;* a pensioner would thus be able to provide for his family after his death if he wished to do so.

That as hospitals, as at present constituted, have no funds from which pensions to medical superintendents and others can be granted, and, inasmuch, as they relieve the State from the charge of a large number of patients who otherwise would of necessity be so charged, it is just and desirable that pensions, as granted to county asylums' officers out of the rates, should be granted to hospital officers from the Consolidated Fund, or from such other source as the Legislature may, in its wisdom, determine.

I claim your indulgence and kindly criticism on the subjects I have ventured to bring under your notice. They are matters in which we are all deeply and personally interested; it is true they are only a few of the many that arise for your constant consideration, but I shall be amply gratified if, with your assistance, I have even in a single instance been able to contribute to the welfare of these patients, to whom we have devoted our energy and knowledge, and, I think I may say, the best portion of our lives.

Appendix.—Description of Cottages shown by Photographs.

Group of three cottages in asylum grounds; under charge of one ladies' companion. First cottage contains two sitting rooms, kitchen, three bedrooms. Four ladies reside here

with three attendants, one a special attendant for one of the ladies.

Second, or middle cottage: three sitting rooms, five bedrooms, bath room, kitchen, scullery, &c. The cooking for all three cottages is done here. Fifteen ladies reside under the charge of the ladies' companion and two attendants.

Third cottage: three sitting and four bedrooms, with kitchen, &c. The senior assistant medical officer resides in this, and there is one lady patient with special rooms and attendance.

Beech House, for nine male patients, paying higher rates of board, has four sitting rooms, large billiard room, with conservatory, eleven bedrooms, with the usual offices, large garden. Is in charge of cook-housekeeper, several male attendants, varying in number according to the special requirements of the patients. About one mile distant from the asylum. Visited daily; rent, £125 a year.

Brook Cottage, for thirteen female patients, has two good sitting rooms, the usual domestic offices, bath room, water closet, seven bedrooms, large garden; is in charge of cook-housekeeper, and two attendants. Rent, £50 a year. Weekly cost per patient, including rent, 15s. 1d.

There are twenty acres of land attached to this house at a separate rent. Distant from asylum half-a-mile; visited daily.

Shadow Moss: three sitting, five bedrooms, bath room, kitchen, with the usual domestic offices; half an acre of garden. Nine male patients reside here under the charge of a man and his wife. Annual rent, £40.

Four acres of land, with cottage attached, at a separate rent. Weekly cost per patient, including rent, 16s. 1d.

Distant two miles from the asylum. Visited every two or three days.

Beech Cottages: in each cottage one sitting room, kitchen, scullery, pantry, three bedrooms; quarter of an acre of land. At one period I had five male patients in one cottage, and one in the other. At present there is one male patient in one cottage, and one female in the other, in charge of a man and his wife. Both patients were exceedingly troublesome in the asylum, but are free from disturbing influences here, and the asylum is free from two very disagreeable inmates, who are just as well supervised and cared for as if they resided in the asylum.

Rent £15 a year for both cottages.

Distant about one mile from the asylum. Visited daily.

Oak Cottage: superior separate accommodation for three female patients. Three sitting, six bedrooms, with the usual domestic offices; large ornamental garden. Patients have special attendants.

Rent, £50 a year.

Visited every few days, or more frequently if necessary.

Distant about three miles from the asylum.

Glan-y-don, Colwyn Bay, North Wales: a seaside residence, with large grounds well laid out, and superior separate accommodation for ten or twelve ladies. One half the number generally reside here, and the other half consist of patients who are sent for change from time to time. A medical man, resident in the neighbourhood, visits when required, and frequent and irregular visits are made by the medical superintendent. The house is in charge of a housekeeper and ladies' companion, with a large staff of servants and attendants, and a carriage and pair of horses kept for the use of the patients.

Distant about eighty miles from the asylum.

Annual rent, including about thirty acres of land, £350.

St. Anns: a specially designed hospital, with all the rooms on the ground floor. For the education and medical treatment of forty epileptic children, twenty of each sex. Is under the charge of a matron and a separate staff of nurses and assistants.

Adjoins the grounds of the asylum. Visited daily, or more frequently if necessary.

All the houses enumerated are furnished, and the board and attendance supplied by the hospital authorities, but in addition to these there are several farm houses within an accessible distance, where single patients reside, who are boarded and lodged by the occupants of the houses at a rate agreed upon. These patients are all visited frequently, and at irregular times.

In this way one-third of the patients at least reside outside the main building, and many more might be so placed with advantage if the necessary accommodation could be readily obtained. This system requires constant and vigilant supervision, and the immediate temporary removal to the hospital of any patient requiring more active treatment.

Gouty Melancholia. Report of a Consultation on a Case. By Andrew Clark, M.D., F.R.C.P.

"Well, doctor, what do you think is the matter with my patient?"

"I think it is a case of gouty melancholia."

"Gouty melancholia! Ah!

"You seem surprised and incredulous."

"No, doctor, I was just thinking that the last two or three cases which I brought to you turned out to be gouty, and I was wondering what 'gouty' really meant."

"What it exactly means to other people I do not pretend to know; what it means to me I can tell you very shortly. Your patient is in what I call the gouty state, and by the gouty state I mean the state brought about in certain constitutions by the retention in the blood and tissues of the body of certain acid and other waste stuffs, and their effects thereon."

"But what do you mean by certain constitutions?"

"I cannot now explain that to you in full. I must content myself with saying that they are constitutions characterised by a certain type of nervous impressibility, but a feeble capillary circulation, by tendencies to venous congestions, and by deficient excretory powers."

"But, doctor, I have often seen cases of gout in which the patients had large, strongly acting hearts, and full arteries."

"Very true, but you will often see in such cases a very languid capillary circulation. There is no necessary relation between the two. Other forces besides the heart determine the vigour of the capillary circulation, and these other forces are sometimes directly antagonistic to the force of the heart."

"Well, doctor, you have told me what you mean by the gouty state, but how is it to be recognised?"

"The gouty state is manifested by various widespread symptoms, which, though viewed singly are not characteristic, when looked at collectively are conclusive as to its presence. There is almost no tissue, and no organ, which does not at one time or another become the seat of these symptoms. In the digestive system, for example, you have the glazed, dusky, congested throat, catarrhal, acid, and painful indiges-

tion, localised persisting abdominal pains, recurring diarrhœas, portal congestions with diminished bile excretion, and neuralgias, and the like. In the renal system you have fleeting albuminurias; in the respiratory system attacks of asthma, bronchitis, lobular pneumonias, and otherwise unaccountable dyspnœas; in the vascular system, bouts of irregular action of the heart, with transitory murmurs, venous congestions and thromboses, capillary stagnations and blockings. In the nervous system you have curious headaches, vertiginous attacks, numbness, tinglings, formications, sensations of loss of power, and of sudden heat and cold. Furthermore, you have sudden elations and depressions of spirits, and frequently recurring fits of morning misery.* In the special senses there are conjunctivitis, some forms of cataract and other ocular degenerations, chronic inflammation of the nasal passages, and deposits in the middle and internal ears. In the locomotive system you have cramps and quiverings of muscles, odd pains in the heel, the instep, and the arm, swellings, stiffnesses, and pains in the joints, swellings of the fingers and their distal articulations. In the cutaneous system you have erythemas, eczemas, and boils."

"A terrible array of symptoms that, doctor, but I do not suppose you mean to say that any one of them is necessarily indicative of the gouty state, and what I want to know is, how you prove the causal connection of any set or combination of them with that state."

"I prove it, or think I do, in this way. First, it is certain that people with some one or more of the symptoms which I have mentioned, are peculiarly liable to gout; and, secondly, when gout arises, these manifestations of the gouty state subside or wholly disappear. And I will refer, by way of illustration, to the last three cases of this kind which have happened in my practice. The first was a case of severe temporal headache, which lasted for two years, which was seen on several occasions by Dr. Russell Reynolds, and which suddenly and completely disappeared after an attack of gout in the foot. The second was a case of severe pain in the epigastrium, persisting for many months. This also disappeared after an attack of regular gout in the toe. The third case was one of bronchitic asthma, which regularly alternated with gout in the hand."

* Some of these manifestations of the gouty state have been admirably worked out by Sir James Paget, Mr. Prescott Hewitt, Dr. Russell Reynolds, and more recently by Dr. Dyce Duckworth.

"Now, doctor, kindly show me how you apply these views to the case of my patient. How do you make out that his trouble is, as you have called it, a gouty and not an ordinary melancholia?"

"Well, as you admit the existence of the melancholia, we need not dwell longer upon that. Let us go back and examine the history of the patient, and endeavour, by a critical examination of it, to discover whether his present malady is a primitive, or, so to speak, a substitutional one. Four years ago your patient was suffering from indigestion. He was nervous, irritable, depressed, sleepless, full of fears. He had little liver attacks, when his urine became dark, his fæces pale, his conjunctivæ yellow. Then he had eczematous patches on the fore-finger, behind the ear, and in the scrotum. He got sometimes better, sometimes worse, but never well. And suddenly, in the cold spring, you remember, he had a slight attack of gout in the foot. After this he was well for two years, living carefully, as his own fears and your precepts induced him to do. At the end of this period we made out that, his hygienic zeal having abated, he again fell into a state like that from which he had escaped through his attack of gout. Again gout made him well. Again, having fallen into loose ways of eating and drinking, and neglected every form of exercise, he drifted, a few months ago, in the cold spring, into the old state. He became dyspeptic, flatulent, acid, his bowels were irregular, his urine light coloured and low in density, his liver was full, his fæces deficient in bile, his skin yellowish. He has recurring headaches or head feelings, he is irritable, nervous, depressed, sleepless, full of baseless fears, and he suffers on waking from a seemingly causeless agony, which subsides as the day advances. Here, in an aggravated degree, is the assemblage of symptoms which, before, were immediately and completely relieved by an attack of gout. But now there is no gout, and so, as I think, the symptoms remain. So the gouty stuffs retained in the blood and in the tissues strike with a partial severity the nutritive and functional activities of the nervous system, and you have the melancholia as the substitution for the gout. This is your patient's gouty melancholia."

"Well, well, doctor, I now see what you mean, and I won't further contest the question with you, but do you think such cases common?"

"Well, I think them frequent, and especially frequent in

women. The greater impressibility and movability of their nervous systems, their fuller emotional nature, and their larger subjectivism lay them more open than men to the disturbing influences of retained waste, and I am greatly impressed with the belief that many of the anomalous nervous affections with which women are afflicted, at the turning period of life, have a gouty origin."

"Well, after all this pathological talk about the patient, we must come to the practical question of what is to be done with him. What have you to suggest, doctor?"

(To be continued.)

Marriage and Hereditariness of Epileptics. By M. G. Echeverria, M.D., late Physician-in-Chief to the Hospital for Epileptics and Paralytics, and to the City Asylum for the Insane, New York, &c.

Arethæus asserts that several physicians, and among them the famous Asclepiades, observed that venery cures epilepsy developed at the age of puberty. The same opinion was professed by Scribonius Largus, and, with these authors, the corruption of retained semen originated the spasmodic malady in such cases. Alfarius à Cruce, commenting on these primitive ideas, contends that, in similar instances, the change of age effects the cure improperly attributed to venery. His pupil Sinibaldi, declares venery powerless against fits, exploding after the age of fifteen, especially in adults, or individuals of an advanced or old age. But in epilepsy *à putrescente,* upon seminal retention, venery may prove of such great moment as to occasion altogether its cure.*

This belief has prevailed until our days, acrimony of retained semen acting, according to Tissot,† as a powerful irritant of the organism in those instances of venereal epilepsy due to prolonged continence, and these views have been held by several other French writers.

The preceding notion has not prevented the recognition of venereal excesses among the principal causes of epilepsy by Aetius, Galen, Arethæus, and subsequent authors. Moreover, a kindred resemblance was supposed between epilepsy and coitus, the former being not infrequently induced during

* "Geneanthropeia." Romæ, 1643, p. 886, C.

† "Traité de l'Epilepsie." Lausanne, 1785, p. 73, §26.

the latter, which was compared by Democritus to a slight seizure *μιχρα επιληψια*, or, as Faustus has described it—

"Turpis, et est morbi species horrenda caduco."

A young man, observed by Schenck,* always saw a woman offering herself lasciviously to him, during his epileptic paroxysms, ended by seminal emission. The same author refers, besides, to a case in which Salmuth (Cent. i., obs. 99) remarked convulsions of the testicles during the fits.

Either as a practical result of this supposed essential participation of the genital organs, or of those in regard to the hurtful influence of the retained and corrupted semen, emasculation has been, from early times, employed as one of the remedies for epilepsy, still empirically tried in desperate cases. Eunuchism did not exist in the Greek or Roman Republics, except as spontaneously self-practised by the priests of Cibeles and of Diana Ephesi. But the Roman Emperors introduced it from Asia, about three centuries after the Republic, and, it seems that emasculation against epilepsy was used by Cœlius Aurelianus,† and was copied from him by E. Platerus and Mercatus.

Heurnius‡ performed the operation on several of his patients, and his practice is favourably cited by Sinibaldi and other classical authors of the seventeenth century. The celebrated Jean Taxil, who flourished during the latter part of the sixteenth century and the beginning of the seventeenth, says :— "Some have advised eunuchism to cure such malady (epilepsy), though I believe not intending to cure it thereby, but to prevent its transmission to offspring."§ Hector Boethius‖ leaves no doubt as to such having been the declared object of the custom among the primitive Scots. "He that was trublit," says he, "with the fallin evil, or fallin daft or wod, or havand sic infirmite as succedis be heritage fra the fader to the son, was geldit, that his infectit blude suld spread na firther. The women that was fallin lipper, or had any infestion of blude, was banist fra the company of men, and gif

* Joannis Schenchius. "Observationum Medicarum Rariorum." Frankfurti, 1665, Lib. i., "De Epilepsia," p. 104.

† We are glad that Dr. Bacon has, by resuscitating this practice, drawn fresh attention to it. See Report of the Cambridge Meeting in "Notes and News."—[Eds].

‡ "Opera Omnia Postrema Editio," Lugduni, 1658. "De Epilepsia," Ch. xxiii., p. 421.

§ "Traité de l'Epilepsie," etc. Tournon, 1603, p. 229.

‖ "Croniklis of Scotland," trans. by John Bellenden, Edinburgh, 1536, Lib. 1.

she consavit barne under sic infirmity baith she and her barne were buryit quik."

This is the first and only legal measure against the hereditary spread of epilepsy that we have found distinctly recorded, in addition to the incapacity of epileptics to marry, pronounced by the Greek Church, and the local edict forbidding their marriage, issued in the middle of the last century, by Prince Stolzemberg de Hutten, Bishop of Spires. Of these three measures, the first has been the most radical and barbarous. Burton, after justly remarking that it was "done for the common good, lest the whole nation should be injured or corrupted," adds, "A severe doome you will say, and not to be used amongst Christians, yet more to be looked into than it is."*

The Mosaical and Roman laws make no allusion whatever to the marriage of epileptics. Nor did the Athenians forbid it, who, to prevent the degradation of their race, put to death all children born with any infirmity—a terrible measure which, on the other hand, does not seem to have guarded them against the prevalence of the sacred disease or *lues deifica*. Among Christians, the spiritual and sacramental nature of marriage consecrated its bonds as indissoluble, and in questions concerning their validity or dissolution, the Church was the supreme unerring judge. Luther and Melancthon proclaimed marriage a mundane affair, not concerning any Church regulation, but the practice in the German Empire continued, notwithstanding this declaration and the schism, without departure from the primitive Catholic canon, until the Emperor Joseph II. introduced into the German statutes the principle advanced in France by Launoy—that marriage is a civil contract, under the exclusive jurisdiction of temporal authorities, the sacrament being a purely accessory thing benevolently added to it by the Church. For this reason we do not find, until the seventeenth century, in countries where the Reformation had been triumphant, divorce laws with special enactments in reference to epilepsy, as it may vitiate or render null and void the marriage. Before considering them we shall briefly notice the older *dicta* of the Ecclesiastical Court in Rome, which are still enforced in almost every Catholic nation belonging to the Latin race.

In 1588, Michael Syrum and Diana Brandanima, both of Greek extraction, were married in Venice, according to the Greek rite, and

* "The Anatomy of Melancholy." Oxford, 1621, p. 85.

had a daughter who did not live long. In 1602, Syrum being enamoured of another woman, or for some other motive, applied for the dissolution of his marriage, on the ground that he had acted by fear of paternal threatenings, *ex metu reverentiali*, and because Diana deceived him, concealing that she suffered from epilepsy at the time of marriage. Epileptics are by the Greek rite deprived of legal capacity to marry, and, confident in this, Syrum submitted the case to a Greek Prelate at Venice; but he decided against Syrum, who was equally unfortunate on his appeal to the Auditor of the Chamber that confirmed the sentence. The case was then carried up to the Rota at Rome. This tribunal pronounced the Prelate's decision unauthorized by the Pope, or the Patriarch at Constantinople, whereas the Auditor's sentence was also void for his want of jurisdiction over matrimonial matters. But it did not thereby sustain Syrum's petition, for the supreme decision, besides rejecting the plea of intimidation, and noticing the fact that Syrum could not claim the benefit of the Greek canon while he lived subject to Latin laws, sets out the following no less adverse conclusions in regard to the second allegation in the demand :—

"17.—Epilepsy does not prevent or annul marriage."

"21.—It is an erroneous sentence to annul a marriage already contracted, by reason of epilepsy."

"22.—The Roman Church does not tolerate indistinctly the Greek rites in her divine celebrations, but only those approved by the Apostolic See."

"24.—Neither laws nor customs have any force against divine rights."*

The above decree of the Ecclesiastical Court at Rome—that epilepsy does not prevent marriage—was altogether disregarded when the Prince Bishop of Spires, as previously stated, issued, in 1757 and 1758, an edict to the tribunals of his own dominions forbidding the marriage of epileptics, under severe punishment of those who, by fraud or otherwise, should contribute to its execution. This important enactment is cited by Mahon† and Delasiauve,‡ but without indicating its bibliographical source, which we have unsuccessfully searched for to see the grounds exposed by the learned Jesuit Bishop for his judicious measure, in opposition to the maxim laid down by the Supreme Roman Tribunal, that epilepsy does not prevent marriage. This maxim reverses older decisions, often applied, of Saint Thomas and other recognized

* "Pauli Zacchiæ Quæstionum Medico Legalum, etc." Tomus Tertius. Lugduni, 1673, "Decisio, lvii., Rot. Rom.," p. 107.

† "Médecine Légale et Police Médicale." Paris, 1807. Tome iii., p. 92.

‡ "Traité de l'Epilepsie." Paris, 1854, p. 530.

authorities in the Roman Church, and which, most probably, had greater force not to hinder the edict of the Bishop of Spires. They especially refer to epilepsy as a grave and incurable infirmity, which, like ozena, syphilis, or any other contagious malady, may become a cause to dissolve the espousals or *sponsalia,* as cited by Sanchez* and Zacchias,† in their standard works.

The Greek Church, as just noted, regards the epileptics as incapacitated—*inhabiles*—in respect to marriage. This law is mentioned by Zacchias, who adds, as it is also asserted by Du Preau‡ and others, that no impediment is raised by the Greek Church to voluntary divorce.

The terms of the Ecclesiastical Laws in Saxony are quite explicit in reference to epilepsy as a cause for repudiation. Marriage, as stated by Benedict Carpzov,§ may be annulled on account of epilepsy, paralysis, or other contagious malady affecting one of the parties; or, when any of said maladies existed already before marriage but was concealed; it being further provided, that, prior to granting the divorce, the circumstances of the case should be prudently considered to ascertain whether both parties were cognizant of the fact and therefore consented willingly to marry; and, before deciding the dissolution of the matrimonial bonds on the plea of any contagious or loathsome disease, time should be fixed to determine positively that this is really incurable.

In the case of Heinrich K., and Kunigunda, the daughter of Daniel E., it was alleged that Kunigunda, on account of epileptic fits, had become unfit for the matrimonial state, wherefore both earnestly prayed to be allowed to have their marriage vows annulled, and the President, Assessors, and Upper Consistory, decreed, the 27 April, 1621, that it should be so granted.

Andrea Bayer,‖ in his supplement to Carpzov's work on Ecclesiastical Jurisprudence, refers to a subsequent decision of the Supreme Consistory, dated October 15th, 1703, and enumerates the incurable and contagious disease therein judged

* "De Sancto Matrimonii Sacramento Disputationum, etc." Lugduni, 1739. Tomus Primus, Lib. i., p. 106.

† *Op. cit.*, Tomus ii., n. 18, p. 773.

‡ "De Vitis, Sectis, et Dogmaticum Omnium Hereticorum, Gabrielem Prateolum Marcorsium," Coloniæ, 1581. Lib. vii. § 15, p. 203.

§ "Jurisprudentia Ecclesiastica seu Consistorialis." Lipsiæ, 1731, Lib. ii., Lib. x., p. 268.

‖ "Additiones ad Benedicti Carpzovi Jurisprudentia Ecclesiastica vulgo Consistorialia." Lipsiæ, 1732, p. 128.

cause of divorce, namely—*Leprosy, Epilepsy, Phrenesis, Morbus Gallicus, Phthysis,* and *Hydrops,* to which are also referred Apoplexy and Paralysis. Whenever one of the parties shall ignore that the other suffered from any of said diseases before marriage, or when the disease happens subsequently to it, there is cause for repudiation, provided it is the positive judgment of the physician that such disease is contagious and incurable.

Michael Alberti relates another very interesting case tried before the Extreme Consistory, and favourably decided the 17th December, 1736.

The petitioner, a woman, K., applied to the Ecclesiastical Court to make the celebration of her marriage null and void, because her betrothed, U., had epilepsy. The petition sets forth that he had fallen into ill-health, *i.e.*, epilepsy, when young as well as of late years. The Leipsic Faculty was consulted whether such a man, who had in late years been so afflicted, was in danger of becoming attacked again with the above-mentioned epileptic disease, and whether the woman who marries him need be afraid of her own constitution suffering thereby.

In a lengthy Report, in which all the circumstances connected with the case are carefully examined, the Faculty replied : that such cases are very rarely cured. That epilepsy is certainly not contagious : the Faculty does not say that K. will either become epileptic, or that her life must be in danger, but holds the opinion that all the circumstances adduced may easily prove injurious to her health.

The Halle Faculty was also consulted on the case, submitting for their consideration that, when at school U. was struck by the master on the head, and the blow was followed by epilepsy, to which he continued subject thereafter. He was betrothed to K., but before the celebration of the marriage, she began to be afraid of the fits, and dreaded an unhappy marriage. She thought that, under such circumstances, her espousal was not valid or obligatory, but could be dissolved on account of such a severe disease. She asks the Faculty's opinion, as her lover has not (from being treated medically) had fits for two years. The Faculty, in reply, express the fear that anxiety of life and matrimony will renew the attacks, particularly because the marriage act is very injurious to epilepsy, or to those who were formerly affected with epilepsy. Considering that coitus is already called by some authors a slight epileptic fit, which affects either the brain and the whole generative functions so as to render the subjects impotent, or unfortunate parents, by conveying to their children an incurable disease; therefore is applied to this case the principle established by Stryck and Nicolai in regard to impotency as a cause for the dissolution of espousals. The Faculty concludes, that it cannot be maintained, with

consistency, that U. is entirely freed from epilepsy, and that one must fear rather, from manifold causes, and particularly from the restraint and anxiety of married life, a severe relapse. Petition granted.

There was subsequently an appeal from this decision, but no judgment appears to have been given as to the propriety of marriage. All that the statement signed by the judge amounts to is, that U. was then (17th December, 1737), sound in health, and able to work like other young men.* The inference is that the judgment was reversed.

The laws of Denmark do not differ from those of Saxony. They provide among the various causes for repudiation or nullity of marriage, that—" § 74, n. 7. If it should be discovered that the husband, or the wife, has concealed some secret disease, as for instance, leprosy, epilepsy, or any other kind of contagious or loathsome affection, existing before they united in marriage, their divorce, if wished, may be granted. But, should he or she become afflicted with any of such maladies after celebration of marriage, a certain length of time should be fixed on to employ suitable remedies to expel the malady, and if the diseased person is unable to do it, the marriage then should be declared void if so petitioned." †

The Ecclesiastical Law of the Church of England makes no especial reference to epilepsy as a cause to invalidate or annul marriage. The common law treated the marriage bond as indissoluble, until 1857, when the Statute 20 and 21 Vict., c. 85, took away from the Ecclesiastical tribunals all civil jurisdiction over the subject of marriage and its incidents, conferring it entirely upon courts of justice, with jurisdiction to grant divorces *à vinculo matrimonio*. We are not aware, however, of epilepsy having been ever interposed as a cause for divorce, nor that it has invalidated in Great Britain, a contract of marriage, under the modern resolution of the civil courts, that the marriage of a lunatic not being in a lucid interval is absolutely void. Although epileptics are not legally considered as lunatics, they not unfrequently fall into a condition in which they accomplish their acts automatically, in an unconscious manner, that necessarily vitiates them and renders them not binding in law. We shall presently cite a recent case in which marriage would have been consummated under these circumstances, if it had not

* "Michaelis Alberti Jurisprudentia Medica." Lipsiæ, 1737. Casus, xxiv., tomo quarto, p. 490, et casus xxv., tomo quinto, p. 649.

† "Regis (Gloriosiss. Memoriæ) Christiani Quinti Leges Danicæ." Trans. into Latin by Petrus A. Höyelsinus, Hauniæ, 1710. Lib. iii., p. 270.

been prevented, at the very moment of celebrating the nuptial rites in the church, by the relatives of the epileptic.

This irresponsibility appears distinctly recognized in the case of Abbot Gatus,* subject to violent epileptic fits, and who, under the influence of one of his attacks, executed an instrument that was declared, on this account, void by the Roman Court. It was in this case that Zacchias asserted that epileptics are wholly irresponsible for some days before their fits, and *in gravissimo morbo*, or very severe attacks, for three days after. As a complement to this doctrine, subsequently held and acted upon by different medico-legal authorities, Zacchias sets down that, in *levioribus epilepsiis*, or *petit mal*, the patient, contrary to what happens with the very severe fits, is neither before nor after the attacks of unsound mind. We need not insist on the incorrectness of this latter assertion; nor is the term of three days' duration of the epileptic insanity after the severe attacks, by any means its extreme or invariable limit, as supposed by Zacchias. When describing the true epileptic nature of the unconscious state here considered in relation to acts of violence,† we presented a series of cases of *petit mal* and vertiginous fits, with which these prolonged, singular mental paroxysms of real insanity are commonly associated. The following is an instance of marriage celebrated during one of such paroxysms of mental epilepsy :—

In August, 1873, a young epileptic, heir to a large fortune, and belonging to a noble family, was induced to marry, during one of his mental attacks, a common young actress from the Bowery Theatre, New York. Neither his mother, then absent, nor his intimate friends became cognizant of the occurrence until he sent his wife away, in the most violent manner, from the hotel where they had been lodging for two weeks after their civil marriage. The actress immediately instituted legal proceedings against him, who denied the acts he had accomplished at the time of the marriage, attributing, very angrily, the action brought against him to a deliberate swindle on the part of the actress's mother, who shrewdly projected and carried the marriage into quick execution, profiting by the mental condition of the spendthrift young man. But the evidence against him left no room to doubt as to the reality of the marriage. Although subject to occasional attacks of *grand mal*, only in the morning, and to daily fits of *petit mal*, followed by an unconscious state, during which he executed the most extravagant and lavish acts, epilepsy was not suspected as the cause

* P. Zacchias, *op. cit.*, Tomus Posterior, pp. 161 et 162.

† "American Journal of Insanity," April, 1873, Vol. xxix.

of his strange conduct at the moment of the marriage. The morning he ejected his wife from his apartments he had just recovered from one of his convulsive seizures. Anxious to avoid scandal and disgrace to the family, his mother paid a large sum to the actress to stop all legal proceedings against the young man, who was sent abroad, and his divorce obtained without opposition.

We now pass on to narrate a no less remarkable example bearing some similarity to this, to which we have already alluded.

The case, that of "Sans v. Whalley," came before Mr. Justice Manisty and a common jury, at the Bail Court, Westminster, on the 3rd of May, 1880. It was an action brought by Isabella Sans, a widow (who was until recently a beershop-keeper at North Woolwich), to recover damages from Joseph Lawson Whalley, a widower (Holly Terrace, Leytonstone), for breach of promise of marriage. The damages were laid at £2,000.

For the last three years the defendant, since the death of his mother, had given way to drink a great deal. He had as many as six epileptic fits a night, followed by insane attacks, when he would ask if his wife was dead, and why she had been buried without his knowing it. He was in the habit of visiting Mrs. Sans' house, and on several occasions proposed to make her his wife; but she refused on account of misgivings as to his intemperate propensities. On Sept. 11, 1879, the defendant renewed his demand in the presence of three other persons, and, to make assurance of his engagement, he asked for paper, pen and ink, requested that the eldest son of Mrs. Sans should be sent for, to know if he had any objection to the marriage, which he had not, and thereupon Mr. Whalley wrote out the following promise:—"I agree to marry Mrs. Sans to-morrow by license.—(Signed) Joseph Lawson Whalley."

He then gave her a diamond ring, which was lent to him by his aunt, as an engaged ring. On the following day he came to London, and, accompanied by Mrs. Sans and her brother-in-law, they went to Doctor's Commons for the license, and he paid for it with a five-pound note, obtained by Mrs. Sans pledging two rings of hers and the one Whalley had given her. He asked Mr. Sans to take the license to the church, so that they might be married at eight o'clock on the following morning. He slept at Mr. Sans that night, and on the following day they all three, and Mrs. Sans' daughter, went to the church, which was not open, for the sexton was at breakfast; but, when he came, the Brightmores—relatives of Mr. Whalley—and other people, were crowded outside of the church. Mr. Brightmore seized hold of Mr. Whalley's arm, and said—"Come away, Joseph; you shall not marry that woman." Mr. Whalley replied—"I am perfectly sober, and know what I am doing; if you come near me again I will have you locked up." In the church, Mr. Beele (the Vicar)

took Mr. Whalley into the vestry, and informed him that he had received a communication from Dr. Vance stating that Mr. Whalley was suffering from delirium. The latter remarked—"What a shame I cannot marry the woman I like. Had I known it I would have obtained another medical certificate." The Vicar asked Mr. Whalley, in the presence of the Brightmores, what were his intentions, and he replied—"To make Mrs. Sans my wife, as I have intended for the last seven months," on which the minister said—"That does not look like insanity, Mr. Brightmore."

Dr. Sharpe, of North Woolwich, who had been brought to examine the defendant, saw him in the vestry of the church. He exhibited symptoms of delirium tremens—hard drinking must have been going on to produce them. He was unfit to contract matrimony, and advised him to delay it for a fortnight, which he was willing to do. But, although so agreed, Mr. Whalley failed to keep his promise at the expiration of the fortnight.

Mr. Mitchell, assistant to Dr. Sharpe, corroborated his testimony.

Dr. Vance testified that he had attended the defendant on several occasions for epilepsy and delirium tremens. Some of the symptoms were very severe; but he did not see the defendant professionally between the 21st August and the 14th September. He found him on the latter day in a high state of delirium. (This was the day after he wrote the communication to the Vicar.)

Mrs. Brightmore, aunt to the defendant, testified that he had fits; as many as six a night, followed by insanity, and also delirium tremens. On the 3rd and 4th September he had fits. She procured Dr. Vance's certificate, and gave it to the clergyman. She brought Dr. Sharpe and Mr. Mitchell to examine the defendant, who left the church with Mrs. Brightmore's sister, and was then in a bad state, and had fits.

Mr. Whalley said: I am the defendant. I am 33 years of age, a widower, with two children. I went to live at North Woolwich about February, 1879, with Mr. Brightmore, a cousin of mine. I have given way to drink a great deal, and at different times I have been attended for disease brought on by drink. I was in a drunken state from March to September, 1879—never thoroughly sober. I used to drive about and visit my friends. When I walked about I used to meet friends, and go off with them drinking. I was in a fearful state of drunkenness in September, and cannot remember any particular day dining at home. I have gone occasionally to plaintiff's house to drink. I do not remember being there on the 11th September. (The written promise to marry produced.) I have no recollection of anything about it, or of going to London with the plaintiff or her son, and going to Doctor's Commons. I have not the slightest recollection of it, or anything that was done there, or at North Woolwich. I don't recollect being in the church to be married. I was told of it several days after; I was quite surprised when I heard of it. I was

laid up for some time after I was told of it with delirium tremens. I believe the signature to the application for the license to be mine, but I have no recollection of signing the document. I do not know what has become of the license. My wife died in July, 1878. I am now under medical treatment.

Other witnesses also deposed as to defendant's drunken habits.

Counsel having addressed the jury, the Judge summed up, and the jury returned a verdict for the plaintiff—damages £25.

In this case, delirium tremens seems to have been assigned as the cause of the defendant's conduct; but it is manifest that his condition and demeanour were not those consequent thereon, whereas they quite agree with the paroxysms of epileptic insanity, ordinarily displayed by individuals who can imbibe large quantities of liquor without any remarkable sign of intoxication or of delirium tremens, which may, nevertheless, suddenly explode as forerunner of a convulsive attack, upon some potation beyond the habitual quantity. In delirium tremens there is a group of symptoms that cannot be mistaken. The terrifying hallucinations, the melancholy with homicidal or suicidal tendencies, the stupor, and, above all, the trembling of the facial muscles, with quivering of the hands and limbs, are phenomena too obvious not to have been noticed as proofs of legal unfitness in Mr. Whalley by those to whom he applied for the license at the Doctor's Commons, or by the Vicar of the church, on the morning of the 13th September. Nor was the least allusion made to a single of these striking symptoms by any of the witnesses.

On the other hand, and this is a point strongly bearing on the case, epilepsy in delirium tremens exists, it is true, without any relation to the motory derangement, and may even set in with hardly any tremor; but it never occurs without the delusional mental manifestations evidently wanting in this instance. On the contrary, chronic alcoholism may persist for a long while, with no other conspicuous effect than epilepsy, like that arising from other ætiological sources. But, under such circumstances, the mental, or the vertiginous kind of attacks are the most commonly observed, and the latter are frequently associated with sudden acts of violence, or with an automatic unconscious state, similar to somnambulism, which may last several hours, or even days, and generally terminating, as in Whalley's case, by a violent maniacal or spasmodic paroxysm, the transition to a sound condition of mind taking place, in every instance, after a long, profound sleep. And then, the epileptic exhibits

absolute amnesia of what he has done automatically, in an apparently conscious manner, during his mental paroxysm.

The communication sent to the Vicar by Dr. Vance, stating that Mr. Whalley was suffering from delirium tremens, has no legal value, since Dr. Vance, as he testified, had not seen Mr. Whalley professionally between the 24th August and the 14th of September, which was the day after he had already written such declaration.

It should seem that, when Dr. Sharpe was brought to see Mr. Whalley, he exhibited some motory trouble, which the doctor regarded as symptoms of delirium tremens, but which, we rather think, were indicative of the threatening fits Whalley had after leaving the church with Mrs. Brightmore's sister. Moreover, this terminal convulsive stage of the mental attack was, as usually, attended with the high state of delirium noticed by Dr. Vance on the 14th of September.

Finally, the series of acts executed by Mr. Whalley in relation to his marriage is not compatible—we repeat it—with any form of delirium tremens, whereas the singular occurrence and complete oblivion, of such acts, bear all the characteristics of epileptic insanity. Facts not disclosed at the trial may yet alter these views; but, based on the above reasons, and the testimony of which we have reproduced the main points, we regard Whalley's case as a typical one of alcoholic epilepsy, his insanity not differing symptomatically from that of other kinds of epilepsy. The only remark we should add, in conclusion, and in reference to the judicial decision, is, that no breach of promise could have been committed by a man who was evidently in an unfit mental condition to contract any legal obligation at the time when he made and signed the promise of marriage.

The laws and religion of France consider the marriage bonds indissoluble, because the civil contract of marriage cannot be executed without the mutual consent of the parties, which involves their sanity and freewill at the time. Legrand du Saulle* rejects the idea of introducing into the civil codes pathological grounds for judicial separation or dissolution of marriage, and deprecates in strong terms the social evils that would flow out therefrom. For "want of French observations of such a striking interest," Legrand du Saulle cites an example, borrowed from the "American Journal of

* "Etude Médico-Légale sur les Epileptiques." Paris, 1877; p. 217.

Insanity," to illustrate the dissolution of marriage on account of epilepsy, maniacal furor, and murder. This often-cited observation, at first quoted from the "American Journal" by Falret, in his standard Memoir on the "Mental State of Epileptics," has been copied therefrom by Legrand du Saulle and other French medico-legal writers, but without noticing that the case has been decided by the French Court at Mantes, and not in America, upon the most judicious and convincing argument of M. Amelot, Royal Procurator. This case establishes an important precedent which has thus passed ignored. On this account, we here present its faithful translation :—

"*Civil Court at Mantes (Seine et Oise), presided by M. Castel.—Audience of the 28th December*, 1844.—*Marriage contracted by an epileptic.—Application for its nullity.—Murder of the father-in-law the very day of the wedding.*"

"This strange trial, perhaps without example in our judicial records, raised the most perplexing medico-legal question of ascertaining the mental disposition of a man subject to epilepsy, during the hours immediately preceding a furious fit, and whether such disposition deprives him of exercising his free-will."

"The following are the circumstances of the case:—François Levieil, aged twenty-eight, a shoemaker at Jusiers, had suffered for several years from epileptic fits. The malady commenced from a fall on the ice. The attacks, at first confined to slight fugitive absences, assumed subsequently a most serious character, degenerating into furious mania. During the years 1838-39-40 and 41, Levieil served in the 5th Light Regiment, in which he pursued his trade of shoemaker as private out of the ranks of the company. He then had frequent epileptic fits, almost always preceded by a short loss of consciousness, during which he would either take the hammer, the knife, or any other tool at hand, to use it as an auger, or would again use this latter instead of a hammer, thus becoming, by such awkwardness, the laughing stock of his comrades.

"When discharged, Levieil returned home in September, 1841, determined to marry and to keep on with his trade. He became soon affianced to the daughter of François Moron, a farmer of Jusiers, and the marriage was fixed for the 26th of the following October. On the 24th Levieil was seized with pains in the head, which seemed to him a forerunner sign of an attack. He called on a physician at Meulan, who had treated him secretly since his return, and asked that he might be bled—an operation from which he had always derived relief ;

but the physician refused to do it, remarking that he should not abuse this remedy.

"On the morning of the 26th, a few hours before the ceremony, Levieil, suffering from ever-increasing pain, was bled by another physician at Jusiers, but this late operation afforded slight relief to his persistent headache.

"However, the civil as well as religious ceremonies took place. Levieil behaved himself properly; he seemed calm and composed, but deeply taciturn; he uttered no word beyond the inevitable *yes*. Did such a calm and concentration and silence indicate in him the state of a man who thinks and reflects profoundly on the importance of the engagement he is about to contract? or, did they not rather evince the dreadful symptoms observed by science in epileptics during the moments preceding their acts of fury? Be this as it may, on leaving the church, Levieil suffered from such a violent headache that, using his own expressions, "it seemed as though a boiler with boiling water were within his head." He accompanied the wedding party to the house of his father-in-law, located opposite his own; but they were obliged to lay him in bed, in a room adjoining that in which the nuptial dinner was spread. Then the fit of furious epilepsy explodes, suddenly developed after much uneasiness, and quickly reaches the extreme of the paroxysm. He throws down the persons with him, and, while they run out to get ropes to bind him, he rushes out of the house in his shirt, takes hold of a shovel, sees a woman, pursues her and knocks her down with a blow on the head. His brother-in-law interposes to stop him; but he and those who accompany him are in turn chased. Levieil then lies on the ground before his house door, grinding the pebbles with his teeth; after a while, stands up and goes in to get a shoemaker's knife; he burst open the door of his father-in-law, Moron, and rushes in, saying, "I must kill you all." The first person that he met was his father-in-law, who, on the instant, falls dead, pierced by several blows with the knife.

"The attack which had these terrible consequences continued for three consecutive days, during which they had to confine this wretched man in a sack. On the 29th Levieil had recovered his senses, and, only remembering the circumstances of his marriage, he had altogether forgotten what had occurred subsequently, and believed that he had constantly slept since that time. He was a few days afterwards transferred to the Maison de Santé at Clermont, where he still remains, and whence he will probably never come out, for his malady is incurable, and, although the fits are rare, they are of such an extreme, sudden violence, that his confinement will be always necessary to public safety."

"Under these circumstances, the guardian of Levieil, who had been interdicted, applied to the Court for a declaration of the nullity of the marriage, on the ground that, at the

time of its execution, Levieil was already under the influence of his disease, and, therefore, incapable of giving a free consent.

"M. Legaux, of Mantes, the advocate, urged strongly the application; he tried to show that Levieil's insanity existed already during the hours preceding the marriage, sustaining his assertion by the opinion of Dr. Bouneau, charged the day after the events, to visit Levieil to inquire into his mental condition.

"Mr. Escaude, counsel for Mme. Levieil, chiefly interested in the success of the application, spoke on the same strain, appealing to the Court's equity.

"M. Amelot, Royal Procurator, calls the attention of the Court to the singular and anomalous position of this married couple separated for ever after a dreadful event, without having ever cohabited, and who, should the marriage be maintained, will remain no less bound to each other by the inflexible law. He recalls the whole circumstances of the affair, laying particular stress on those which seem to indicate that on the very morning of the marriage-day, Levieil was in a bodily and mental condition that rendered him unfit to give a free consent. Levieil, he said, behaved himself decently at the municipal office, and the church; he answered to the sacramental questions, but, was he not at that moment under the thraldom of that terrible malady which was to manifest itself, on coming out of the church, by the furor and homicide? Was not the profound taciturnity, remarked by the witnesses to the marriage, the very sign of a reason already overwhelmed and half paralyzed by that violent headache, which Levieil, in his recollections, compared afterwards to boiling water in a boiler? The little intelligence and will that were then spared sufficed him undoubtedly, to walk freely and, in case of need, to utter some monosyllables; but, did this intelligence, did this will, undermined by a volcano ready to explode, allow him to understand in all its gravity, the importance of the act he was accomplishing?

"On this point the magistrate's conviction could only be formed upon consulting science and the experience of men who have thoroughly studied these kind of maladies, and who assert, that in certain epileptics the acts of fury are ordinarily preceded by a period of calm and taciturnity more or less prolonged, throughout which a progressive process of intellectual derangement, ultimately leading to furious

dementia, takes place. We do not pretend to demonstrate by rigorous proofs the mental situation of Levieil at the moment of the ceremony of his marriage.

"Proof of insanity, when such insanity is not yet betrayed by words or acts, but by calm and silence foreboding the storm, can only be furnished by God. We rest only on presumptions, but they are grave ; they are based on the study and observation of analogous facts by experts, and they suffice, if not to lead us to a certitude—at least, to create a doubt. Therefore, the doubt, on a question intended to decide if the union stamped with such an appalling episode has been freely contracted, ought not to be interpreted in an unfavourable sense to the wishes of the two families who jointly pray for its nullity.

"The Court, agreeing with these conclusions, decided for the nullity of the marriage." *

Far be it from us any disposition to open the doors to legal precedents that might loose the indissolubility of the matrimonial bonds, but it is as clear an act of justice as any can be, and as incapable of being affected by any fundamental moral principle, that the Court at Mantes could not have arrived at any other decision than to pronounce null and void the marriage of Levieil. To the common judgment of mankind the equity and justice of this decision are self-evident, while the course pursued thirty-six years ago by the French Royal Attorney and Judge, evinces a correct humane appreciation of the singular ways in which the mind may become disordered, and insanity exist without apparent signs, that is worth the attentive consideration of most public prosecutors and justices of our day.

An unpublished case, somewhat analogous to the preceding has been lately communicated by the eminent Dr. Delasiauve to Dr. Hack Tuke, who has brought it to our notice, and kindly allowed us to quote it here :—

In 1869 a bride and bridegroom had just met at the Mayor's office, when the municipal officer became informed, through an anonymous letter, that the future husband was an epileptic. Thereupon, an explanation took place, accompanied by surprise at the disclosure, and reproaches of ill-will. The marriage was, however, accomplished at the Mayor's office and the church. But, in the midst of the wedding ball the husband, being seized with a fit, had to be removed into a room, and on his return to the party, in a quarter of an hour, fell again

* "Gazette des Tribunaux." N., 5523, Jany. 7, 1847, p. 226.

with a second fit. Dr. Delasiauve was consulted the day after. In consequence of the impossibility of annulling the marriage by the French laws, no other course was left but to postpone cohabitation, and to prescribe a treatment. The bride's family were acquainted with the Imperial Minister of Justice, and, on Dr. Delasiauve's advice, he was informed of all the circumstances of the case. Unfortunately they were not heeded. The married couple went to live together at the end of three weeks, and they kept on living by themselves, supported by their respective families. The fits increased in frequency, until the unfortunate husband died, three years after his marriage, leaving three children.

The common laws in the American States do not offer great impediments in the way of married persons seeking to be divorced. We know, however, only of one instance, in New York, in which, eight months after marriage, the divorce was obtained on the grounds of ill-treatment, during the furious fits of epilepsy and desertion by the husband.

We remarked in the beginning that venery has, since the earliest times, been considered a remedy for certain kinds of epilepsy, wherefore marriage has been advised with that object. We have discussed this subject at length in our Clinical Researches on Epilepsy, and need not repeat here what we have there stated. Assuredly, "it is manifest," as Sieveking very properly notes, "that the difficulty of meeting with instances which establish the point, sufficiently demonstrates the truth of the general law that marriage is not curative in epilepsy."* Dr. Collineau has lately advocated the marriage of epileptics, with theoretical arguments which seem very plausible, but are nullified by its lamentable results. Delasiauve† with unsurpassed competency, has condemned this attempt to revive such false doctrine, for, as he observes, "it may be said, from a therapeutical standpoint, that the remedy is worse than the evil, as evinced by experience."

In proof of this, we could cite, among others, the very eloquent and sad instance of a young man, of strong physical constitution, subject to nocturnal epilepsy, and who was prescribed, by a physician, to marry as the best remedy for his attacks. He followed the advice, concealing his malady from his unfortunate bride. But the fits, instead of abating, increased in frequency and intensity, until he suddenly died one night, four months after marriage, in a most violent paroxysm, immediately after coitus. His young wife re-

* "On Epilepsy," London, 1858, p. 113.

† "Journal d' Hygiene," Paris, 1879. Vol. iv., pp. 325 and 339.

mained pregnant, and gave birth to a child, who died, at the age of five months, from hydrocephalus and convulsions.

A patient of the late Dr. Charles Budd, of New York, having married, died upon a series of fits, after the first intercourse. She had also expected to be cured by marriage of her epileptic malady, notwithstanding the contrary opinion of Dr. Budd. This case recalls that reported by Felix Plater,* in which a young woman died, on the very first night of her marriage, of violent convulsions, induced, however, it is stated, by anger at the refusal of her brothers to consent to her wishes in regard to property matters. The widower claimed the dower, which was at first denied by the brothers-in-law, who finally paid him one thousand florins.

Intimately connected with the question of marriage, is that of the hereditariness of epilepsy, on which there is quite a difference of opinions among standard authors. Even some of those who recognize the powerful influence of an inherited constitutional tendency on the development of the neuroses and insanity, and Morel among them, do not admit the transmission of epilepsy from parent to offspring, while others reduce it to a very slight or insignificant proportion. Among the former, Lasègue further asserts that, "epilepsy *(la grande épilepsie)* being not a disease, but an infirmity, is acquired only in two possible ways: by traumatisms effecting permanent lesions, or by spontaneous deformity." † Without entering into the objections to these views, we shall merely point out the cardinal fact, disregarded by Lasègue, of the hereditary transmission through which structural peculiarities and infirmities (not in the broad sense of the term, but as here applied to the imperfect development of the cranial bones) are commonly acquired, and which upsets such restricted ætiology of epilepsy, rendering at the same time more inevitable its hereditary spread.

It will be of no practical importance to discuss the conjectured reasons for the negative results obtained by Tissot, Maisonneuve, Gintrac, Leudet, Morel, Delasiauve, and those who reject the hereditary transmission of epilepsy, sustained by Portal, Boucher and Cazauvieilh, Beau, Moreau, Trousseau, Foville, Voisin, and many others who have accumulated evidence so ponderous as to make the denied fact wholly irrefragable.

* "Felicis Platerii Observationum, etc.," Basilea, 1641. Lib. i, p. 37.

† "De l'Epilepsie par Malformation du Crâne," p. 12. Rep. from "Annales Méd. Psych," 5e. S. Tome xviii., Paris, 1877.

Knowing how subject to uncertainties are the inquiries into the hereditary transmission of diseases, when studied from offspring to parents, we have proceeded in an opposite manner, and, starting from the epileptic parent, we have endeavoured by researches, continued for more than ten years, to ascertain the real state of health of the offspring, excluding from our calculation every case in which we have not been able to verify the facts asserted. We are also aware that the same plan has been pursued by Foville,* Voisin,† Martin, and others, but on a smaller scale, though arriving at results agreeing with those presently exposed.

A series of 136 married epileptics—62 males and 74 females begot 553 children, of whom :—

	Males.	Females.	Total.
Died in infancy of convulsions ...	89	106	195
„ very young from other diseases ...	16	11	27
Still-born	9	13	22
Epileptics	42	36	78
Idiotic	11	7	18
Insane	5	6	11
Paralytics	22	17	39
Hysterical	0	45	45
Choreic	2	4	6
With Strabismus	5	2	7
Healthy	63	42	105
Total ...	264	289	553

Taking into account that in one instance both father and mother were epileptics, we may represent in 134 families (136 individuals) the heredity relationship—

From the paternal side in 61 cases.
From the maternal side in 73 cases.
From both parents in 1 case.

The 73 females begat 298 children—116 males and 182 females ; among the former 47 died of convulsions in infancy, and 28 were epileptics ; whereas among the remaining 255 descendants from epileptic fathers there were—of the female sex 24 epileptic, and 42 who died of convulsions in early infancy. This evidently shows that the transmission of epilepsy does not exclusively occur from the mother to the

* " Annales Médico Psychologiques," Tome ii., 4 s., 1878, p. 120.
† *Ibid,* Tome xii., p. 120.

daughter, or from the father to the son, as supposed by some writers; but the epileptic mothers transmitted their malady to a greater number of offspring than the fathers, for the former begot 57 of the epileptic children, 107 who died of convulsions, and only 38 healthy.

Hereditary predisposition existed already among 87 of the parents—40 males and 47 females, in the following relationship:—

	Males.	Females.	Total.
Had epileptic father ...	3	5	8
,, ,, mother ...	6	4	10
,, ,, grand parents	3	2	5
,, ,, brothers	1	3	4
,, ,, sisters ...	5	3	8
,, ,, uncles ...	4	3	7
,, insane father ...	3	6	9
,, ,, mother ...	6	8	14
,, ,, grand parents	4	5	9
,, ,, brothers ...	0	2	2
,, ,, sisters ...	3	2	5
,, ,, uncles ...	2	4	6
Total ...	40	47	87

Epilepsy existed in the three generations in 19 of the male and in 27 of the female patients. Insanity in the grand parents re-appeared in the grand children in the families of two males and three females. Some, if not all, the children begot by parents tainted with hereditary predisposition exhibited unmistakable evidences of it. Every case of insanity, except two among the females, issued from this class of tainted parents, who begot 321 children, affected as follows:—

	Males.	Females.	Total.
Epileptic	28	34	62
Insane	5	4	9
Idiotic	7	5	12
Paralytic	9	12	21
Died of convulsions in infancy ...	56	73	129
,, of other diseases in infancy ...	3	16	19
,, of hydrocephalus	6	8	14
Still-born	5	7	12
Healthy	20	23	43
Total ...	139	182	321

Of the above 43 healthy children, representing 13·39 per cent. of the total in this series, 38 have already passed the age of fifteen, the eldest being 27 years. One of the males, aged 17, displays a great musical talent. The 62 children who had epilepsy, with the 129 who died in convulsions, make a total of 191, amounting to 37·69 per cent. of cases in the above table, in which the convulsive neurosis has been directly transmitted from parent to offspring.

The father and mother epileptic begot five children—two died of convulsions in early infancy; one of hydrocephalus, and of the remaining two girls, one seven years old, is an epileptic imbecile, but her sister has a bright intelligence, although of a very feeble physical constitution.

One of the females became epileptic immediately after her first confinement. She displayed the most violent homicidal impulses. Her two first children died in infancy of convulsions, and the third, born at the hospital, was transferred to the Infants' Hospital. Her father, an epileptic and inveterate drunkard, murdered his wife and two children during one of his fits, for which crime he was condemned to life imprisonment in Ohio.

The largest proportion of healthy children—62—issued from the 49 parents who did not exhibit any constitutional neurotic predisposition. They also begot 16 children with epilepsy, and 66 who died very young of convulsions, making 82, or 35·34 per cent. out of their whole 232 descendants. The healthy offspring from these parents amount to 26·81 per cent., and of them 45 have already passed the age of adolescence. In 23 of these 49 parents, epilepsy was developed from one to five years after marriage, and they begot 7 children epileptic, 11 who died in infancy of convulsions, 1 idiotic, 4 paralytic, and 37 healthy. Let us add that, only 7 parents—6 males and 1 female—begot 18 children all healthy, whose ages are now from 13 to 29 years.

To recapitulate, we have found among the 136 married epileptics here considered :—

1st.—68 whose descendants have been epileptic, and either idiotic, or insane, paralytic, hysterical, and healthy.

2nd.—61 whose descendants have been either insane, or idiotic, paralytic, hysterical, choreic, and healthy. In addition, several other children in these first and second groups have died during infancy of convulsions.

3rd.—Finally, as just noted, 7 parents have engendered children who have arrived at the age of adolescence or

puberty, without displaying any nervous or mental disorder. No infantile mortality has existed in these families forming an aggregate of 18 descendants—6 males and 12 females,—two of the former issued from the only mother epileptic who belongs to this series, in which every descendant appears to be sound.

If we estimate the whole of those affected with the convulsive neurosis out of the 553 children, we find 195 who died from convulsions in infancy, and 78 epileptics, amounting to 275, or 49·72 per cent. of the cases in which an epileptic parent seems to have obviously entailed his disease, without any change of type, on the offspring.

Doutrebente,* in his Prize Essay—"Genealogical Study on the Hereditary Insane," says—"That the reproduction of similar types in the descendants is a fact only observable with suicidal insanity, but not with *epilepsy*, or any other kind of malady of the nervous centres. The hereditary morbid germ undergoing transformations, or progressive changes through each successive generation, does not remain stationary." This analysis clearly proves, however, that epilepsy is actually transmitted from parent to offspring without change of type, and, as it results, even in a larger proportion than insanity, which, according to recent estimates,† does not exceed, reckoning direct and collateral relations, 34·9 per cent. (Bethlem). To the considerable number of those who die during infancy of convulsions is due that we do not find, among adult epileptics, the evidences of the remarkable hereditary transmission of their disease. The proportion of those with it, who have survived, amounts in our estimate to 14·10 per cent., which is not far removed from the proportion (12 to 13 per cent.) ordinarily admitted by French and English authors.

We have already stated that these results agree with those obtained by some French alienists. In a series of 32 epileptics collected by Jules Tardieu,‡ from observations reported by Foville, Voisin, Bourneville, and others, the direct transmission of epilepsy occurred in 23 cases, eight males and 15 females, begetting 72 children, who were thus affected; 33 with convulsions, and of whom 21 died in infancy; one insane, one imbecile, one eccentric, one very nervous, one with strabismus (who herself had three children, of

* "Annales Médico Psychologiques," Tome ii., 5 s., 1869, p. 394.

† J. C. Bucknill and D. Hack Tuke, "Psychological Medicine," 1879, p. 57.

‡ "De la Transmission Héréditaire de l'Epilepsie," Thèse. Paris, 1868.

whom two died in infancy from convulsions, and the third, very nervous, is subject to sudden fits of anger), 10 died in early infancy, two were still-born, and 11 are apparently healthy. In the remaining nine cases the parents had no children; but their ancestors and brothers, or collaterals, were saturated with a predisposition to epilepsy, or insanity. The epileptic father of one female, observed by Bourneville, committed suicide; the mother, also epileptic, died at the Salpêtrière; her brother is eccentric, and her sister epileptic. This patient had seven children; the first still-born; three other sons and one daughter died of convulsions in first infancy. Lastly, the father of another female married twice; by the first wife he had eight children, and, all but the patient, died of convulsions. By the second wife he has had nine children, eight have already died from convulsions, and the last, eighteen months old, has thus far shown nothing particular.

The father or mother had epilepsy in 18 cases, and in one of them both parents were affected. Epileptic collaterals were noticed in six cases. Insanity, or other nervous disease, in seven. Unknown, one. Epilepsy was twelve times oftener transmitted from the father to the son, or from the mother to the daughter, than from the parent of one sex to offspring of the other; and in no instance did the transmission appear from the mother to the son, which Tardieu regards as a curious coincidence.

Martin, from statistics that had been collected at the Salpêtrière, in 1874, and from those published by the French alienists we have mentioned, found that 19 epileptics begot 78 children, of whom 55 died in infancy, the majority of convulsions. Of the 23 surviving, 15 only were healthy at the time of the inquiry, and they were all very young.*

We may briefly add that, 83 families, observed by Lanceraux, in which one or more members suffered from diseases of alcoholic origin, had 410 children; of this number 108 (more than one-fourth) have had convulsions, and, in 1874, 169 were dead and 241 living, but 83 (more than a third of the survivors) were epileptic.†

Two of the cases here considered call for a special notice, and we will do it, in conclusion, leaving the reader to draw his own inference on them.

* "Annales Médico Psychologiques," 1878, and "Journ. of Mental Science," July, 1880, p. 313.

† "Gazette des Hôpitaux," April, 1879, p. 377.

The first is that of a young male epileptic whose family was tainted with a neurotic predisposition. We attended him in 1866, and a treatment with the bromide of potassium rapidly arrested his attacks. He then decided to marry a first cousin to whom he was much attached. The father strongly opposed himself to it, on account of the epilepsy and the consanguineous relation. We were consulted on the subject, and condemned the intentions of the young man, who, however, carried them out, leaving the paternal house. He has not only kept free from attacks, but is also the father of four healthy children. Another singular incident with this case is, that, prior to the marriage, and during one of the intermissions of the bromide treatment, the oxide of silver was prescribed against some neuralgic symptoms. And, without our knowing it, or suspending the bromide, he kept on uninterruptedly, for nearly two years after he left New York, with the use of the oxide of silver, his whole body becoming thereby of a dark bluish discolouration.

The other case is that of one of the females, seized with nocturnal spasms at the age of puberty, and who continued so until she married, when the fits ceased without ever recurring thereafter. This woman, however, has had four children, of whom the first died of meningitis and convulsions; the third is paraplegic, and, of the two remaining daughters, one became epileptic at the age of 13, on the establishment of menstruation three years ago. When we cited this example, ten years ago, in our "Clinical Researches on Epilepsy," two of the offspring had only given evidence of the inheritance of a disease which seemed in abeyance in the mother. Let us also remark that no hereditary taint of any kind is known to exist on the father's side.

Finally, we may legitimately conclude, from the facts recorded in this paper, that the direct hereditary transmission of epilepsy is a positive fact; and, that a serious responsibility rests upon any physician who counsels the marriage of epileptics, both as regards the parties themselves and the future of the offspring.

Insanity in British Guiana. By R. Grieve, M.D., Medical Superintendent, Public Asylum, British Guiana, Berbice.*

From the short time at my disposal, and from not having beside me the complete records of the asylum, my remarks to-day must necessarily be more limited in their scope and desultory in their character than under other circumstances would have been the case. I must content myself with bringing before you, in a very general way, some facts relating to the proportion of insane amongst the different races and people which go to make up the much diversified population of British Guiana, and I may notice also a few of the more prominent forms of insanity seen in that colony. What I have to say may, I trust, possess sufficient novelty to be interesting, and may prove none the less suggestive, although its object be not to support any preconceived or pet theory. British Guiana, although a West Indian Colony, forms part of the mainland of the Continent of South America, and amongst its inhabitants is seen a diversity of races as great, if not greater, than in any other country of like extent. There are two large primary divisions into which the population may be separated, namely, those born in the colony—in local phraseology called creoles—and immigrants. In 1871, the date of the last census, the population of the country numbered 218,909, consisting of 103,775 creoles and 115,134 immigrants. Neither in these numbers nor in any subsequent calculations are the aboriginal Indians (bucks) included, who inhabit the interior of the Colony, and who do not supply any contingent to its known insane population. The first division or creoles comprises a very large population of blacks of fine negro blood, descendants of the local slaves of pre-liberation days and of black immigrants subsequently brought from Africa or the neighbouring West Indian islands. In this class are to be found the greatest number of the coloured people of mixed African and European extraction in various degrees of combination, with a few white creoles of pure European descent. Amongst the immigrants are included, firstly, the black and

* Read at the Quarterly Meeting of the Medico-Psychological Association, held at Glasgow, March 24th, 1880. (See Journal for July.)

coloured people who have come from the other West Indian colonies, chiefly from Barbadoes; secondly, negroes born in Africa imported as free labourers, and who mostly belong to the West Coast tribes; thirdly, many East Indians (coolies) brought under indenture to work as labourers on the sugar estates; fourthly, a good number of Chinese, introduced for the most part under similar circumstances; fifthly, Portuguese who have come from Madeira and the Cape de Verde Islands; and, lastly, a comparatively small proportion of Europeans.

The asylum with which I am connected is the only one in the Colony, and the number of insane under treatment there furnishes the sole record we have of the prevalence of mental diseases. From the data thus supplied can be calculated with approximate accuracy the population of insane amongst the different races, and the results thus obtained are striking. Taking the two great divisions of creoles and immigrants we find that the former yield a population of less than one per 1000 (·95), whilst amongst the latter it is over one and a-half per 1000 (1·60). Thus it would seem that mental diseases prevail more extensively amongst the visitors than in the native inhabitants of the place. The thorough change in the condition of life to which the immigrant is subjected may be taken by some as a sufficient explanation of the difference here noted. For myself I am inclined to give much weight to the greater likelihood there is that insane immigrants of the quiet class, destitute, as in many cases they are, of relatives or friends, find their way to the asylum in greater numbers than the corresponding creoles who have their families near them. There are still more striking differences to be found in the proportion of insane amongst the various classes of immigrants who, with the exception of the Europeans—and it may be the Portuguese—live pretty much under similar conditions. I shall give the numbers of these, and then draw attention to one or two points in connection with them. Of natives of Barbadoes and other West Indian islands there are in the Colony 21,523—proportion of insane 1·44 per 1,000; of Africans, 7,541, giving a proportion of 3·18; East Indians, 63,846, proportion 1·50; Portuguese, 13,032, proportion 1·30; Chinese, 7,098, proportion 2·11; Europeans, &c., 9,094, proportion 0·90. Amongst this number it will be seen that there is a great excess in the proportion of the insane found

amongst the Africans, and that the proportion amongst the Chinese is high, while amongst those of European extraction it is very low. The last fact may, I think, be accounted for by the circumstance that very few of the European insane are retained in the Colony; they are mostly sent to Europe to their friends. The very great number of lunatics found amongst the Africans appears to me to carry some significance as bearing upon the question of the connection existing between civilisation and the prevalence of insanity. Those people born and living during their earlier years in Africa belong most certainly to the race which possesses less of civilisation than any other seen in the Colony. Yet they send to the asylum more of their number than any other. The significance of this fact depends in great measure on the belief which may be held as to the influence of the hereditary element in the production of insanity. Believing, as I do, the inheritance of the insane predisposition to be a great, even an essential, factor in the evolution of mental disease, I hold that the statement now made militates against the belief that high civilisation brings the cause of insanity in its train.* Vice is a more active agent in the manufacture of the insane neurosis than even "mental strain;" and however little of the latter may fall in the way of the "noble savage," he is no stranger to the former. On the other hand, I can easily see that the complete change of the local conditions under which the individual is placed by his removal from an entirely savage life to one having the comparatively high civilisation of a British Colony, imperfect as that may be, yields sufficient explanation to any one who believes in the greater potency of the causes acting on the person himself, and ascribes less to the sins of his forefathers. Amongst the different nationalities, the type of insanity which exists varies much. Race distinctions do not disappear on coming to the asylum. I shall briefly notice a few of the more striking points in this connection. One which has already been brought to public notice, in an article published some years ago in the Journal, written by Dr. Donald, is the large proportion of epileptics amongst the

* It is evident, however, that none of the facts mentioned are sufficiently conclusive to help to determine this question one way or the other. Dr. Grieve himself accounts for the apparent number of insane among the Africans, and for the smaller number of European insane. There is, therefore, no evidence whatever to disprove the position that civilized peoples are more liable to insanity than uncivilized.—[Eds.]

Chinese in the asylum. Speaking from memory, I should say that eight out of every ten of our Chinese patients are epileptic. Amongst the negroes mania is the form most usually seen; here may be noted the absence amongst this race of suicidal tendencies. The black people as a class are not suicidal; I have no recollection of suicide having been committed by a black, sane or insane, in the Colony during my residence there. On the other hand, the tendency to self-murder is very marked amongst the Chinese—a Chinese labourer on the sugar estates will often hang himself for what seems to us a very trivial cause—and in the asylum they give more trouble on this account than any other class of inmates. The East Indian is more suicidal in his tendencies than the blacks, but not so markedly so as the Chinese. There is also less dread of homicide with us than in an English asylum. The anger of the negro when insane is very quickly raised, but, as a rule, it as quickly subsides. We see very little of that fixed determination to injure—that brooding over imagined wrongs and watching for an opportunity for revenge, common enough here in the insane. Amongst the East Indians, a quiet, low melancholia is the most common form, but they also suffer from mania, in which the attacks, as a rule, are shorter, and the patients more manageable than with the blacks. There is one form of mania very markedly shown amongst the negroes, natives of Africa, which is characterised by a strong desire to hide themselves from human sight. If out of the asylum they will run into the bush and remain there until they starve, and in the asylum the same tendency shows itself. Amongst the Portuguese insanity is of the European form. There is one other circumstance to be noticed, and that is the absence of general paralysis. Amongst more than six hundred patients under treatment since I have been in the Colony, there has only been one case—that, however, was a very marked one. He was a creole of the Colony, but claimed to be of pure European descent. His father was a Scotchman and his mother a creole. There is also a striking freedom from any form of paralysis. Amongst the 310 patients who were in the asylum when I left there was not a single paralytic confined to bed. Before closing, there is connected with another subject an observation which I shall very shortly bring to the notice of this Society, and that is one referring to the relative weight of different portions of the

brain. It is, I believe, generally assumed that the relative weights of the different parts of the brain do not possess any significance as indicating race. Amongst Europeans, if there be any difference in the weight of the two halves of the cerebrum, the left is the heavier. Since I have been in the West Indies I have had the opportunity of examining over two hundred brains of sane and insane. I have found that whilst amongst the East Indian, the preponderance of weight is on the left side of the cerebrum, the opposite is the case amongst the negroes, and very markedly so—in the vast majority of cases the right half is heavier than the left; in some the two sides are equal, and very rarely, indeed, does the left weigh more than the right, and then from the effects of evident disease. When I began to realise this fact, I naturally set myself to look for some explanation of it, and as naturally first thought of prevalent left-handedness, but my search after left-handed blacks was not a very successful one, as I did not find a single specimen. Then another idea struck me, which I now submit to you, not as an explanation but as the very faintest suggestion in that direction. Of all the observations made in connection with the important subject of the localisation of the functions of the brain in its various parts, that which places the organ of speech in the left hemisphere is the one most universally accepted. May there not be some connection between the undeveloped left hemisphere of the African and his primitive and simple language?

I have again to apologise to the Society for the desultory character of my remarks, and to express my regret that having been so much and continuously occupied with the important and necessary administrative work connected with extensive changes made in the asylum, I have been prevented from bringing these subjects to the notice of the profession in a more exact and scientific form, but this, I trust, it may be in my power at some future time to do.

*On the best Mode of tabulating Recoveries from Insanity in Asylum Reports.** By D. Hack Tuke, F.R.C.P.

Much attention has been directed of late, more especially in America, by Dr. Pliny Earle, to the ordinary mode of calculating recoveries from insanity. Having examined with some care into the different results of several modes of making these calculations, I propose to state in this paper the conclusions to which I have been led, and to suggest an improved form of tabulating cures in the Reports of our asylums.

Great stress has been laid on the importance of distinguishing between *persons* and *cases* as regards recovery, and I have therefore endeavoured to ascertain among other things the different results obtained, according as we ascertain the recoveries from *attacks* of insanity or those of *persons*; and when percentages are taken, according as we calculate the recoveries of *cases* on the cases admitted, or the recoveries of *persons* on the persons admitted. It should be observed that Dr. Thurnam did not overlook the importance of this distinction in his "Statistics of Insanity," but it has been too frequently ignored by asylum physicians.†

I am greatly indebted to Dr. Savage for placing his admission books at my disposal, and knowing, as I have reason to do, how much time and labour their examination involves, I must express my obligations to Dr. Bacon for supplying me with most valuable particulars extracted from his books for my benefit. The labour he has expended is another proof that the more persons *have* to do, the more they *can* do, and in fact his labour in my service should be regarded as one of his contributions to this section. My cordial thanks are also due to Dr. Chapman and Dr. Manley, the Superintendents of the Hereford and the Hampshire Asylums; to Dr. Needham, of Barnwood House, Dr. Blandford, Dr. Stilwell, Dr. Baker, of the York Retreat (in his absence Dr. Colin Campbell), and others.

I am unable, however, to make use on the present occasion of more than a small part of the information thus obtained, as the limits of time circumscribe my remarks to a consideration of the points which I have indicated.

* Read at Cambridge in the Psychological Section of the British Medical Association Meeting, August 13, 1880.

† "The distinction between the number of cases admitted into any institution, and the number of persons in whom those cases occurred, is an important one in a statistical point of view; and in the construction of these Tables has always been kept in sight."—*Op. cit.*, p. 65.

My first intention in examining the books at Bethlem was to distinguish the persons from the cases as regards admission and cure from an early period, but I found this a more serious undertaking than I had anticipated, and one which when attempted yielded doubtfully accurate results. I therefore restricted the enquiry to ten years, viz., from January, 1869, to December, 1878, stopping short somewhat of the present year in order to obtain as many completed cases as possible.

Now during this period there were 2,241 admissions, and the number of discharges on account of recovery amounted to 1,077. This number corresponds to that which is ordinarily given in our Asylum Reports under the head of "discharged recovered," and is, without explanation, in danger of misleading the unwary examiner of asylum statistical tables. I do not now allude to percentages, which do not bring out the difference so strikingly. This number really represents only 962 patients who recovered. One of these recovered for the tenth time, so that within a certain period he had figured as ten persons discharged cured in the gross number of recoveries. The number of persons admitted was 2,094.

Let us now compare the cures per cent. when calculated as usual—that is to say cures of attacks—however frequent in the same patient, upon the admissions, on the one hand, and the cures of persons calculated upon admissions of patients on the other. In the former instance, it was 48·05; but in the latter not more than 45·94—the difference between the total cures and those of persons being 115.

So, again, with the Cambridge Asylum. The replies of Dr. Bacon to my questions show that while there were out of 1,968 admissions during the twenty-one years the Asylum has been opened, 696 discharges on account of recovery, there were in fact only 586 patients cured. One had recovered seven times, 4 five times, 7 four times, 12 three times, 43 twice, and 519 once. Again, calculating the recoveries, including re-cures, on the total number of admissions, the percentage was 35·36; while calculating the recoveries of persons on the admissions of persons, they were less, viz., 34·19, the difference between the total cures and those of persons being 110.

In Table I. will be seen these different modes of calculation worked out for more asylums. It will be observed that though considerable, the difference expressed in percentages is not so patent as when the gross numbers are given. The reason of this is that the *re-cures* are, to a certain extent, balanced by the *re-admissions*. The discrepancy is greater in

a series of figures published by Dr. Mitchell in the "Journal of Mental Science," January, 1877. There I find that the cures per cent. on the ordinary mode of calculation, were 47·3, while the calculation worked on persons was only 41·5, showing a difference of 5·8. In Asylums E and F the numbers happen to be higher when worked on persons.

TABLE I.

Showing percentages of Recoveries calculated on Cases and Persons in Various Asylums.

	ON CASES.	ON PERSONS.
Asylum A	48·05	45·94
„ B	43·04	40·00
„ C	35·47	33·88
„ D	35·36	34·19
„ E	31·01	31·61
„ F	29·22	30·03
„ G	27·41	26·61
„ H	24·83	26·03
Dr. Mitchell	47·3	41·5

That the plan of including re-cures in the percentage is not necessarily balanced by the re-admissions—that the calculation of cases cured on cases admitted does not always prove identical with that of persons cured on persons admitted, though it may often happen to be very nearly the same—may further be shown by this very simple Table, for which I would apologise, did I not know that as a matter of fact some difficulty is felt on this point.

TABLE II.

Usual Mode of calculating Percentages. Cases of Recovery on Cases of Admission.

RECOVERED.	ADMISSIONS.	RECOVERED.
1	1. Jas. Smith ...	... 1
1	2. Jno. Jones ...	... 1
	3. Thos. Brown	
	4. Hy. Robinson	
1	5. Wm. Dawson	... 1
1	6. Chas. Mason...	... 1
	7. W. Marriage	
1	8. Henry Pasco...	... 1
	9. Frank Pearson	
	10. Geo. Hancock	
1	11. John Jones (re-admitted)	Died insane.
1	12. James Smith (ditto) ...	1
Recoveries ... 7	12 Admissions (cases)	6 Recoveries.

Here we suppose 12 Admissions and 7 Recoveries in the first column. As of the admissions two were re-admissions, only ten persons were admitted. It may be said that as you add the two re-admissions to the admissions, and two to the first column—the Recoveries—it will come to the same thing, whichever of the modes of calculation in question we adopt. But a glance at these figures will show that such is not the result, for the five recoveries do not bear the same relation to the ten persons admitted, as the seven cures bear to the twelve admissions. In fact, there were 50 per cent. of the persons cured, while there were 58 per cent. (58·3) of the admissions followed by recovery.

Let us, however, suppose an instance in which the two methods of calculation would produce the same percentage. This is shown in the column to the right. Suppose that John Jones, instead of recovering on his re-admission had not recovered, but died insane, we should then have twelve admissions as before, but only six recoveries—the same proportion as is borne by the numbers when persons only are taken as the basis of calculation, or 50 per cent. in both instances.

The other mode of calculation, that of persons on persons, is represented in Table III.

TABLE III.

Showing the more correct Mode of calculating Percentages. Persons who Recover on Persons Admitted.

ADMISSIONS.		RECOVERED.
1. James Smith	...	... 1
2. John Jones ...	...	... 1
3. Thomas Brown		
4. Hy. Robinson		
5. Wm. Dawson	...	... 1
6. Charles Mason	...	... 1
7. W. Marriage		
8. Henry Pasco	...	... 1
9. Frank Pearson		
10. Geo. Hancock		
10		5

What I contend for, then, is this—that it is mere chance whether the difference between the results of the two modes of calculating the percentages is small or large, or identical as in this instance; the only supposable case in which the customary method would give a correct result being that in

which the number of cases which recover bears the same proportion to the number of cases admitted, as the number of persons who recover bears to the number of persons who are admitted, in which event the percentages are, as we have already seen, identical.

But it is said that we *ought* to reckon the re-cures in our calculation, and that the ordinary method does this. On the contrary, whether they should be included or not, this method does not do justice to them, for they are largely balanced, as we have seen, by the re-admissions. If it is desired to make them tell, we ought to calculate the cures and re-cures on the persons admitted. This would raise the percentage of Bethlem Hospital recoveries to 51·43, and of Cambridge to 40·61. With Dr. Mitchell's cases the percentage on this mode of calculation is given by him at 65·6.

The present system of calculating the percentage does not, therefore, secure that which some of those who employ it suppose they gain.

On the general question whether we should or should not allow for re-cures, I fully admit that the number of times any patient recovers should be stated in our tables, but this should be kept so distinct that those who consult them should be able to distinguish between the persons who have recovered and the number of recoveries, for I cannot agree with those who hold that we should regard each cure of insanity in a patient in the same light as each cure of a physical disease—pneumonia, for instance. The famous Dr. Willis, George III.'s medical attendant, when giving evidence before a Committee of the House of Commons, in 1789, and astonishing its members by a statement of the number of cures he effected, when asked whether every cure in the same person was included in the calculation of the whole number, replied—"If a person has been twice brought under my care, and twice cured, I reckon two cures, as I should of a fever." But it seems to me that our experience proves but too clearly that the parallel is not a fair one, for the relapses after pneumonia and fever, when once cured, would be much less frequent than in mental disease; and the patient himself would be generally a sounder man *physically* in the interval than the re-cured lunatic is *mentally*. Besides, from the different functions of the organs attacked, the permanent consolidation of a portion of one lung may allow a man to perform efficiently the duties of his position in life; but the remains of an infinitesimal lesion of the brain may virtually

incapacitate him from the efficient performance of his duties in the intervals between the attacks.

I most fully admit, however, that as to the credit of treatment, these repeated cures of the same patient may have shown the skill and taxed the patience of the Superintendent just as much as if occurring in separate patients; and as to the individuals themselves, they have no doubt in many instances enjoyed a fair share of health in the intervals of their attacks.

All I object to is allowing figures to go forward, year after year, to the public, representing the gross number of recoveries as the number of persons restored to society able to resume their place as useful members of the community; for without some clearer mode of presenting the actual facts than at present obtains, they will believe that 100 recoveries represent 100 persons enjoying the use of their reason, instead of, in too many cases, oscillating between the world and the asylum. Then in their ignorance of the tendency to the recurrence of insanity, they are astonished at the ever increasing demands for new asylums, and the conclusion, out of all proportion to the fact, that there has been an increase of insanity. Nor will these misconceptions be dispelled till it is stated in characters so legible that he who runs may read, how many of the published cures are only re-cures of relapsed cases. Dr. Earle writes to me:—"The British Superintendents are careful to inform the readers of their reports how many of their admissions are re-admissions. Why are they not equally careful to show, *in their recoveries*, what proportion or what number of them are the recoveries of the re-admitted patients?" I trust that before long this question will not have to be asked.

I would propose to supplement the present Tables in the Annual Reports of Asylums in the following manner.

I would add to what is already usually given (viz., the re-admissions and the number of persons admitted), the number of times each patient has been admitted.

This is exhibited in Table IV.

I would, in the Recovery Table, show separately in addition to the number of cases recovered—

1. The number of *persons* who recovered.
2. The number who relapsed, and who did not relapse.
3. Of those who relapsed, the number who had again recovered at the date of the Report, thus showing, when added to the previous cures, the net number of recovered persons.

I have taken as an illustration the Cambridgeshire Asylum, the materials for forming the Tables (IV. and V.) being obtained from Dr. Bacon.

It will be seen that while 34·19 per cent. of the persons admitted were cured, 103 or 17·5 per cent. of these relapsed, leaving 28·2 per cent. who did not (so far as the asylum is concerned); that ultimately, allowing for cases of relapsed patients, 31·15 per cent. were cured at the date of Report.

TABLE IV.

Admissions and Re-admissions from opening of Asylum in 1858 to 1880—

Cases admitted (total cases under treatment) ...		1,968
Re-admissions		257
Persons admitted (total persons under treatment)...		1,711
Re-admitted once ...	257	
Do. 2 ...		
Do. 3 ...		
Do. 4 ...		
Do. 5 ...		
Do. 6 ...		
Do. 7 ...		
Do. 8 ...		
Do. 9 ...		
Do. 10 ...		

TABLE V.

Recoveries from opening of Asylum to 1880—

Total *cases* or 35·36 per cent.		696	
Recovered ... once ...		519	
„ ... 2 ...		43	
„ ... 4 ...		7	
„ ... 5 ...		4	
„ ... 6 ...		0	
„ ... 7 ...		1	
696 recoveries representing 586 *persons* recovered.			
Total *persons* or 34·19 per cent.			586
Recovered persons re-admitted			103
or 17·5 per cent.			—
Recovered persons who have not relapsed ...			483
or 28·2 per cent.			
Relapsed persons discharged cured... ...			50
			533
Or 31·15 per cent. of persons admitted ...			

Such a Table would afford practical information in regard to the proportion of patients who relapse, so far at least as the asylum can be cognisant of the subsequent history of the patients it has treated, and would no doubt present anything but a bright picture of the stability and permanency of the cures effected; but it is far better that the truth, however unpleasant, should be clearly recognised. Thus I find that at the Hereford Asylum that one patient was first admitted in consequence of a 5th attack, and recovered from that and a 6th, 7th, 8th, 9th, and 10th attack. He had slighter attacks at home, not sufficient to bring him to the asylum, in the intervals. Of this patient, Dr. Chapman says, that although counting six recoveries, he really did not recover at all. Another patient, admitted in consequence of a 4th attack, recovered from that and from a 5th, 6th, 7th, 8th, 9th, 10th, and 11th attack. Another, admitted for a 2nd attack, recovered from it and from a 3rd, 4th, 5th, and 6th attack. Lastly, two patients, each admitted on the 4th attack, recovered from it and from a 5th and 6th attack. All these, and several others, Dr. Chapman has no doubt will return again and again. How can we call these "cures"? Is it not a misnomer? Dr. Manley points out in his last report that 40 per cent. of the recoveries since the opening of the asylum have relapsed, thus reducing the percentage from 31 to 18. Taking the recoveries from the *first* attack at the York Retreat up to a certain date, as many as 65 per cent. relapsed—some, of course, recovering again. The cures at first were 53 per cent.; then, after deducting relapses they were only 18 per cent.; while allowing for re-cures the latter number was raised to 26 per cent.

Summary.

I.

That the Statistical Tables in the Reports of the Asylums for the Insane should contain a clear statement, not only of the re-admissions (specifying the number for each person and distinguishing between re-admissions after recovery, improvement, &c.), but of the re-cures, showing separately the number of *persons* who have recovered.

II.

That the percentage of recovery given in these Tables should be that of *persons* recovered, calculated on *persons* admitted.

III.

That the usual plan of obtaining the percentage of recovery by calculating the cases of recovery on the cases admitted, though frequently producing nearly the same result, does not afford a reliable proportion of the number of persons who recover to the number of persons admitted.

IV.

That if it be desired to include the number of times the patient recovers, this object is not secured, as some suppose, by the usual method of calculating the percentages of recovery, but by calculating the gross number of cures and re-cures upon the persons admitted.

V.

That the present plan of jumbling together in the Statistical Table of Recoveries, the gross number of cures and re-cures, is misleading, and occasions exaggerated views as to the curability of insanity, and proportionate disappointment when the demand is made for additional asylums.

CLINICAL NOTES AND CASES.

Cases of Tumour of the Brain in the Insane. By Thomas Lyle, M.D., Borough Asylum, Birmingham.

Tumours of the Brain amongst the insane are so very rare that I think any clinical record of such cases cannot be without interest, not only to the medico-psychologist, but also to the general practitioner.

I will, therefore, bring before your notice two cases of Tumour of the Brain, one of which came under my care in June, 1879.

T. H. admitted 30th June, 1879, from his own home. Age 40, married, occupation a boatman on the canal. First attack. His wife states that he has always been a very steady, respectable man. About six months ago, one day while at work, he fell off the boat into the canal, and was nearly drowned before assistance could be rendered him. After he was taken home it was found he had lost the use of his left arm and leg. He remained home from that time until he came to the asylum. When admitted into the asylum he had regained the full use of his paralysed side. There is no history or

symptoms of syphilis. His wife also states that during the last six months he has been quite changed in his habits, that he is now irritable and gets very excited at times; occasionally destructive.

June 30, 1879. When admitted he was in a very restless condition; general incoherency and rambling in conversation; neither knew where he came from nor where he was.

July 1, 1879. Patient rested and slept well last night; seems very confused when any simple question is put to him, and is some time before he can give an answer. Muscles of face and lips tremulous, and when asked to put out his tongue it is done with a jerk, and quivers while protruded. His memory is very defective. When asked how long he has been here, says "a month," when in reality he has only been one night; pupils slightly unequal, but both active. Examination of chest shows heart and lungs to be healthy. Complains of pain in his head.

July 20. Had a convulsive attack to-day, after which it was found his left side was paralysed, and the pupils were markedly unequal. Complains of pain in his head.

Aug. 24. Has been rather helpless since last note was made, and been confined to bed; yet he keeps in the very best of spirits. When asked how he is, says he feels "very well," repeating the words "very well." He sings occasionally, and talks a good deal of the fine boats he possesses, and addresses strangers by some familiar name, such as "Joe;" labours under the delusion of mistaken identity, and holds out his hand to shake hands with strangers, believing he has known them all his life. Takes his food well, and enjoys it.

Nov. 20. Very little change since last note was made, unless it is that his voice is not so strong, and is very tremulous when he speaks. He takes his food well, but it does not do him the same amount of good it did, as he has lost flesh lately, showing that nutrition is becoming impaired.

Jan. 8, 1880. Generally very happy and content, although he is quite helpless; has to be lifted out and into bed. Bed sore forming over the sacrum; pulse 86; urine examined, was healthy.

Feb. 3. Sank and died.

Feb. 4. Autopsy: Body thin and emaciated. There was a large bed sore over the sacrum.

Head: Calvarium normal in thickness; dura mater very firmly adherent to the skull cap, considerably thickened, and had a leathery feel; arachnoid slightly opaque, with some sub-arachnoid effusion. The brain substance was highly vascular, and presented a pinkish aspect.

On taking a slice off the right cerebral hemisphere of the brain, a tumour was found, of a greyish colour, occupying the greater part of the right anterior lobe, and extending backwards about three inches. The tumour was the size of a medium orange, irregular in shape, and somewhat uneven on the surface, with two or three small cysts attached

to it. It was supplied with small vessels from around it; the brain substance in the immediate neighbourhood was very soft and pulpy, and had a cream-like appearance. The corpus striatum and optic thalamus of that side were much softened and broken up. Softening had just commenced on the left side; the floors of the lateral and fourth ventricles were rough with small granulations, as seen in an ordinary case of general paralysis. The other organs were healthy. Weight of brain, 44oz.; blood vessels of brain thickened.

Microscopical appearances of tumour, by Dr. Saundby, who kindly undertook to examine the tumour for me. Portions of the tumour were prepared by soaking in bichromate of potash, solution, syrup and gum. The sections were stained with logwood, Dr. Cook's formula. The tumour was composed of two portions, a hard and a soft portion. The former was made up of homogeneous material, staining only slightly and diffusely, containing many capillary vessels with enormously thick walls, and presenting the appearance of lowly-organised newly-formed tissue which had undergone caseation. The latter was the growing portion, consisting of groups of round and spindle cells and a number of capillary blood vessels.

The appearances are suggestive of the growth being an old gumma.

Case II.——In the Obituary Record of this Asylum I can only find one case of tumour of the brain, which my colleague, Mr. Green, met with some years ago; and, so far as he can remember, it is the only case he has met with.

The case was that of a man (E. B.), aged 40, an upholsterer, married, subject to epilepsy.

He is recorded to have been a man of average height and bilious temperament; had been gay and dissipated. When admitted he was unable to stand, and nearly unconscious; pupils sluggish but of equal size; can be roused, but not easily; countenance pale; cannot be made fully to comprehend what is said to him. To every question he answered "yes," or "not at all;" spoke slowly, as if he had a difficulty in articulating. This patient lived only fourteen days, during which time he is stated to have had delusions as to his great wealth; memory very defective, and circulation languid. He is only stated to have had one fit, and that was the day before he died.

His wife says his mind was more or less affected for seven years before he was sent to the Asylum, and that he was almost blind for a year during that time.

It was also stated that his right side was weaker than the left, as he used to assist to dress himself with the left hand, but not at all with the right, although he could move it.

Autopsy: In the upper part of the left hemisphere of the brain, close to the longitudinal fissure, and just under the coronal suture,

was a large fibrous tumour, weighing 5½oz., resting upon, but not reaching the lateral ventricle ; it was irregular in shape, and nodulated on its surface, and the brain around it was softened. The veins proceeding from the tumour, and the lateral sinus in which they terminated, were filled with a firm, dense, fibrinous coagulum ; the whole brain was highly vascular.

Tumours amongst the insane are rare, but the experience of different authors has varied, as may be seen from the following : Fischer found not one case in 318 autopsies. Dr. Batty Tuke, out of 400 autopsies of the insane, found himself in the same position ; but he says on three occasions he met with gliomata in the sane. Dr. Hack Tuke found one tumour in 400 cases. The French statistics show 22 out of 8,289 cases. In the Somerset County Asylum tumours were found at the rate of 16 per thousand. Dr. Sutherland mentions that he found four in 200 cases.

Dr. Clouston was more fortunate in this respect, as he found at the Carlisle Asylum six cases out of 214, while this is the first case I have met with out of 400 autopsies.

Dr. Clouston, in a very interesting paper on this subject in the "Journal of Mental Science," July, 1872, says that Arnold quotes Morgagni and Bonetus that tumours are one of the 47 pathological changes in the brains of the insane. Certain authors have expressed doubt as to whether tumours of the brain are really productive of insanity, their objection being founded on the fact that in certain cases tumours have existed which have not been accompanied by abnormal psychical symptoms. I agree with Dr. Batty Tuke that there is very little doubt that tumours of various descriptions are productive of insanity, producing mental weakness, and, in some cases, even dementia of the deepest colour.

I think the symptoms generally to be met with are excitement, followed by some kind of seizure—it may be apoplectic—then defective memory and obtuseness of the intellect. In both cases I have related there were allied symptoms such as those of an apoplectic character, at or near the beginning, followed by delusions of grandeur and wealth, as seen in general paralysis of the insane ; then defective memory. I cannot say, however, that in my case the patient was free from delusion, as laid down by some ; headache was complained of throughout my case, and in four out of Dr. Clouston's six cases.

Then, in the two cases I have brought forward, paralysis was present in the form of hemiplegia. This agrees with a

case related by Dr. Bacon. Paralysis was present in some form or other in four out of Dr. Clouston's six; but paralysis does not follow as a matter of course because a tumour is present in the brain. Calmeil found that three-eighths of those affected with organic disease of the brain were free from paralysis, and, of the other five-eighths paralysed he found four-eighths hemiplegic.

Dr. Boyd has compared the frequency of tumour in the sane and in the insane, and finds out of 38 cases, 17 showed symptoms of insanity, which agrees with Calmeil; but I cannot help thinking this is much too high a percentage, and that a very great number of cases are treated at home and we hear nothing about them; it may be looked upon only as ordinary softening of the brain. In conclusion, the two cases I have related strongly corroborate the excellent paper by Dr. Clouston on this subject, as regards the pathological influences exercised by tumours growing in the brain. He says they have three distinct effects on the brain structure: 1st, they create irritation, tending to ramollissement in the nerve substance with which they are in contact; 2nd, they cause pressure on distant parts, which in its turn causes an alteration of the structure and nutrition; and, 3rd, they set up progressive disease, resulting in an increase of the connective tissue and thickening of the coats of the blood vessels.*

Autobiographical Letter from a Patient. Contributed by G. H. Savage, M.D.

Bethlehem Hospital.

Dear Sir,—

In accordance with your desire I will give you a short review of my mental condition while here; but before commencing with that subject, I will furnish you with a brief sketch of my life during a certain period to enable you to comprehend the several causes that led to my breakdown; and I am the more willing to undertake the task, should I, by so doing, render you any assistance in treating any such similar cases. Firstly, I must tell you that, as a boy, I was of a most excitable and irritable temperament, and had a mad love for jumping and running about, also for cricket and other like games. When I was about thirteen years of age I went to the University College School, where I remained three years, after which I entered the

* See Case of Tumour of the Brain associated with Epilepsy and Catalepsy, by Dr. Fletcher Beach, "Journal of Ment. Sci.," Oct., 1879, p. 326.—[Eds.]

College, attending lectures there for a term of eighteen months. While at school I contracted the terrible habit of self-abuse, which I practised all my life until within a few months of my coming here, when I was startled out of my lethargy and came to perceive to the dire effects which that fearful sin had produced in me.

I was very fond of my books, and worked pretty hard for the Matriculation Examination, which I passed in June, 1869, and then proceeded to read up for the first B.A., reading very late into the night; unfortunately it was labour thrown away, my father being forced to take me with him to South Africa on account of his affairs being entirely mismanaged by those under whose charge he had left them. Had the B.A. degree depended but upon one examination, I should certainly have attempted it, only, as you doubtless know, it is necessary to pass two examinations, the second of which one is not permitted to enter for, until the October of the year following that of the first one. About the time that I passed the Matric. I took to smoking, which I fear I even then indulged in to too great a degree. I can also see now that I seemed to lose, after I had been at school a couple of years, to a great extent, the zest with which I had previously entered upon all my studies. Several times I used to imagine myself to be the only human being, and that other people were created and that books were written in order to try me. Of course I drove the absurd idea away, but the delusion at different times would hold me entranced.

I was eighteen when I left England, and after reaching Capetown, proceeded, after a few weeks' stay, to the Free State, where my father had a business under the management of a nephew of his. While there I learnt to frequent the billiard-room, and as a natural sequence, got into the way of drinking spirits—French brandy in particular—like a young fool thinking it one of the most manly things to be able to imbibe a large quantity of alcoholic drinks. During my stay there, about eight months, I had a very bad sore throat and sore feet, though no swelling was visible, and I had to take to my bed, but recovered in a few days and believed myself to be in perfect good health; in fact I always imagined myself to be enjoying such, which could never have been the case whilst I was leading such a wild life. After that I came back to the Colony to a small town, near the Orange River, and entered into business with another, where I lived for four years, and after a few months quiet life again frequented the billiard-room, and, of course, lifted the elbow very much. When I was twenty-one I had connection with a dirty woman and caught the disease, which I had very badly. I was very careless, went walking about and doing my work whilst I was suffering for two months. Meanwhile all this time my father's business was being utterly mismanaged by his nephew, the knowledge of which, instead of rousing me to make an effort to try and assist him, seemed to make me drink more; in fact during the last few years of my residence up-country I

appeared to live in the billiard-room, never retiring to rest before 12 p.m. and not rising before 8.30 a.m. I was, I may almost say, in a complete state of coma ; my memory failed me, and when I was spoken to, or when I read, I could hardly understand what was said or what was written, and, like an idiot, did not seem to be aware of the cause which I know now too well. My mind appeared never to be at rest, and something within me compelled me to drink, for I really did not like spirits ; it was owing, no doubt, to my system demanding some stimulant to create a false strength that for a time took the place of the true strength ebbing away from me. I felt very wretched all the time, and I have some recollection (what a fearful thing to have done!) of having sold myself to the devil for a few years' peace of mind. I was constantly desiring short life, my life was so miserable that it was quite a burden for me to live. On my return to Capetown I felt still more wretched, and generally suffered, after taking lunch, from a heavy dull pain in the top of my head ; I also found that I could scarcely read, at times reading a whole column of a newspaper, of which when I had reached the end, I discovered that I did not know what I had been perusing, and was forced to throw the paper on one side. After a few months I left for Natal with my father, where he had set up a business, and whilst there most decidedly did not get better. I seldom went out anywhere. I could not speak in company, and it was quite an effort for me to make even the most commonplace remark. I must tell you that I always was very bashful and reserved, especially in the presence of ladies, from a boy upwards. Two or three months before my arrival here my father in closing his business had to leave for the Old Colony on business matters, and left me in charge of his affairs. During his absence I was in very low spirits, and suddenly imagined that I was accused of the most heinous crime that a man could be guilty of, and on his return he found me in a fearful state, and I told him that I was determined to go before a magistrate and take an oath to the effect that I was entirely innocent of the offence imputed to me. He prevailed upon me to go with him to an attorney, a friend of his, before whom I took the oath. Of course I still did not feel satisfied, and attempted to take my life with a razor. Fortunately I had the delusion that I could not kill myself, and that in punishment of the sin I had persisted in the Almighty had doomed me to an everlasting life of torment. I heard, or fancied I heard, all kinds of whispers about me which made me imagine that first this fate and then that fate was in store for me. On the voyage along the coast to Port Elizabeth I thought that everybody knew me, and I heard some remark that, when taken before a magistrate, my tongue would be cut out, and that "when he lays his head on his pillow he will sleep for a week." This latter remark, I imagined, was made in allusion to my father, so that when he had taken some powerful narcotic in his food the steamer's course might be reversed in order to land me at Zanzibar and to hand me over to the Arabs to torture me

as they pleased. In consequence of this delusion I kept cautioning my father not to take any soups or liquid food, and worried him the whole day, and at night started out of my berth and roused him out of his sleep to see whether he was under the influence of any sleeping draught. Even when I reached Port Elizabeth, which place I knew very well, I still at first imagined that I had come to Zanzibar. During my stay with my mother and sisters I would not stir out of the house, and kept walking up and down the rooms all day long ; on the application of different girls for the situation of cook, I told my mother not to take any girl without my first seeing her, being under the delusion that I had signed a paper agreeing to marry some girl after a certain number of years, who, when she made good her footing in my father's house, could compel me to fulfil my engagement. I then fancied that I had not been properly cured of the disease, and was afraid that I would cause contagion to spread all over the house ; so afraid was I of doing so, that I was only too glad to leave the house, and eagerly accepted at last my father's proposal of a voyage to England, which he had several times before in vain requested me to take with him. All along I also had the delusion that I had caused fearful ruin and death all over the earth through the fearful habit I had indulged in. On our way to this, I thought that all on board were those whom I had injured and were suffering like myself from secondary symptoms. Only two considerations hindered me from throwing myself into the sea; one was that my doing so would be of no avail, inasmuch as I could never die, and that therefore I should be lying to all eternity at the bottom of the ocean smothered alive and nibbled by fishes and other crawling reptiles ; the other consideration was on account of my father's being with me, that I did not wish him to be a witness of my self-destruction. I believed my body to be immortal, because I was under the delusion that I had no blood in my veins, and had very little flesh left, that I had no internal organs whatever, that I had not even either heart or brain, that the very marrow had been drawn out of my bones. On arrival at Southampton my father went to the agent of the Union Line of steamships, of which our vessel was one, to see whether any letter had reached them addressed to him; in the meanwhile a letter was given to me, and I set off in hot haste after him, fearing that he had been put out of the way for a time to enable people to do as they liked with me. I was under the impression that I was known to the whole world, and had become famous, or rather had established myself as the most notorious character that had ever been in existence; also that whilst I remained on the earth men were in duty bound to sin in every possible manner, that all I had learnt at school was false, that no history was true, nothing but the Bible to be taken as truth. I believed that my father had deceived the world, which in turn had treated him a similar way, and that it was left to me to discover the true state of things ; that men would first teach me what was right and then would tempt me to do wrong,

and that I had signally failed in the task set me; that when the time arrived the whole family was to be broken up and destroyed because of my wickedness, not one member to know the fate of any of the others. On entering this Hospital my delusions gathered additional strength, and were reinforced by new ones which cropped up in my mind day by day. I imagined England to be joined to the Continent through people being ruined by using water, all of which I had polluted; that I was to see none but those I had injured; that each one was acting a *rôle* in the farce; that I was too contemptible to be taunted with or accused of my offences; that even you and Dr. Williams took my hand to make me believe that I was only in a similar condition; that the other patients were placed in in order to give me as much mental pain as it was possible in the power of man to do by causing my mind to ache with alternate hope and doubt; that all the great wars in this century had never been waged, such as the civil wars in America and Spain, the Franco-German, the present Russo-Turkish wars, &c., which, after a while, I believed, had been undertaken because of my unnatural life, also that for the same reason all these fearful murders, burglaries, &c., had taken place; that owing to my evil life the great Creator had manifested His wrath against the sins of mankind by causing famines, droughts, shipwrecks, &c.; that I was the false Messiah at whose coming the sins of the world were forgiven, sufficient atonement having been made therefor by the sufferings inflicted on all by means of all the diseases I had propagated through the water I had polluted. A little while after my arrival here I at last discovered my mode of punishment, which was that my empty body, being a mere shell, was to be filled with bad food up to my throat, that I would then fall into a deep sleep and thus be buried alive, suffering to all eternity from every possible disease and pain, my body to be filled with worms which would crawl up and down my empty veins; that I would be tortured frightfully by the abortive attempts to get out of a serpent which was to be placed in my inside by means of an egg put in my food. So afraid was I of the last torture that I used to watch the attendant pouring out the tea and beer, and used to retain in my mouth the morphia you gave me, and watched my chance to spit out the same, thinking that in some curious way the egg was held in solution in the medicine. What an absurd idea! It must appear inconceivable to a sane man that any such delusions could take possession of the mind of a human being suffering from any temporary mental disease. I actually imagined that some here feigned illness and were willing to suffer their being fed by means of the stomach pump, in fact willing to do anything unnatural, being sustained by the knowledge that they would wreak their terrible revenge on me for having blighted all their hopes and prospects. I used to look at the poor creatures and turn away and mutter beneath my breath that they would soon be more than amply revenged on the brute who had done them so much harm. To crown the farce acting here, I took both Dr. Williams and yourself to be not real medical

men, but merely two gentlemen who just were able to smatter a little about mental disorders. I believed that all had been prepared for me years before, so as to enable every one to know his part well. I therefore trust you will pardon my having made use of the expression of sinecure with regard to yourself and your assistants. I need scarcely mention that I at first refused my food, but after a while, though I fancied I knew my fate, I could not help eating, for I was very weak, and had a great craving in my inside for food. I imagined that everybody was copying some habit of mine, and even singing the song that I used to hum, especially when I heard, "When Johnny comes marching home again," thinking that I was the Johnny implied, that there would be a jubilee all over the earth after I was thrown away. I really believed that I had to find out the true faith which was hidden from me, then that the Christian religion was the true one in which all believed that the Jews really believed in it, but had deceived me ; in this state of mind I read the New Testament, but could not understand it nor believe it. I at first would not pray to God, fearing that my prayer would be accounted as additional sin, which I afterwards entreated the Almighty not to consider as such. During the first few months here I found that I kept spitting out for some time after meals part of my food which appeared to remain in my throat, and that no retching was necessary to eject it, as I had merely to open my mouth. This circumstance strengthened my delusion that I had no stomach or any other internal organs, which received further strength from my hearing at meal times such remarks as, "You cannot fill an empty cask with more than it can hold." "What does rotten meat produce? Worms." "Can a man live without a brain!" (to an attendant). "Yes! your family will go to heaven and you will go to hell, and be there more years than Methuselah lived, and you will have cold arms and cold legs, and you will be filled with maggots which will breed thousands upon thousands." I believed that if I had not been able to sleep a little I should have gone raving mad. I could not wish my worst enemy to suffer in a like manner. Once or twice of an evening whilst pacing up and down the gallery I felt my head swim and found myself edging nearer and nearer to the wall. I succeeded in overcoming the giddiness, each occurrence of which I imagined denoted that my last day on earth had arrived. I at times dreamed of my fate, and one night in particular that I was being stuffed into a sack, unable to resist or to utter a word, though perfectly conscious of what was being done to me, which made me start up in awful horror to find that it was but a dream. I fancied that my unnaturalness was due to my being an abortion permitted for some purpose or other to live, also that I had become a hermaphrodite.

I fear me that you will not learn much from the perusal of this rhodomontade of nonsensical delusions, the existence of which I can only account for in that, whilst my brain was in the comatose state that I

have before mentioned, I heard all these different remarks ; whether such were made in reference to my mode of life or in order to drive me to a place like this I cannot say.

In conclusion allow me to thank you, and with you, Dr. Williams, for your uniform kindness and courtesy towards me, though at one time I took both him and you to be my two deadliest enemies, and trusting to be forgiven for my hastiness and show of ill-temper on different occasions,

I remain, dear sir,
Yours respectfully,

Geo. H. Savage, M.D. * * *

OCCASIONAL NOTES OF THE QUARTER.

Mr. Dillwyn's Amended Bill.

We confess that, at one time, we hoped Mr. Dillwyn would succeed in framing a Bill which would on the one hand satisfy the just claims of the proprietors of Private Asylums, by offering a liberal compensation for their contemplated loss, and on the other meet the demands of a considerable class of the public who feel uneasy about the nature of the relation subsisting between patient and proprietor in these institutions.

Our hopes, we regret to say, have not been realized.

The perseverance of Mr. Dillwyn in endeavouring to push his measure through the House of Commons has not met with success this year, but as there is every reason to believe he will re-introduce his Lunacy Law Amendment Bill, we think it due to those who are interested in its provisions, to point out their bearing, and their unsatisfactory character.

In a recent article in this Journal we asserted, and we do not hesitate to repeat the assertion now, that not a few of the present proprietors of Private Asylums will gladly hail any arrangement for the extinction of Licensed Houses which is conceived and carried out in a just spirit, by which their interests and peculiar position are fairly and liberally considered.

It ought, however, to be effected by a Government and compulsory measure, not one which is permissive, and would therefore operate unequally and unfairly.

If the conversion of Licensed Houses into self-supporting Lunatic Hospitals forms a portion of a Government Bill, it need not financially be a very Herculean measure. Scarcely six per cent. of the whole number of lunatics in England and Wales are in private care ; and the purchase of the 95 Licensed Houses now existing may be effected at

a moderate national cost, while it would be an intolerable burden if cast upon some of the unfortunate counties affected by Mr. Dillwyn's Bill.

How and by whom the new hospitals are to be in future conducted, is another matter, bristling with difficulties which we are not disposed to discuss here.

Some suggestions of amendment of the law were embodied in the Report of the Select Committee of 1877, and will doubtless form part of the Bill which, although delayed, will, we may presume, be at no very distant time introduced by the Lord Chancellor. Such a Bill will receive respectful attention from the medical profession, but it is not likely to go far enough to satisfy the unreasonable demands of a section of the public who clamour for the virtual removal of the principal safeguards against the dangerous acts of the insane.

Any future legislation in regard to Private Asylums is, of course, hampered with a system already firmly established, and which was built up during ages when Parliament took little or no care of the insane; the wants and comforts of family life have become interwoven with it, and the 8 and 9 Vic., cap. 100, *et seq.*, developed a clear distinction between lunatics dependent upon local taxation and those possessed of means for their own support. Taken together, they appear to facilitate the admission to asylums of the pauper class, and guardedly oppose obstacles to the ready reception of persons capable of paying for their own maintenance in Licensed Houses. The lax tone of morals of a former day, and the indifference to the condition of even ordinary prisoners, justified this suspicion of possible corrupt influences, and there is no reason to complain of its continuance in healthy moderation. Wendell Holmes is not far wrong—there never was a guild of persons or a company of craftsmen that did not require sharp looking after. The liberty of the subject is at stake in either case, but in one of them there is property, and towards that the English law has ever been scrupulously tender.

Mr. Dillwyn's Bill modifies the present system of admission of pauper patients to asylums. In Secs. 11, 13 and 14, it includes them in the provisions for further visitation and the discharge of patients. There is nothing more bearing on the interests of this class, as Sec. 8, which enables Justices to provide superior accommodation for other than paupers into County Asylums cannot be regarded in this light. Licensed Houses are, therefore, almost exclusively affected by this Bill, and several changes made since that of 1879 are for the worse instead of the better. Both Bills are permissive, and liable to the imperfections of that class of legislation, but, whereas, in Clause 2 of the Bill of 1879, the Justices were authorized in their dealings with proprietors of Licensed Houses (if bought up) to award them a sum not less than one year's *gross* receipts over and above the value of the plant and premises, in that of 1880, this is reduced to "a sum not

less than the yearly average of *profits* during the three years immediately preceding the sale!"—that is, one year's profit, or about 75 per cent. less than the first proposal.

That many of the houses and sites are not worth purchasing at all —and this is the serious, if not fatal difficulty attaching to Mr. Dillwyn's scheme—is undeniable; but having regard to the fair interests of the asylum proprietors themselves, we maintain that if they are to be compensated for the loss they would sustain by such a Bill, they ought to be paid at least as liberally as proposed in the first Bill. When it is recollected that a large number of the proprietors consist of either ladies (mostly widows of medical men), or of medical men advanced in life who cannot adopt a new profession, this Bill would, if allowed to pass in its present form, be justly regarded by them as simply confiscation of their property, because, although permissive, the results of refusing to accept the terms offered must be slow if not immediate ruin. If this be granted, there would seem to be nothing in the Bill calculated to mitigate the heavy blows inflicted upon the proprietors, and, so far as they are medical, upon the profession itself.

True, in the last Bill the schedule imposing upon medical men the declaration "On soul and conscience" (whatever these may mean; neither phrase, alike unknown to English law, being defined), does not appear, but the whole scope and tendency of the scheme is to hand over the care and management of lunatics to Justices of the Peace by overshadowing the opinions and discrediting the authority of physicians, and, practically, to an officious quorum only of the Bench, as the Court of Quarter Sessions is generally well pleased when members of their body can be found to take a laborious duty off its hands.

Is it certain, by the way, that County Justices will thank the promoters of this measure for endeavouring to add to their duties, and, as it would certainly prove, their troubles?—little honour and much anxiety. And it will probably be said, with much force, that the only mitigation by way of compensatory privilege granted by the Bill is (sec. 5) the power given to them to tax paying private patients or their friends, in order, not to improve the accommodation of pauper lunatics in their asylums, but to lessen the cost of the latter to the ratepayers. This power is also given under the Bill to the Justices of only twenty-four out of the fifty-two counties in England and Wales, as twenty-eight counties have no licensed houses within their borders, and the expenses of enlarging Public Asylums for the reception of a superior class of patients, if that duty is accepted by the counties last named, will for a long time anticipate all reasonable profit. Heavy responsibilities are imposed on the Justices of Surrey, Middlesex, Somerset, Wilts, and other counties, if they elect to adopt its provisions, from which Dorset, Berks, Hants, Cornwall, &c.,

are almost entirely free. In addition, the Metropolitan County Justices take over the visitation of all Licensed Houses within their jurisdiction, hitherto performed by the Commissioners in Lunacy, and so practically become the comptrollers of, in a sense, their own speculations. A certain well-worn Latin proverb about custodians will inevitably be cited against them, for it will be said that this searching and independent inspection is to be transmuted, so far as the visitors are concerned, into an interested examination of their own affairs by a body of men whose position of Justices of the Peace is the only guarantee that in judging of the working of their own acts, they would be less prejudiced than ordinary mortals. Again, it has hitherto been deemed a great boon to the patients that the medical visitor of a Licensed House should have no personal interest in the admission or detention of patients; but by Clause 9, the medical visitor is to be one of the two medical men signing certificates on all future cases of admission, whether of pauper or private patients, excepting those admitted under certificates of emergency. Such a course would altogether destroy the principle of the recommendation of the Select Committee.

Clause 13 provides for a system of espionage, which may cause, to say the least, much annoyance. By this Clause, "*any person*" (by whatever motive actuated) may obtain from a Judge in Chambers, if in London, or if elsewhere, from a Chairman of Quarter Sessions, or Stipendiary Magistrate, or a County Court Judge, an order for the visitation for the examination by two registered practitioners of *any person* confined as a lunatic in *any* hospital, house, or asylum (the only limitation here being, that the medical practitioners must be approved of by the party who grants the above order). And if the two strange doctors, after two visits, decide that the alleged lunatic is not dangerous to himself or others, his liberation would follow, in spite of any opinion to the contrary held by the Medical Superintendent, Committee, or the Medical Visitor. Surely this objectionable proceeding will not be conducive to the recovery of the patient. Besides, are there not "needy lawyers," as well as "needy doctors," who will be found only too ready to set the machinery of this Clause in motion for their own interests, and not those of the patients? The two registered practitioners need not be experts; on the contrary, they may, until the General Medical Council is brought to recognise the necessity of special psychological study, be wholly ignorant of the shades of insanity. The Commissioners exercise due caution in sanctioning the visits of even alleged friends of a patient who desire to investigate his condition or grievance, but if Clause 13 becomes law, they will only be communicated with, and there is no sufficient guard against the door being thrown open to visits originating in nothing better than impertinent interest, or rather interested impertinence.

To most thorough and frequent inspection of private as well as other asylums we have no objection; on the contrary, we desire it. But irregular and harassing visitation will endanger the permanent recovery of the patient, if it leads, as is probable, to premature discharge—the patient being hurried into the cares and turmoil of the world at a moment when the tender shoot of renewed mental vigour requires the most careful protection and guidance. No form of disease is more liable to relapse than insanity, and time must always be an important element in its satisfactory treatment. But the present tendency of popular legislation is so to increase the danger arising from facility of discharge, that we shall, if it is successful, read in the papers even more frequently than now the details of family tragedies, accompanied by the remark: "He had recently been discharged from a lunatic asylum."

We are disappointed to have to make these criticisms on Mr. Dillwyn's no doubt well-intentioned, Bill, which in its revised form is less liberal than the original. But it is not, we willingly admit, altogether bad. Let us be just.

Clause 10 adopts the principle of the early treatment of insanity.

Clause 12 extends the power to receive voluntary patients.

Clause 14 doubles the visitation of public asylums by the Commissioners in Lunacy. (Why not include workhouses?)

Lastly, Clause 16 adds two medical Commissioners to the Board, with a paid chairman.

All these, which are real improvements, obtain our unqualified approval, and as to the last it is sufficient to say that many years must elapse before the advent of a second Lord Shaftesbury. The labours he has performed as a labour of love cannot justly be imposed upon any other man without adequate payment, and it is to his honour that this is fully understood and recognised—as evinced by the reception accorded to him at our recent dinner.*

Granting, then, that it is probable a great change in the present constitution of Licensed Houses will eventually be brought about, not because abuses have been committed by the honourable physicians who superintend them, but for other reasons; hoping, as we do, that only superior houses will survive, placed on a basis satisfactory alike to the proprietors and the susceptibilities of the public conscience—we earnestly hope that our Legislators will not, either in haste or at leisure, do anything which will introduce greater evils than those from which it is desired to escape.

* A report of Lord Shaftesbury's speech will be found under "Notes and News."

PART II.—REVIEWS.

General Paralysis of the Insane. By William Julius Mickle, M.D., M.R.C.P.Lond., 8vo., pp. 246. London: H. K. Lewis.

This book has all the good points which a work on the subject should have. It is concisely and carefully written. The history is given of each part of the subject, and the authorities from whom information is gleaned are carefully referred to. We look upon this as the best book on general paralysis that has appeared for a very long time, and as, in many respects, in marked contrast to the one by M. Voisin, recently reviewed in this Journal. It is handy, and carefully edited.

It may appear somewhat ungracious, after saying so much, to find fault, but it is the Reviewer's duty not only to praise but to point out defects, especially such as may be easily remedied in a future edition. The style, as a rule, is good, but we shall have to refer to examples of stilted English, a thing to be guarded against by younger writers. They must not consider, because experienced writers such as Maudsley may indulge in highly picturesque language, that they can begin to use all the ornaments of literary diction without having gone through a long course of practice.

The book before us is divided into two distinct parts; the first containing a description of the disease itself, with its symptoms, and tracing carefully the opinions of authorities on the causation, symptoms, duration, diagnosis, pathology, and therapeutics of the disease; the second part is an expansion of what appeared in the "Journal of Mental Science" some time ago, and includes a very complete set of cases, divided according to the groups which Dr. Mickle is inclined to consider natural. In the first chapter the synonyms, definition, and history of the discovery of the disease are given, and we think the definition as good an one as can be given at present. Dr. Mickle adheres to the doctrine of unity in general paralysis, but we rather object to the terms "unity" and "duality" as confusing, and should have preferred a mere statement of what was meant without the use of these words. In mentioning the stages of general para-

lysis, we should object to the statement, "Fourth, the stage in which mental weakness has advanced through confirmed dementia towards amentia," "amentia" being a term associated only with idiocy, and therefore not to be associated with dementia. The prodromal stages are considered, and here, as with all other clinical features of the disease, we have the utmost confidence in Dr. Mickle's description and opinions. Every statement made by him throughout the book bears evidence of most careful observation and most painstaking recording. There is nothing very special to note about his division of the symptoms of general paralysis, these being divided into the physical and mental, but he has a rather convenient arrangement by which the physical and mental symptoms of each period are placed side by side, and are thus easily to be compared. As a rule, we agree with the statements made by Dr. Mickle, but when he refers to the condition of the retina in general paralysis, we must differ from him. He evidently has less experience in the use of the ophthalmoscope than he has in that of other instruments. Therefore his descriptions are collected from others, and have not been so carefully verified by himself, and the consequence is that he repeats the statements that have been made so often, and contradicted as frequently by ophthalmic surgeons, that the retina is often hyperæmic.

When speaking of the rather grandiose style of our author, we said we should give examples, and perhaps a very good one is his description of the expansive form, or ambitious delirium, seen in general paralysis—"The patient is not only 'possessed,' but inflated, with greatness. The methods of language fail him here as he rides uplifted on the mighty wave of feeling; or, to him borne on this swelling tide of exultation, the very heavens appear to open, and he holds converse with celestial beings, and has ecstatic visions of eternal fields. Last flight of all, he may announce himself enthroned as the Almighty, and invested with His sceptre of universal sway, amid the pæans of angelic hosts."

In considering the mental symptoms of the second period, the forms in which general paralysis presents itself are discussed. Thus, the expansive, the acute maniacal, the hypochondriacal, the melancholic forms, the form in which dementia predominates, that with "stupor," and, finally, that with symptoms of circular insanity, are considered. When speaking of the form with stupor, he refers to cases with symptoms of acute dementia, or of melancholia with

stupor. We presume by this that he does not consider the two states to be identical, though, when referring immediately below to one of these cases, he represents the patient, though suffering from dementia, offering a strenuous resistance to feeding. In speaking of the motor signs that are seen in the third period, a good description of the facial symptoms is given. Thus, he says, "the physiognomy, the expression of the emotions, are much altered, owing to this relaxation of the lower part of the face, and to relative overaction, or even some momentary twitching spasmodic action, of the muscles about the eyebrows and forehead, which tends to produce an unwonted expression of apparently unfelt astonishment or regret. Thus, at the same moment one part of the face may seem to express one emotion, another part a different emotion." We rather doubt the statement that "in this stage the reflex activity of the limbs, especially of the lower, is lessened," for in many cases that we have carefully observed, the reflex irritability has been increased very considerably, and, although it may not be a constant symptom, it, at all events, is not a rare one to have this increase. The rest of this chapter is full of very fine descriptions of the varieties in symptoms of the disease. When speaking of loss of sensibility, we are inclined to think that he looks upon it as general rather than local too commonly, for, in our experience, local losses of sensibility are much more common than progressive general loss. In a description of the ordinary symptoms, reference is made to important general symptoms, such as the character of the eating, the cachexia, the appearance of the skin, the othæmatoma, &c. At page 36, under "B. Mental Symptoms," we should again prefer to see dementia instead of amentia. Dr. Mickle has saved a good deal of trouble to his readers by collecting together the complications of general paralysis, so that questions as to the epileptiform, apoplectiform, and paralytic seizures, aphasia, changes in temperature, respiration, circulation, digestion, and urinary excretion, may be investigated apart from the clinical history of the disease. This is important, because many of the points are still under discussion, as, for example, the relationship of temperature, that of the pulse, and that of the paralysis to the disease as apart from other nervous diseases. At pp. 37-39, 44-46, he gives the results of careful researches in regard to the fits. The statements about the temperature lead one to think that the balance of experience maintains

the truth of the old idea that there is a definite increase of temperature in this most interesting disease of the nervous system. The conclusions that Dr. Mickle arrives at in reference to temperatures are that—"1. A rise in the temperature often accompanies a maniacal paroxysm. 2. A rise in temperature often precedes and announces the approaching congestive or convulsive seizures, and nearly always accompanies them. 3. When these states are prolonged, the associated elevation of temperature is usually prolonged also. 4. Defervescence of temperature, after its rise with excitement or with apoplectiform attacks, often precedes the *other* indications of toning down to the usual state. 5. Moderate apoplectiform attacks, or moderate maniacal exacerbations, are, however, not invariably associated with increased heat of body. 6. A transitory rise in temperature may occur without any *apparent* change in mental or physical state to account for it. 7. The evening temperature is usually higher than the morning temperature in general paralysis, and an absolutely high evening temperature occurs in cases rapidly progressing towards death. 8. A *relatively* high evening temperature seems to be of evil omen, even when *not absolutely* very high. 9. Rapidly progressing cases may show temperatures above the average both in the morning and evening, for a long time before any complication exists. 10. Gradual exhaustion may pass on to death, in general paralysis, with an average morning temperature normal, or nearly so, throughout, except when raised temporarily by the special attacks to which general paralytics are subject. 11. The onset, especially, of pulmonary complications, or of hectic from bedsores, is marked by much heat, and when death is accelerated by the former, the temperature and pulse rise high; often, however, sinking somewhat before death, whilst respiration then becomes very rapid." Sweat-secretion, pulse and respiration are next considered, the digestion and appetite for food follow, and a paragraph is devoted to the urine. Much more has to be done under this heading, and perhaps Dr. Mickle may be able to continue the investigations that have been begun in this matter. We quite agree with the paragraph in which he says, "Seeing the frequency of renal disease in general paralysis, one would expect to find albuminuria more often than is the case." A careful investigation of the condition of the pupils follows, taking into consideration the symmetry, size, mobility, and shape of the pupils.

As usual, Dr. Mickle takes a common-sense view in reference to the relationship of dilatation of pupils to special symptoms of excitement and depression.

In Chapter III. the Precedence of Orders of Symptoms is dealt with. Nothing especially new is to be noticed under this head. On page 62 we can hardly understand how "towards the last dementia is often so intense as to overpass the bounds of amentia" We should think that it is scarcely proven, either, that "both the mental and motor symptoms are throughout more intense, as a rule, than are the sensory." Under D. we come to *The Question of the Existence of General Paralysis without Mental Alienation.* Dr. Mickle says, "I think if cases of this kind are followed up it will usually be found that they resolve themselves into the form of general paralysis with dementia only, in the psychical sphere." The question of remissions in general paralysis is sufficiently treated of, and the distinction between mere arrest of the disease and distinct remission is made fairly clear at pp. 63, 64, 65. This is of considerable importance, for we all know that patients may develope symptoms up to a certain extent and no further, for years stopping in one phase of the disease, whereas, on the other hand, certain patients, especially the more maniacal, lose most, if not all, of their mental symptoms for longer or shorter periods. Statistics are next given as to the duration of the disease, leaving us very much in the condition that we were in before. That the average duration of the disease is more than two years, Dr. Mickle's experience, as he tells us, differs from that of physicians to ordinary asylums, in having so many soldiers, whose mode of life must be considered both in the duration and the causation of the disease. When speaking of the termination of the disease, recovery is spoken of as possible from the less advanced degrees, and one can see that the author's idea distinctly is that, though possible, it is not probable. Among the immediate causes of death are various ulterior effects of bedsores, exhaustion, septicæmia, pyæmia, "ichorous spinal meningitis," whatever that may be. He refers to intracranial hæmorrhage as a sometimes fatal complication, and mentions "intraspinal" with a query. We can inform Dr. Mickle that this last is a real cause of death, and on at least one occasion a patient died with very high temperature and hæmorrhage into the cervical region.

In Chapter V. the diagnosis of the disease is treated, and

treated most carefully. This chapter has great merit. The order in which other diseases, for which it may be mistaken, are considered, is satisfactory, and chronic alcoholism is first treated of, then syphilitic disease of the brain and meninges. This second subject may be almost spoken of as a hobby of our author's, but one that he has not ridden unduly. On page 73 there is a careful *résumé* of the distinctions that need scarcely be quoted here. We are glad to see that warning is given against too hasty diagnosis. When considering certain cases of acute mania, we are told that "a well-founded diagnosis is impossible, and that, perhaps, for weeks or months." This seems to us to be one of the most important things to be considered, for, general paralysis being looked upon as a distinct and well-marked disease, general physicians expect that at once asylum physicians should be able to say, "This is, or is not, an example of the inevitably fatal disease, general paralysis." Consideration of intracranial tumours follows, and also cerebro-spinal disseminated sclerosis. We can hardly understand why, in speaking of this last disease, it should be said, "there is a secondary miliary sclerosis in some cases of general paralysis," for we are left in doubt as to whether by that term he refers to true insular sclerosis, or to the probably post-mortem changes that have been called miliary degeneration. Some of the other observations under the head "diagnosis," are less satisfactory, and we think that they are vague, at all events from the pathological side, although they are of interest and importance from a clinical point of view. Thus, such divisions as those of Dementia with Paralysis, Senile Dementia, Senile Dementia with Paralysis, &c., cannot be considered as exactly scientific. As Dr. Mickle says, "the relationships between general paralysis and locomotor ataxy remain to be worked out;" but we think that he might help a good deal in the work. In speaking of epilepsy, we are glad to find that Dr. Mickle's opinion agrees with our own, and is in opposition to that of M. Voisin, who considers that epilepsy is a common cause of general paralysis of the insane. When the causes of general paralysis are considered, we think our author shows great power and discrimination. He has not been led to the right or to the left by the authority of the past or of the present. He has carefully considered the predisposing causes and the exciting causes under the two heads of moral and physical, and has clearly brought out facts which have been pretty

firmly held of late by those having experience among the insane. In discussing the predisposing causes of general paralysis, probably the question that would claim most attention from any body of alienists would be the relationships of heredity, marriage, and alcoholic excess in the production of the disease. In considering heredity, our author quotes other authorities, but does not give us his own opinion sufficiently definitely. He is quite of opinion that excess in alcohol is a well-ascertained cause. We do not think he gives sufficient weight to cranial injuries as causes of this disease, which certainly surprises us, as we should have thought that in an asylum where there were so many soldiers, examples would have been forthcoming in which injury played the chief part. Under "Exciting Causes," it is said, "In my own cases alcohol, though perhaps rarely acting alone, has appeared to be by far the most frequent and efficacious cause of general paralysis." Dr. Mickle does not agree with Dr. Maudsley in considering sexual excess, chiefly in married persons, as a fertile cause of general paralysis, and we cannot avoid quoting a paragraph (p. 105), as a specimen of his style, and also of his downright way of expressing his belief: "Having for years sought, and usually in vain, for a history of sexual excess in my own cases, I do not hold with the view that excessive frequency of sexual intercourse, and especially in married life, is by far the most fertile cause of general paralysis. No doubt in some cases, and particularly among the newly-married, this is the cause, in others one of the several causes, of the disease. But I venture to submit that it is erroneous to pay an almost exclusive attention to this cause, as has been done by some authorities on the subject, certain of whom have gone so far as to assert their belief that when not due to excessive sexual intercourse, general paralysis owns another form of sexual evil, namely, masturbation, as its exciting cause. As if, forsooth, the life, both marital and non-marital, of men was but as an orgy of satyrs, either consumed with secret lust, or fitly partnered in salacious revelry by bacchantes lascivious of eye and wanton of limb!"

After a consideration of the disease and its symptoms, a very careful investigation is made into the morbid anatomy of the subject, both macroscopical and microscopical, and the average weights of the brains of general paralytics, and of the different parts of the brains, are given, the conclusion being that the brains of general paralytics weigh consider-

ably less than those of healthy people of the same ages. The weights and conditions of the lungs, stomach and intestines, liver, spleen and kidneys, are dilated upon; the only point of interest being the statement of a fact that has been observed by others, that undue adhesion of the capsules of the kidneys is common.

The microscopical appearances in general paralysis, as observed by the best investigators, are carefully detailed, but the most important part for us is on page 128, where, under the head of "Personal Observations," we find the results of Dr. Mickle's research. "My own microscopical examinations in general paralysis have mainly concerned the cerebral cortex, and, concisely stated, the following were the principal changes found:—In the advanced cases, fatty particles, free, or in the individual tissue-elements, were sometimes observed on the sections. *The Cortical Nerve-cells.*—Sometimes atrophy or shrinking of the large nerve-cells was observed, associated, or not, with the appearance of vacuoles, surrounding or beside them; sometimes they were of a dull, dimmed appearance, took the carmine stain badly, and their nuclei were obscured: or, again, granular or fuscous degeneration of the nerve-cells was present in various degrees, occasionally even to disintegration of the cells with destruction of their processes. One or more of these changes, and sometimes others, existed in a given case. *The Neuroglia.*—In the neuroglia the microscope revealed an unusual richness of its nuclei; at least bodies similar to these were abundantly strewn throughout the sections. Sometimes there was an apparent relative increase in the amount of neuroglia generally; occasionally, colloid bodies were found in the cortex, or pigment granulations, or microscopic patches, which stained badly, and had either a ground-glass-like or fibrous appearance. Not seldom were there various doubtful or equivocal appearances similar to some which are still matters of dispute between histologists. *Blood-vessels of the Cortex.*—Many vessels contained aggregations of blood-corpuscles, by which they sometimes were completely filled or were bulged. Increase of the nuclei of the walls of the minute blood-vessels was a common appearance. Sometimes molecular deposits or pigmentary deposits were seen in or upon their walls. Either associated with these deposits or existing separately there were sometimes appearances of more or less irregular thickening or dilatation of the vascular wall."

Now and then some vessels had a soft molecular appearance; occasionally fusiform dilatation was seen; more rarely, capillary rupture and extravasation, so that vessels were surrounded by minute ecchymosis."

Beside descriptions of the appearances after death, a very important part of the pathological enquiry by Dr. Mickle is contained in the eighth chapter, where pathology and pathological physiology in the broadest sense are considered. Under "Pathology" he here considers the questions of localization and cerebral congestion. Not that much information that is fresh is given us as to the relationships of degeneration and inflammation as causes of the disease under examination, but succinctly and clearly are placed before us the ideas of the leading writers as to these two most important conditions. It seems to us, certainly, that the day is not reached when pathologists can say that general paralysis is always associated with inflammation, or always associated with degeneration. So many conditions of the disease point to combinations of different degrees of these two causes, for many writers describe all changes of a certain kind as inflammatory, but give no definition of inflammation. One's general idea of inflammation is, that it is a more or less over activity in the parts of a tissue or organ, but when we have to deal with a disease which lasts for years, the meaning of the word "inflammation," as connected with that disease, appears to be strained; and, on the other hand, we can scarcely look upon the disease as proved to be one of simple degeneration, otherwise there would be no essential distinction between general paralysis and many other degenerative conditions. Upon this subject we would refer to page 147, where the view proposed by our author is propounded. "*Proposed View.* — In the interpretation of the various symptoms of general paralysis, it may be broadly stated that the morbid process in the nervous system first deranges and then destroys, or tends to destroy, the functions of the parts affected. Yet is the interpretation surrounded by grave difficulties. For: 1. The morbid process is modified in different cases. 2. Its extent varies likewise. 3. The part or parts at which it begins, also vary in different instances. 4. In some cases the greater portion of the cerebro-spinal system may be more or less involved in a general disturbance of nutrition and disorder of function, while, in others, the diseased action may long be *comparatively* localized. 5. As

different nervous districts are successively and progressively implicated, it usually happens that the function of one part is merely exaggerated or disordered at the same time as that of another is practically destroyed. 6. The destruction of an inhibitory centre, under these circumstances, will permit relative over-action of functionally related centres, which have escaped from its regulative influence."

Restricting his attention to the clinical aspects, and to the morbid histology of the disease as actually observed, the course of general paralysis is described as follows:—"In the vast majority of cases, the cerebral cortex is primarily affected, the meninges usually being more or less involved almost simultaneously." "In many cases the morbid process apparently is most active, and at first active only, in circumscribed regions of the cerebral cortex. In others the morbid action is more diffused." "Taking the mass of cases, the convolutions of the frontal and of the parietal lobes suffer more than those of other parts of the brain." . . . "The morbid process in general paralysis is primarily set up by excessive, irregular, protracted activity, and over-strain of a larger or smaller number of the active functioning elements of the cerebral cortex, which subserve the higher faculties of the organism. It is usually admitted that these active functioning elements are the so-called ganglionic nerve-cells of the cortex. Of the most potent and frequent causes of general paralysis each, in its own way, brings about the primary step to which we refer, namely, the excessive, irregular, protracted, activity or over-strain of a larger or smaller number of the nerve-cells." In speaking under this head of the proximal causation, in the statements that over-activity and over-straining "induce contemporaneous hyperæmia, and this hyperæmia tends to keep in action its own causes," and "from frequent repetition of this condition the normal tonus of the arterioles is gradually lost, not only in the cortex, but in the overlying meninges also," and that "thereby is prepared the way for sudden or protracted meningeal and cerebral hyperæmias, which embarrass the brain circulation and brain nutrition," we have some of his observations on this head. As might be expected, the question of *exaltation or ambitious delirium* is dealt with by Dr. Mickle, and we suppose that his theory is probably as good as, and no better than, that of others, but it seems to us that the explanation he gives of it would be essentially the same for maniacal

excitement as for the exaltation of general paralysis. The question of convulsive attacks and their origin seems to be considered in a broad and satisfactory way, so that at the same time that centres of disease that give rise to local convulsions or local palsies in the one case are recognised, yet the fact that these local causes may set up general convulsions is also recognised, so that not only the seat of the disease is to be considered a cause of convulsion, but the degree or quality of the diseased process must be considered as well. In concluding the chapter on pathological physiology, our author considers that "whether, in general paralysis, the principal mental symptoms can be entirely referred to the organic changes in certain frontal (and parietal) convolutions—the motor to those of the so-called cortical motor zone—the sensory to those of certain portions of the temporo-sphenoidal and parietal, must remain a matter of question." Dr. Mickle seems open to observations and statements made by the most opposing observers, and has a great belief in the facts of Brown-Sequard.

There are a few points to which it may be well to refer as characteristic of Dr. Mickle's work. One of the most characteristic is his belief in the different symptoms produced by the different affection of the right or left half of the brain, and we should say that our experience would lead us to hesitate before accepting such a statement as this:—"When it is the *right* hemisphere, exalted delusion, gaiety, expansive delirium, and maniacal excitement, predominate; when it is the *left*, either emotional depression, melancholic ideas and, perhaps, hallucinations; or else an extreme and early dementia, are unusually obvious, if not predominant." We shall have to refer to this again, briefly, when considering the second part of the book. We think that the last paragraph of this chapter is the most important:—"Yet is general paralysis primarily and principally a disease of the cerebral cortex."

The most important part of the book has already been reviewed, and it will only be necessary to sum up in a few words what is to be said on prognosis, treatment, and varieties. Dr. Mickle is distinctly of opinion that general paralysis is very rarely cured. The statement that an idea has often come into his head that benefit might be derived from the creation of large suppurating surfaces, has occurred to very many, but with the same results, viz., that they have not had the courage to put the plan into actual practice. It

seems a pity that some of us cannot borrow some of the requisite courage from the French, and see whether the results are encouraging. When speaking of therapeutics and hygiene, under the head of "*Prophylactic,*" Dr. Mickle seems inclined to advise the "regulation of marriage by the pressure of enlightened public opinion," but it seems to us that a good deal more is to be known about the relationship of general paralysis to inheritance both from neurosis and from other physical causes of degeneration before any steps can be taken to prevent marriages into the families of general paralytics. As to prophylaxis, one is advised to lead a "perfectly regular life, early hours, moderate and regular bodily exercise, a total disuse of alcohol in any form, and of tobacco." We are inclined to think that persons who are of the general paralytic type will not submit to these restrictions. Dr. Mickle advises that "general paralytics should be removed from home." In this we agree with him, and should say, "avoid asylums, if the patients can be managed out of them," as the inheritance directly from general paralysis so little affects the family that it seems a pity to attach a stigma of insanity to the offspring of the general paralytic if it can be avoided. Nothing new (except *veratrum viride*) is recommended in the way of general medical treatment, and we are disposed to think that our author has no very great faith in remedies.

So much, then, for Part I., and as in Part II. we have cases, and a reprint, with additions and slight alterations, of an article which has appeared in the Journal before, we would only remind our readers that Dr. Mickle still believes that the disease may fairly be divided into five groups, both corresponding in pathology and clinical aspects. In the first group the soft-brained hyperæmic cases, in the second the cases with considerable effusion of serum; in the third group cases with adhesions chiefly affecting the left hemisphere; in the fourth, cases affecting the right hemisphere; and in the fifth there is local induration of the cerebral cortex. Although we may be inclined to doubt the naturalness of these groups, yet they are sufficiently definite to be of use, at all events temporarily; and, in concluding the review, we have only to say that the book is eminently satisfactory, and that the continued record of the observations so carefully made by the author, will add largely to our knowledge of general paralysis.

Report of the Inspector-General of the Insane for the Colony of New South Wales for the year 1879.

Dr. Norton Manning, whose laborious "Report on Lunatic Asylums" to the New South Wales Government, will be in the recollection of many of the readers of this Journal, has recently been relieved from the superintendence of the Gladesville Hospital for the Insane near Sydney, and, as we stated in a recent number, has been appointed Inspector General of Asylums to the Colony, an office to the discharge of the duties of which he brings qualifications which cannot fail to secure, both for the insane and the public, advantages which they have not hitherto enjoyed. (See Journal for April).

The results of inspection and the history of insanity in the Colony, during the year 1879, are embodied in the Report to which this notice refers.

On the 31st December, 1878, the number of insane persons under official cognizance was 1,916; and on the 31st December, 1879, this number had increased by 95, or to 2,011. The increase in registered lunacy since the year 1864 appears to have been pretty constant, and is shown in detail in the following return :—

Year.	Increase.	Year.	Increase.
1864	53	1872	53
1865	53	1873	86
1866	77	1874	62
1867	41	1875	109
1868	75	1876	43
1869	Decrease 4	1877	89
1870	63	1878	87
1871	98	1879	95
	Total		1,084

Or an average of ... ... 67·5

Dr. Manning gives an interesting table, in which he shows the number of insane persons in the Colony, and their proportion to population, as compared with the proportions to population in the neighbouring Colony of Victoria, and in England—

Year.	Population of New South Wales.	Total Number of Insane in New South Wales on 31 Dec.	Proportion of Insane to Population in New South Wales.	Proportion of Insane to Population in Victoria.	Proportion of Insane to Population in England.
			Per M.	Per M.	Per M.
1863	378,934	931	1 in 407 or 2·45	1 in 670 or 1·49	1 in 464 or 2·15
1864	392,589	984	1 in 399 or 2·50	1 in 604 or 1·65	1 in 457 or 2·19
1865	411,388	1,037	1 in 396 or 2·52	1 in 595 or 1·68	1 in 445 or 2·24
1866	431,412	1,114	1 in 387 or 2·58	1 in 541 or 1·84	1 in 436 or 2·29
1867	447,620	1,155	1 in 387 or 2·58	1 in 515 or 1·94	1 in 424 or 2·35
1868	466,765	1,230	1 in 379 or 2·63	1 in 439 or 2·27	1 in 411 or 2·43
1869	485,356	1,226	1 in 395 or 2·53	1 in 416 or 2·40	1 in 403 or 2·48
1870	502,861	1,289	1 in 389 or 2·57	1 in 392 or 2·55	1 in 400 or 2·50
1871	519,182	1,387	1 in 374 or 2·67	1 in 369 or 2·71	1 in 394 or 2·53
1872	539,190	1,440	1 in 374 or 2·67	1 in 340 or 2·94	1 in 387 or 2·58
1873	560,275	1,526	1 in 367 or 2·72	1 in 337 or 2·96	1 in 381 or 2·62
1874	584,278	1,588	1 in 367 or 2·72	1 in 329 or 3·04	1 in 375 or 2·66
1875	606,652	1,697	1 in 357 or 2·80	1 in 322 or 3·10	1 in 373 or 2·68
1876	629,776	1,740	1 in 361 or 2.77	1 in 318 or 3·14	1 in 368 or 2·71
1877	662,212	1,829	1 in 362 or 2·76	1 in 313 or 3·19	1 in 363 or 2·75
1878	693,743	1,916	1 in 362 or 2·76	1 in 304 or 3·27	1 in 360 or 2·77
1879	734,282	2,011	1 in 365 or 2·74		

From this table the deduction is drawn that the proportion of insane to population in New South Wales is not greater than in Great Britain and Ireland, and that it has not increased during the last five years.

The latter belief is still further supported by a table *(See page* 412*)* which gives the ratio of admissions to the population of the Colony from 1863 to 1879 inclusive. This shows that in 1878 the admissions bore the proportion to population of 1 to 1,636, as compared with a ratio in England of 1 to 1,845, and in Victoria of 1 to 1,324.

Another year, Dr. Manning may probably think it desirable to give, in connexion with this table, the number of *persons* admitted, instead of *cases,* as has been done with advantage in the last Report of the English Commissioners. It would also be an excellent plan to carry the same analysis into the statistics of recoveries and deaths, the

former of which seem to have averaged 38·84 per cent. of all cases admitted into the Hospital of New South Wales during the last 10 years, and the latter 6·87 on the average numbers resident during the last four years. The results are not unsatisfactory when compared with similar statistics in this country.

TABLE showing the ratio of Admissions to the population of the Colony from 1863 to 1879 inclusive.

Year.	Admission.	Population.	Proportion to Population.
1863	187	378,934	1 in 2,026
1864	199	392,589	1 in 1,973
1865	182	411,388	1 in 2,260
1866	196	431,412	1 in 2,201
1867	181	447,620	1 in 2,473
1868	223	466,765	1 in 2,093
1869	265	485,356	1 in 1,831
1870	253	502,861	1 in 1,987
1871	340	519,182	1 in 1,527
1872	303	539,190	1 in 1,779
1873	342	560,275	1 in 1,638
1874	330	584,278	1 in 1,770
1875	356	606,652	1 in 1,704
1876	360	629,776	1 in 1,749
1877	457	662,212	1 in 1,449
1878	424	693,743	1 in 1,636
1879	440	734,282	1 in 1,668

The pressing burden of lunacy under which the ratepayers of England are both groaning and grumbling, appears to be growing apace in the Antipodes, and to be opposed by a corresponding disinclination to meet it in the only way in which it can be met, namely, by timely extension of asylum or other accommodation. The Report tells us that the total number of patients crowded into the hospitals, in excess of their dormitory accommodation, is 263; 209 women at Paramatta being crammed into a space which is only sufficient for 123, the buildings themselves being "so old, so gloomy, and so irredeemably bad in every respect, that their continued occupation is a cruelty to the patients, and their complete removal at the earliest possible time an absolute necessity." Much allowance is to be made for the difficulties of a new country, but it is to be hoped that the authorities will not suffer this unwholesome, and in the end uneconomical, state of things to continue, but will carry into effect the practical recommendations which Dr. Manning is so competent to give them.

Another circumstance to which Dr. Manning draws attention in his report equally deserves the attention of the Colonial Government. It is that, from deficient hospital accommodation and other circumstances, large numbers of persons are treated for symptoms of insanity in the prisons of the Colony. With the crowded and unsuitable condition of some of the existing asylum accommodation, it may well be doubted whether the patients thus treated are not, in most respects, as well circumstanced as they would be if they were removed to the asylums, but neither the fact nor its cause are matters upon which the Colony has reason to congratulate itself, or which will be likely to lessen the ultimate burden which will fall upon the ratepayers.

The average cost of patients in the hospitals for the insane has been for the year 1879, 12s. 8¼d. per head per week.

Dr. Manning concludes an able and interesting Report by printing *in extenso* his entries at the various asylums on the occasions of his visits, and the reports which have been transmitted to him by their several superintendents, all of which give assurance that the members of our specialty are doing good service, and maintaining the credit of the old country in one of the most important of her colonial possessions.

Congrès International de Médecine Mentale. Tenu à Paris du 5 au 10 Août, 1878. *Comptes Rendus Sténographiques. Paris*, 1880.*

I.

1. *Presidential Address.* By Dr. Baillarger.
2. *On the Protection afforded by the Law of the 30th June*, 1838, *against the so-called Criminal Lunatics.* By Dr. Billod.
3. *What Measures should be taken as regards the so-called Criminal Lunatics.* By Dr. Huzony.
4. *On the so-called Criminal Lunatics.* By Dr. Dagonet.
5. *Broadmoor, the State Asylum for Criminal Lunatics in England.* By Dr. D. Hack Tuke.
6. *On Measures to be taken as regards the so-called Criminal Lunatics.*
7. *Supplementary Meetings of the 6th and 7th of August*, 1878.—*On the so-called Criminal Lunatics.—On Criminal Lunatic Asylums (Les Asiles de Sûreté).*
8. *Statistics of the Special Infirmary at Gaillon.* By Dr. Hurel.

The Presidential Address, by Dr. Baillarger, after thank-

* *President*—Dr. Baillarger; *Vice-Presidents*—Professor Lasègue, Drs. Semal, Echeverria, Hack Tuke, Mierzejewski, Giacchi. *Secs.*—Drs. Motet and Ritti.

ing the members for their answer to the call made by the Société Médical Psychologique, and bidding them the most fraternal welcome, sketches, in rapid characters, the advance of mental science since the beginning of the century. The discovery of general paralysis stands foremost, as it has wrought a change in the ætiology, symptomatology, prognosis, and, above all, in the pathological anatomy of mental diseases. Improvement in the organisation and management of asylums, and the occupation—chiefly agricultural—of their inmates, have contributed to clinical progress. The therapeutical advancement has been less striking, although the number of cures has increased in a notable proportion. Dr. Baillarger refers himself to French asylums, for this remark as to the less striking progress in therapeutics of mental diseases scarcely applies to England or America, where the results are so remarkable and obvious. Indeed, no greater therapeutical progress could have been achieved as regards both the use and the non-use of drugs, and the substitution for undue restraint of a more humane treatment, accompanied by a nutritious diet, with other hygienic measures and the systematic occupation of the patient, so properly pointed out as of the first importance by Baillarger. If proofs were needed for our statements, the results at Bethlem, Wakefield and the York Retreat amply afford them.

Allusion was also made by Dr. Baillarger to the usefulness of the establishment of the Medico-Legal Society of Paris, which, by drawing nearer the legal and medical professions, has already contributed to remove their dissent, with the most practical and beneficial results.

Every country has shared in the accomplishment of the progress in psychological science, while model establishments erected all over Europe and America appear to have reached the highest degree of excellence.

"The different kinds of assistance of the insane," says, in conclusion, Dr. Baillarger, "the advantages and disadvantages of large and small asylums, of establishments exclusively devoted to the treatment of convalescents under special conditions to be determined, are subjects, as you are aware, which have been very much discussed; but who would venture, however, to assert that all such questions have received a definite reply? Who could answer, above all, whether the progress of science shall not bring forth other new difficulties to be surmounted? We should, therefore, keep carrying on our inquiries with ever-increasing energy to perfect the work of our predecessors;

for never, gentlemen, in aiming at the relief of such a great misfortune as insanity, could improvement and well being prove inimical to each other."

If it were necessary to demonstrate the wisdom of our provisions for the best management of criminal lunatics, the facts exposed at the International Congress in Paris would plainly do it. Considerable difference of opinion is entertained in France in regard to this question, which has awakened a legitimate interest, after having so long remained entirely neglected; while no less striking, and radically different from ours, are the ambiguous ideas, or exaggerated tendencies, of many French alienists in reference to the care specially needed by criminal lunatics, and their commitment and discharge from the asylum.

Dr. Billod thinks that, in regard to criminal lunatics who were insane before their deed, and continue so thereafter, the law of the 30th June, 1838, is perfect, and needs no amendment. Not so, however, in respect to criminal lunatics whose insanity is over after the crime, though liable to recur at any moment, and who should be, consequently, and by right, liberated. Against this class of cases the safety of society remains wholly unprotected. Moreover, the cure of a criminal lunatic is altogether hypothetical, and yet the law enacts that, as soon as he shall be no more insane, he shall be no longer confined in the lunatic asylum, but set at liberty, with more or less chances of displaying the same proclivities that occasioned the first crime. Furthermore, his detention at the asylum shall be in violation of the law, and no magistrate could oppose his discharge. Dr. Billod feels no scruples, however, in always abstaining himself from recommending the discharge of any dangerous lunatic who might recover in his asylum, whenever he feels convinced that his discharge shall be followed by a relapse. He pursues this course principally with those dangerous lunatics whose insanity proceeds from alcoholism, and is inevitably bound to relapse, as he manifested by some examples.

On the whole, Dr. Billod agrees with the general opinion as to the necessity of not liberating such criminal lunatics as these. But where should they be confined? Hitherto this perplexing alternative has been evaded by violating the law, which Dr. Billod deeply regrets, and, to avoid it, he suggests an addition to the law. Recovered criminal lunatics who, in the opinion of a commission of physicians, remain

exposed to a relapse with characters as dangerous as those of the first attack, should continue in confinement. Magistrates should be empowered to order their commitment, just the same as they order, in the case of criminal minors, their confinement in a House of Correction, together with their acquittal.

Part of this legislative measure should be the erection of separate quarters, or rather of special establishments, for criminal lunatics, as those in England. Two of the latter will suffice for the criminal lunatics in France, who do not amount to more than 600, according to Dr. Billod's calculation.

Besides the so-called criminal lunatics, there is another category of dangerous lunatics to whom the preceding remarks are equally applicable. The character of their deeds is no less dreadful and dismal than those of the homicidal, the pyromaniacs, &c. In illustration, Dr. Billod cites the case of a patient who, during the night, escaped from the Vaucluse Asylum. He had been a signalman on the railroad. Carried by the recollection of his former employment towards the Orleans line, not far from Epinay Station, he began to displace the signal disks, and would have caused by this the most appalling catastrophe, by a collision of trains, had not his mischief been timely discovered.

Reasoning madmen are no less to be feared, and political men are frequent victims of their harassing delusions. The animosity displayed by Sandon against one of the last Imperial Ministers is well known. Such was the lucidity of this lunatic that his violent charges against that personage were far from remaining without echo, many persons believing at the arbitrary confinement of Sandon in a lunatic asylum. His death at the Hôtel Dieu, in the division of Dr. Hérard, and the autopsy made by Dr. Lionville, demonstrated cerebral lesions incompatible with mental soundness. Professor Lasègue has also been the object of aim of one of these reasoning maniacs.

Society should be protected against this class of lunatics, and to secure it, no revision of the law is needed. All that is required is to apply it with energy, and without being imposed upon by the appearances of lucidity exhibited by such patients.

(To be continued.)

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *American Psychological Literature.*

By D. Hack Tuke, M.D., F.R.C.P.

"American Journal of Insanity," Vol. xxxiv., No. 4, and Vol. xxxv., No. 1.

Is Suicide always the outcome of insanity? Does Suicide when committed in a state of insanity render the policy of a Life Insurance void?

A paper read before the Medico-Legal Society of New York by Hon. O. H. Palmer has for its title, "Suicide not Evidence of Insanity." Although the question is not treated in a scientific manner, there are some interesting cases related which illustrate the great importance of distinguishing between responsible and irresponsible suicide, especially in connection with the policies of Life Insurance Companies, which, as a rule, provide against suicide. The writer opposes what he regards as the popular belief that suicide is invariably the act of a lunatic, and maintains the opinion, which we need hardly say we agree with, that the commission of the deed is consistent with perfect sanity. Yet not long since, it seems, a Judge in a New York Court ruled in an action upon a life insurance policy that suicide *per se* was evidence of insanity. Mr. Palmer thinks that a comparatively small number of suicides in the United States are due to insanity. He goes further in this direction than we should as regards our own country.

A gentleman, insured to the amount of 50,000 dollars, was found one morning in an unconscious state in bed, with an india-rubber bag containing a sponge saturated with chloroform near his face. After medical treatment consciousness returned. It was then given out that burglars had entered the house, and the victim drugged by chloroform. Some silver and jewellery were afterwards found in a drawer hid in a bush. They were seen by a child a few days after the supposed robbery. Suspicion was excited, and it was discovered that the bag had been purchased by the gentleman himself. The man was proved to be a knave and not a lunatic—though willing to end his days by his own hand that his family might possess the insurance money.

Another case. Captain G. M. C. insured his life in twenty companies for 195,500 dollars. He tried to make it appear that he had been murdered. He feared that suicide would void his policies. A pistol shot was heard in a certain street, where his body was immediately found. "The surrounding facts and circumstances left no

doubt upon the mind of any intelligent disinterested man that the theory of murder was a humbug, nor that it was anything but a case of deliberate suicide by a sane man; yet such is the state of public feeling upon the question of suicide, that the Insurance Companies were afraid to trust it to the decision of a jury, and rather than run the risk of losing the whole amount of this fraudulent insurance, they compromised by the payment of about one half of the claim."

Another very similar case is related in which the bungling manner of the attempt made the theory of murder ridiculous. "A plainer case of deliberate, intelligent, determined suicide was never presented to a court or jury, and yet it was found impossible to overcome the settled conviction that there could be no suicide without insanity, and consequently the fruit of this barefaced swindle has been gathered. I think it must be evident to every intelligent thinking man that there is something radically wrong in a system of jurisprudence which permits or tolerates such grave abuses. . . . . The importance of the question is becoming more and more manifest."

In another article, Dr. Gray also takes suicide for the subject to discourse upon—and an instructive essay is the result, containing much valuable information, historical and national. On the hereditary character of suicide he does not understand how this doctrine can possibly apply to it, in sane people, any more than homicide or theft. He thinks it important to combat this notion, as it leads persons to dread their fate in this respect, who are the offspring of those who have committed it, and by constantly brooding over it they may actually destroy themselves. A man of business consulted Dr. Gray, who had nothing to justify the thoughts of suicide with which he was afflicted beyond the fact that his father and two brothers had killed themselves. He came into the asylum and remained as a patient over the period, and never afterwards was troubled with ideas of committing suicide.

Coming to cases in which men commit suicide who have an insurance policy, Dr. Gray gives the instance of a boat captain, who had laid up his small earnings in an Insurance office, and after a period of mental depression deliberately shot himself. The payment was refused on the ground of deliberate suicide. The history of the case left no doubt of his insane condition, and the claim was ultimately paid. Dr. Gray says that many offices in America now insert a clause of non-payment in the event of suicide, whether *sane* or *insane;* and he asks: Can a lunatic commit suicide? To which he replies that, strictly speaking, he cannot. Let us stop a moment to consider what is the meaning of the word. If it is only killing oneself, of course in this sense a lunatic can commit it, but no doubt Dr. Gray here imports into the term a voluntary and therefore felonious act—in short, *felo de se.* Suicidium is not classic; it is a comparatively modern compound. It was probably first used by Hale: "*Felo de se* or suicide is where a man of age and discretion

and *compos mentis* voluntarily kills himself" ("Pleas of the Crown," Vol. i., ch. 31). Blackstone uses it in the same sense—self-murder (4 Comm.).* In these instances *felo de se* and suicide are identical, and so-used Dr. Gray's observation is justified by Hale. The "Dictionnaire Universel" (1771) states that the Abbé Desfontaines (1685-1745) introduced the word into French. He used it, as Dr. Johnson does, to signify—"Self-murder; the horrid crime of destroying one's self."

Child of despair, and *suicide* my name.—*Savage.*

The word is not found in Donne's treatise entitled Βιαθάνατος, published in his works (1644), which is "A Declaration on that Paradox or Thesis that Self-Homicide is not so naturally Sin that it may never be otherwise." Hence it has been inferred that it was not at that time in use. Paley's, third chapter of his fourth book of "Principles of Moral and Political Philosophy," 1785, is on "Suicide," and he only employs it as the act of a reasonable and responsible being. Five years later, Rev. C. Moore, M.A., in a work entitled "A Full Enquiry into the Subject of Suicide," says, with great clearness:—"There are points to be settled and exceptions to be made previous to a general charge of guilt in all who put a sudden end to their own lives. For though every person who terminates his mortal existence by his own hand, commits *suicide*, yet he does not, therefore, always commit murder, which alone constitutes its guilt. . . . The only instance of innocence which it allows to the commission of voluntary suicide is in the case of madness; when a man being deemed under no moral guidance can be subject to no imputation of guilt on account of his behaviour to himself or others."

The word has never been used by *law* writers except in the sense of a criminal taking away of one's own life. Our authority for this statement is Baron Pollock, who thinks Paley was the first to take the word from the law writers.

His judgment on one important case bears directly on Dr. Gray's query: Can a lunatic commit suicide? and is so instructive as bearing on the question at the head of this Retrospect, that we shall cite him largely:—

"In the eye of the law," he says, "with reference to crime, a man is either *compos mentis* and responsible, or he is *non compos mentis* and irresponsible. Physiologically, no doubt, it is otherwise, and the gradations are perhaps imperceptible from the highest perfection of intellect to the darkest obscuration of the mind. But, in point of law, as soon as it is ascertained that a person has lost his sense of

* "Self-murder, the pretended heroism but real cowardice of the Stoic philosophers who destroyed themselves to avoid those evils which they had not fortitude to endure, though the attempting it seems countenanced by the civil laws, yet it was punished by Athenian law with cutting off the hand that committed the desperate deed. . . . A *felo de se*, therefore, is he that deliberately puts an end to his own existence, &c."

right and wrong, it matters not what else of the human faculties or capacities remain ; he ceases to be a responsible agent; and in my judgment can no more *commit suicide* than he can commit murder.

" Lastly, the view taken by the defendant's counsel appears to me to be opposed to all the principles of sound philosophy which can be applied to the subject. It is admitted, of course, that the office would be liable if death ensued from any of the ordinary casualties of life, even resulting from the act of the party insured, provided the act were not done with the intention to kill. The act of a raving mad man, or of a patient under the influence of a disease, is protected by the policy, if the consequences are not foreseen and intended. So if insanity should produce delusion, and deprive a man of the use of the ordinary senses, and the party should mistake a deadly weapon for an instrument of music, and fancy he was playing upon it, when he was destroying his own life, this would not be *committing suicide* within the proviso of the policy. But, what if the delusion, instead of applying to a pistol or an instrument of death, applied to the man himself. Suppose he believed he was Marcus Curtius and ought to leap into a gulf ? or that he was one of the Decii and must sacrifice himself for the benefit of his country ? or what if he fancied himself an apostle, and that it became his duty to die the death of a martyr? What sound philosophy is there in taking a distinction between a delusion about a pistol, and a delusion in respect of the man against whom it may be directed ? or what distinction in point of good sense can be taken between physical blindness, in consequence of which the party insured walks into a well, and intellectual or moral blindness which, leaving him the use of his senses, and a knowledge of the *physical* consequences of his acts, has deprived him of all judgment which should control and govern his acts, and of all sense to perceive their *moral* consequences ? It may be said that when the delusion extends to the character, office, or condition of the party—so that he mistakes his identity—he does not mean to kill *himself,* and in such a case the office would be liable. But how far is this to be carried ? Suppose under a delusion he believed he had committed a crime for which he ought to put himself to death, and that this was the result of insanity —is this a mistake of his identity ? And how is a judge to direct a jury so as to steer clear of the difficulties that would thus arise ? In my opinion such subtleties as these ought to find no place in the decision of such a question as the present, in which is involved (from the present extensive practice of life insurance) the peace, the happiness and security of thousands of families. Some simple, clear and safer rule ought to be laid down as to a subject in which the public is so deeply interested. In my judgment, if death be the result of *disease*—whether by affecting the *senses* or the *reason*—the insurance office is liable under this policy. Whether the privation of reason be total or partial, whether it produce delusion of one kind or another —whether it affects sensation, apprehension, memory, judgment, or

will, or any of the moral and intellectual powers which constitute our nature—if the act be not the act of a sane responsible creature, but is the result of any delusion or perversion, whether physical, intellectual or moral, it is not the act of *the man*; and to hold otherwise seems to me a departure from the simplicity of the law, and to be repugnant to sound philosophy, which is the spirit of all law, and on which all law ought to be founded."—Law Journal, 1848, vol. xvii.

Before referring to decisions in our own law courts, we note Dr. Gray's remark that whether or not the clause about suicide in the insurance policies is sound or not in principle, it stands on the same ground to medical men, as territorial prohibition.

"You make a contract which forbids you to go, without permission of the insurance company, into territory where certain fatal diseases prevail. If you disregard this part of the contract and die, the contract is void. Still you may have any of these diseases and die of them within certain territory and the insurance will be paid. You cannot bind yourself against the common disease, insanity; you may have insanity and die of it, but sane or insane you must not commit suicide. The assumption is that suicide is not a necessity growing out of the disease, but is so largely preventable by proper care that the friends of the insured are bound to use all diligence to secure against it. The statistics of treatment in the asylum on this point go to justify the reasonableness of this view. Otherwise the clause could hardly be sustained—for the act in an insane man is one of irresponsibility, which he himself may not, unaided, be able to avoid. The self-killing under such circumstances could hardly be construed as a fraudulent intent to reap any undue or improper advantage from the contract or to disregard his obligation to the other party."

After pointing out the necessity of great caution on the part of the medical attendant as to one who has attempted suicide, lest his treatment should be charged as causing death, so as to escape from the fact of the assured having actually committed suicide, Dr. Gray proceeds:—

"To you, as men, the importance or non-importance of discrimination in this particular symptom of insanity in insurance may be of little moment, but as medical practitioners you have grave responsibilities. First, you have to answer whether the person attempting or committing suicide was insane—then the question already indicated in diagnosticating suicide from accidental death, &c. . . . I have said that among the sane suicide is largely a matter of education. This must be taken in connection with the fact that suicide is a violation of nature. Nature revolts at suicide. If it was a mode of death that could be justified in nature it would not need the eloquent and fallacious reasonings of philosophers and moralists in any age of the world to sustain it. There is such a strong popular sentiment, that there are many who believe that suicide is always an insane act."

Dr. Gray then says what we should hesitate to say of English suicides. "Suicide is always an unnatural act, *but in the large proportion of cases, if not the majority, it is committed by sane people.*"

Dr. Gray replying to the question as to the *differentia* between sane and insane suicides, says, "Delusion is the test and touchstone in the diagnosis of insanity. Now this state being present would determine the character of a suicide. But the person committing the act may not have left a record of his reasons in anything said or written. In such a case the judgment must be formed on the circumstances and history of the individual." Dr. Gray does not allow for the cases of suicidal insanity in which there is no delusion, because he does not believe in them.

(*To be continued.*)

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2. *French Retrospect.*

By Dr. T. W. McDowall.

(*Continued from p.* 321.)

Nocturnal Epilepsy.—By *Dr. Echeverria.*—A paper, in English, on the same subject appeared in this Journal, vol. xxiv.

The Comparative Effects of Chronicity and Heredity in the Determination of Certain Types of Insanity.—By *Dr. Billod.*—"Thanks to the labours of Morel, we are now able, with certain cases of insanity, and without any knowledge of the antecedents of the patients, to say 'there are, or have been, lunatics in the family,' and almost always correctly. I say almost always, for there is a very small number of cases in which it is not found to be true, and in which the mental disease assumes all the characters of hereditary insanity, and yet there is no hereditary taint. This is the point I wish to prove, by a selection of cases, and by appealing to the experience of my colleagues, to know if, in the course of their experience, they have not met with similar ones.

"The number of cases which I have observed up to the present time, in which I have found united the characters of a hereditary insanity without there being discovered either in the direct or collateral progenitors, any case of mental, cerebral or nervous disease is not large, since in more than 15,000 lunatics who have come under my observation it does not exceed 15."

We have read the whole paper with the greatest attention, and yet without any profit. So far as our observation goes, it is quite impossible to diagnose the existence of hereditary taint by mental symptoms alone; neither do we believe that hereditary cases present any special features. The cases recorded by Dr. Billod as presenting features of hereditary insanity may do so; but we certainly could not have discovered the fact for ourselves. When we remember how

external circumstances affect the mental manifestations of lunatics, how, in fact, insanity as observed in asylums is not genuine lunacy, but the disease toned down by a variety of circumstances, we wonder at a paper being written on any *mental* symptoms at all. We are reminded of the pretentions of those who professed to be able to diagnose cancer by the facial expression. They were as often wrong as right.

The Progress of General Paralysis in the Hereditarily Insane.—By *Dr. Dontrebente.*—In this short note the writer defends himself from the strictures of Dr. Montyel. When we read Dr. Doutrebente's paper we did not think that he succeeded in proving that "general paralysis is not one of the vesaniæ, and that consequently hereditary tendency to mental disease is not able of itself to produce general paralysis." We do not agree with the statement that "general paralysis is very rarely observed in a family with a hereditary tendency to simple insanity, and, in such exceptional cases, the general paralysis assumes the chronic and remitting form."

Some of the cases of general paralysis referred to in these papers are so chronic that a doubt cannot be stifled that there may be an error in diagnosis. For a case to continue for 22 years is beyond credence. We say this, not with any intention to offend, but because that in this country also, errors are of frequent occurrence, even by asylum physicians. Did this statement require proof, it would be easy to tell some amusing stories how grave and learned doctors have condemned patients to a slow and miserable death, and yet doctors and patients lived long enough to know that a mistake had been committed by some one.

Atropine in the Chronic Enteritis of Lunatics.—By *Dr. Paul Moreau,* of Tours.—In two cases of obstinate diarrhœa very satisfactory results followed the use of atropine in doses of 1-1½ mm. in pill. The treatment was continued from 4-6 weeks. Dr. Moreau is tempted to bring this form of treatment under the notice of his colleagues on account of the disease carrying off such a large number of patients every year in French asylums.

Clinical Cases.

1. *General Paralysis due to Lead?—M. Doutrebente.—Summary.* Father died of cerebral symptoms; intelligence limited; slight lead symptoms, rapid invasion; two congestive attacks (vertiginous), exalted delirium, incoherence, amnesia, dipsomaniacal and erotic impulses; two months' residence in asylum, incomplete remission; recovery.

2. *Marked symptoms of General Paralysis, recovery.—M. E. Galceran.—Summary.* Exalted delirium, impediment in speech, trembling of limbs, tottering gait, aggravation of symptoms, bed sores over sacrum and trochanters, involuntary erections; three attacks of cerebral congestion, death imminent, gradual disappearance of the symptoms; recovery, which has continued two years.

3. *General Paralysis, recovery.—M. Galceran.—Summary.* Attacks of cerebral congestion, with transient hemiplegia; mental enfeeblement, exalted delirium, impediment in speech, inequality of pupils, unsteady gait, attacks of cerebral congestion; gradual improvement, recovery; discharge after 10 months' treatment; recovery continued for a year.

4. *"Folie à double Forme Paralytique."—M. Galceran.—Summary.* Strabismus, diplopia, drooping of the right upper eyelid, first melancholic, then exalted delirium, impediment in speech, tottering gait, trembling of limbs, pneumonia; rapid and complete convalescence.

5. *Exalted Delirium during Convalescence from Typhoid.—M. Lionville.—Summary.* Æt. 21, typhoid fever of three weeks' duration, exalted delirium; continuance of delirium when discharged.

6. *General Paralysis in the Aged.—M. Baillarger.—Summary.* Mental enfeeblement at the beginning, trembling of the limbs, impediment in speech, erysipelas of face, general enfeeblement, gangrenous phlyctæna, contraction of limbs; death. Adhesion of the membranes to the superior and middle part of the right hemisphere. Dilatation of the circle of Willis, dilatation of the lateral ventricles, ventricular granulations, remains of old hæmorrhages into the corpora striata, hypertrophy of the left ventricle of the heart, dilatation and ossification of the aorta, fatty liver, tumour of ovary.

7. *On Functional Exaltation at the beginning of General Paralysis.*—By *Emmanuel Régis.*—The Esquirol Prize for 1879 was awarded to this paper.

After some introductory remarks, the author proceeds with his subject under five different heads. The first is: The dynamic phenomena at the beginning of general paralysis result from cerebral irritation; their variations correspond to analogous variations in the original lesion.

Whatever may be the essential nature of this disease, whether a chronic inflammatory congestion, or a genuine sclerosis, he considers that it is not the less true that the initial phenomenon consists in irritation of the cerebral elements due to—1st, stimulation of the faculties (? "propriétés"); 2nd, increase of the nervous influx; 3rd, excitation of the receptive apparatus; 4th, increased activity of the apparatus.

Thus the excessive activity of the organism is only the last of a series of changes, having cerebral inflammation as the primary cause. When the irritation is slight, the functional excitation is slight; when intense, the phenomena are more marked. Acting upon the whole economy, diffuse irritation of the brain induces an excess of activity in all the organs; when it is more limited, the symptoms are less in degree and extent.

The second division of the paper is devoted to a general conception of these phenomena, and their features in common. The state of inflammation in which the cerebral organs are supposed to be, main-

tains them in a constant state of erethism, and thus we can explain how they can for lengthened periods exhibit an activity far above the normal.

Generally speaking, intimate solidarity with the cerebral lesion, impulsive form, increased intensity and continuity, with preservation of functional tonus; such are the distinctive characteristics of the dynamic phenomena of general paralysis in its early stage, whatever may be the exact locality of the nervous lesion.

III.—The special characters in the chief functions affected.

We may pass over the remarks on (a) the intellectual and affective functions; (b) the muscular and locomotor functions; (c) the reproductive functions; (d) alcoholic excesses; they are largely composed of extracts from various writers, and contain no new suggestions.

As to the vegetative functions, he concludes, from observations of his own—

1. The functional exaltation at the beginning of general paralysis, when it is pretty well marked, causes a constant elevation of temperature, and at the same time an increase in the pulse and respirations.

2. This elevation and increase are chiefly marked in cases of multiple exaltation, or of physical exaltation, with increased motor activity.

3. The increase of temperature is one degree and some tenths (centigrade); the pulse may reach a maximum of 100, the respirations a maximum of 40.

4. This elevation and increase disappear with the functional exaltation. In a case in which the latter suddenly disappeared for several days, the former did so also during the same time.

In illustration of his paper the author gives a large number of cases. These may be passed over, that we may give his conclusions at length.

1. Very frequently general paralysis begins by a state of exaltation or "dynamie fonctionelle," during which the functions of the organism undergo, simultaneously or separately, an increased activity.

2. This functional exaltation is the result of the irritative process which goes on at this time in the brain; between these there is an intimate solidarity: they exhibit the same progress and features.

Intense when the irritation is intense, slight when the irritation is slight, this exaltation extends to all the functions, or is limited to a few or one only; according as the irritation is general, or more or less localised, it appears and disappears with it. We may admit that the exalted functions belong to the morbidly affected brain centre.

3. Which ever function may happen to be affected, these phenomena of exaltation are characterised by their intensity, their persistence, and their generally impulsive nature. However intense or prolonged their exaltation may be, the functions never exhibit any apparent fatigue.

4. Intellectual exaltation affects by preference those predisposed by their birth, education, or profession. It manifests itself by an

incessant and irresistible intellectual activity, along with, in certain cases, a more or less marked exaltation of the affective sentiments.

5. Physical exaltation, not less frequent, affects chiefly the locomotor function. It is evidenced by an incessant and irresistible desire for movement, and by repeated attempts to escape when the patient is placed in an asylum.

6. Sexual excitement presents the same features of frequence and irresistibility. The patients experience immoderate, insatiable desires, and do not hesitate at any means to satisfy them.

7. A certain number of patients, until then strictly sober, become guilty of violent alcoholic excesses. These excesses assume the impulsive type of dipsomania; they are most frequently caused by the incessant necessity for action which they experience, and very probably also by irritation of a special part of the brain.

8. The organs of vegetative life also suffer from this functional exaltation in various degrees. The temperature may reach a maximum of 38·5 (cent.), the circulation a maximum of 100, the respirations a maximum of 40; hunger and thirst are equally increased. The amount of urea contained in the urine is not sensibly modified; but the urine may contain a certain quantity of glycose, a fact which would indicate the extension or localization of the irritative process to the centre of the glycogenic function, in the floor of the fourth ventricle.

9. The study of this period of prodromic exaltation of general paralysis is really important; acting at a time when the symptoms leave room for doubt, it may complete the diagnosis, lead to the adoption of treatment the more useful because of its promptness, and, lastly, modify the prognosis of a disease regarded as incurable, perhaps because it has hitherto only been studied and treated during a stage far removed from its real commencement.

Clinical Cases.

General Paralysis.—Summary. Sudden attack of insanity, with maniacal excitement and extravagant delusions, but without any impediment in speech or disorder of motility; considerable aggravation of the symptoms on the eighth day; acute delirium, death on the thirteenth day. Anatomical lesions of general paralysis.

Two Cases of Ovariotomy followed by Delirium.—1. Æt. 32; delirium appeared on third day after operation; hallucination, fever; death in 36 hours.

2. Delirium on eighth day after operation; exalted ideas, hallucinations of sight and hearing, intense fever, death on the sixth day; anatomical lesions of meningo-encephalitis.

General Paralysis and Locomotor Ataxy.—Summary. Excesses of all kinds, syphilis, excessive fatigue during the war of 1870-1; fall on the head in 1873, progressive locomotor ataxy treated by antisyphilitic remedies, general paralysis.

Congestive Insanity of Syphilitic Origin.—Summary. Headache, paralysis of the third pair, sudden loss of consciousness, unfitness for work, indifference, incoherence, muscular excitement, stiff and awkward gait, hallucinations of sight and hearing ; specific treatment, rapid recovery. This case is taken from M. Fournier's book on Cerebral Syphilis.

The Gyrus Angularis neither the Seat of the Perception of Visual Impressions, nor the Centre of the Movements of the Eyes.—Dr. Clovis Gallopain.—These two cases are recorded to combat Ferrier's statement relative to the motor functions of the gyrus angularis.

The first was admitted to the Evreux Asylum in 1867, and died in 1878, of phthisis. He laboured under melancholia, and sometimes did not speak for several months. The brain weighed 1,280 grms. The cortical substance of the anterior half of the first and second right frontal convolutions was yellow and softened. On a level with the gyrus angularis the pia mater was adherent to the cortical substance, which was reddish, and softened chiefly in the superior half.

The second was that of a man, aged 61, admitted in 1878, suffering from dementia, brought on by long continued drunkenness. There was no paralysis. In a few days he became violently excited, and was found dead in bed six days after admission.

The following were the pathological conditions observed at the post-mortem :—

The bones of the skull are much thickened.

Meninges.—Upon incision of the dura mater it is observed that clots are attached to its internal surface. They are from 5 to 8 centimètres long, 2 or 3 broad, 1 or 2 millimètres thick, and cover the larger portion of the internal surface of the left half of the dura mater. On the right side, the clots are much less numerous. After the clots were removed by washing, it was observed that the internal surface was intensely congested, and lined by very thin neo-membranes containing in their thickness numerous small hæmatomas, varying in size from a pin's head to a lentil. The meshes of the pia mater are infiltrated by bloody serum, which is most abundant over the left sphenoidal lobe, and the circumference of the left hemisphere of the cerebellum. The veins in these regions are gorged with blood.

The pia mater strips easily. The vessels at the base are not atheromatous.

Right Hemisphere.—At many points the cortical substance is the seat of an alteration, which consists in a pinky-yellow colouration, and in a softening so marked that the brain substance is completely washed away under a small stream of water. The points so affected are the following :—The gyrus angularis in its whole extent, posterior third of the first temporal convolution, posterior half of the second and third temporal convolutions, posterior extremity of the superior parietal lobule, and anterior extremity of the first occipital convolution to the extent of a franc piece.

The cortical substance of the gyrus hippocampi, of the "crêtée" convolution and of the internal surface of the first frontal convolution are injected, and of a rosy colour.

In other respects the right hemisphere is normal.

Left Hemisphere.—The cortical substance presents alterations similar to those already described in the right. Marked vascular injection with softening of the cortical substance, exists at the following points :—Inferior third of the two central convolutions, anterior third of the (lobule of the) gyrus angularis, posterior half of the first and second temporal convolutions, anterior half of the first and second occipital convolutions.

A. Joffroy, De la nevrite parenchymateuse spontanée généralisée ou partielle. "Archives de Physiologie," 1879.—The term of "spontaneous neuritis," includes those cases of neuritis, which are not of traumatic origin, and which do not arise from a central lesion or by propagation from other parts. Thus, sciatica is a common example of partial neuritis, when connected with muscular atrophy and the reaction of degeneration. Joffroy does not allow the central origin of paralysis in lead-poisoning, and classifies the nervous lesion as "toxic" partial neuritis. His third class includes those cases in which a set of nerves is affected after acute infectious diseases. As an instance of this class, he gives a case of a woman with small-pox, succeeded by neuritis of the brachial nerves, with pain and subsequent degeneration and atrophy of the muscles. Various sensory disorders are observed in the great majority of partial spontaneous neuritis, but only rarely in lead-poisoning, and then only in a much milder degree.

The second group he terms "general parenchymatous neuritis." The existence of such cases is denied by some authors, but Joffroy gives a case of his own, and quotes two reported by Lanceraux and Denos and Pierrot. His patient, a woman with phthisis, was admitted to hospital on account of loss of power in the lower extremities, so that she could not walk. The upper extremities, cutaneous sensibility and sphincters were unaffected, but there was considerable diminution of the muscular sense. Afterwards the paresis spread to the upper extremities, and all four limbs grew ataxic, atrophied, and lost their electric irritability. A very careful autopsy did not reveal anything abnormal in the spinal cord, the meninges or anterior and posterior nerve-roots. On the other hand, the atrophied muscles were found to be in a state of advanced degeneration, and likewise the nerves. In two out of the three cases mentioned above, there was nothing of the severe pain which was met with in partial neuritis.

The slightness of the symptoms at first, and their invariable, though slow advance, aids in the differential diagnosis of the disease from the Poliomyelitis of adults.

Edward G. Geoghegan.

3. *German Retrospect.*

By William W. Ireland.

(*Continued from p.* 311.)

On Salivation in the Insane.—Dr. Reinhard ("Centralblatt für Nervenheilkunde," 1 November, 1879), states that he found excessive salivation to be present in six per cent. of the inmates of lunatic asylums. Those subject to it may be divided into three groups. The first group consists of idiots and dements of the lowest class having blueness and coldness of the extremities, and small pulse. He thinks the salivation depends upon some paralysis of the vessel. It also occurs in patients who imagine that injurious or poisonous subjects are being administered to them. The secretion of saliva is thus the result of a conscious reflex action; sometimes they imagine that they feel a taste in their mouths which excites secretion. Such patients secrete three times the usual quantity of saliva. It is principally from the parotid gland that this saliva comes. They are obliged continually to spit to get rid of the overflow; and the loss of saliva injures the digestive power.

Salivation in the third group seems to correspond with excitement or disease of the genital organs, especially in women. It is frequently accompanied with dilatation of the pupil, and smallness and jerking up of the pulse. The increase of saliva is one of all its constituents, and not of the watery element alone. In this third group, treatment has been most successful. While trying to calm the excited sexual system, Dr. Reinhard uses subcutaneous injections of morphia, sometimes with the addition of atropine. Where the salivation is accompanied by profuse or painful menstruation, he uses bromide of potassium in large doses, and in one case the subcutaneous use of camphor was followed by cessation of the excessive secretion. As a local application to the mouth, he uses carbolic acid 1 to 50 of water.

Dr. Reinhard cannot suggest any rational remedy, but he treats those cases resulting from delusions of taste or suspicions of having got poison in their food, by washing the mouth with solutions of salicylic acid and tannin.

Aphasia caused by Mental Excitement.—In the "Centralblatt für Nervenheilkunde" (December, 1879) there is a report from a Russian medical journal of a man who became aphasic from a cause which seems very clearly defined. His daughter, who had, or believed herself to have been, deserted by her betrothed, had married another man. The old lover suddenly came to her father's residence, and, as a proof of his dissatisfaction, after using violent language, set the house on fire. In consequence of this regrettable procedure the father lost his speech, and became, we are told, so much excited, that those about him could think of no better means of tranquilising him than giving him brandy to drink. When brought to the hospital at Kiev,

it was found that he could understand all the questions put to him, and could read and write, but he was unable to speak a word, though he gave a pantomimic description of the burning of his house.

The patient completely recovered after five days' residence in the hospital. He said that he had not lost knowledge for a moment of anything that was going on around him. Let us indulge the hope that he has no more daughters to get married.

Insanity caused by Atropine.—Dr. Paul Kowalewsky ("Zeitschrift" xxxvi. Band, 4 Heft) gives an account of a man who was apparently rendered insane by a large dose of atropine. This, though not a common circumstance, has occasionally been observed before. Schroff mentions the case of a woman who was rendered insane by belladonna, and Professor Adamjuk, an oculist, who has been in the habit of giving large doses of atropine, now and then sees instances at least of great excitement resulting from its use. It appears moreover that there is an idiosyncrasy which renders one more easily susceptible to the influence of this drug.

In the case described, the derangement appeared shortly after the use of atropine salt introduced into the eye during the treatment of an eye disease. The insanity declined in a marked degree under the use of morphia. It lasted ten days in all. The pulse was habitually high, varying from 80 to 96. The patient, a man who had well nigh lost his vision, now had a feeling of light and brilliancy. He felt as if he were surrounded by a halo of light, and things appeared on a large scale. He saw around him beasts, birds, crowds of people, uncommon kinds of trees, grasses and other plants. Everything burned, cried or sung. All objects were in continual motion and change; ants, flies, beetles, and other insects seemed to creep over his body. He saw beautiful furniture and rare jewels. He also said that he saw the tree of life, the knowledge of good and evil, the blessing of God, and other abstract ideas realised by visible figures.

The patient was so weighed down by fear that he was afraid to move about. Sleep deserted him, and he was suspicious of those around. Sometimes he forgot his distress, and became pleased with the visions that surrounded him; and sometimes he sank into a state of musing and absence of mind, from which only powerful motives could arouse him. The symptoms in many respects resembled those of delirium tremens, but the objects seen were generally of a large size, whereas as a rule they appear to be small in alcoholic delirium.

On Chronic Poisoning with Tobacco.—Dr. F. M. Richter ("Archiv" x. Band, 1 Heft) had two patients who were suffering from the effects of inordinate smoking of cigars, one of whom died. The result of the examination of the body is given. The vessels of the pia mater and of the brain were found to contain unusually little blood, and the heart was in a relaxed and flaccid condition, and empty of blood. Nothing else of consequence was noticed.

The other patient recovered, on ceasing to smoke, under hydro-

pathic treatment, and the use of the galvanic current to the spine. The symptoms common to both cases were a feeling of tightness in the head, vertigo, a tendency to somnolence, incapacity for mental work, anomalies of disposition, symptoms of amblyopia, spinal irritation, neuralgia, ready liability to fatigue, uncertain motions, shuddering, contractions of the muscles, anxiety, weak or irregular pulse, and emaciation. Sometimes there was an affection like angina pectoris. In the patient who died the appetite and digestion were weak, with colic pains. In the man who recovered, these symptoms were absent, but he suffered from hyperæsthesia of the auditory nerves.

Dr. Richter has arrived at the conclusion that excessive smoking is attended with more dangerous effects than chewing. He considers that the injurious effects of chronic intoxication with tobacco is in part at least owing to narrowing of the vessels, and consequent derangement of the circulation. This explains the amblyopia which so frequently follows excessive smoking. Derangements of nutrition attend the narrowing of the capillaries; and it is supposed that there is undue stimulation of the sympathetic and vagus nerves, liable to end in collapse of the actions of the lungs and heart.

Dr. Richter considers that intoxication from nicotine may be treated very hopefully. In general the health improves, and the amblyopia disappears through simple cessation from smoking. The fatal result in the case recorded by himself was owing to his patient again commencing to smoke. Besides abstinence from tobacco, he recommends the use of iodide of potassium to help the elimination of the poison, and the combined application of hydropathic treatment and electricity, which he thinks causes important molecular changes in the body.

Treatment of Locomotor Ataxia.—Dr. Richter ("Centralblatt für Nervenheilkunde," October, 1879) doubts whether syphilis is as frequent a cause of tabes dorsalis as has been represented by some pathologists eminent in the knowledge of spinal disease. He considers that very hot and cold baths are attended with danger, and that the "Schmiercur," *i.e.*, treatment with baths and mercurial inunction is more likely to do harm than good. He has seen marked improvement in patients suffering from tabes who had also syphilis, without subjecting them to antisyphilitic treatment. Dr. Richter uses the constant current, baths of moderate warmth, and rubbing.

Influence of Static Electricity and Passive Movements on Hysterical Paralysis.—Dr. Erlenmeyer, in reply to Dr. Vigoureux, of Paris, gives some explanations about a case of hysterical paralysis which static electricity was found to remove after the interrupted and continuous currents had been used without effect. He gives us the following observations :—"That metals, magnets, and static electricity, under certain conditions, bring about in invalids marked alterations of sensibility is a fact which cannot be contested, but it has lost much of its importance since the enquiries of Rumpf have shown that in the transference of sensations we have to do with a physio-

logical phenomenon which can be produced in every healthy person. The conditions under which these appearances can be produced are found to be in a proportional relation between the intensity of the disease and the strength of the apparatus. An electric machine, like that in the Salpêtrière, which is driven with steam, is sufficient for all cases." In the production of motility in a paralysed limb, with a hysterical patient, he thinks that the action of the will of the patient plays an important part. This influence cannot be excluded from any remedy, especially when it is something new, wonderful, and unknown. Whether we give homœopathic doses of sugar, of milk, or use an amulet or reliquary, a twenty franc piece, or a magnet, or animal electricity, or mesmerism, we equally act upon the faith of the patient, and make his hopes conduce to recovery. A distrustful and unsympathetic doctor will never treat such cases successfully. Dr. Erlenmeyer states his conviction, derived from much experience, of the favourable influence of passive movements in order to restore the lost muscular power of a limb. He has several times succeeded in at once arousing active movements in a limb through energetic passive movements; and a long-continued course of such communicated movements is one of the best ways of restoring powers long lost.

Case of Loss of Speech cured by Galvanism.—Dr. Mossdorf ("Centralblatt für Nervenheilkunde," January, 1880), gives a description of a youth of 17 affected with loss of speech, which had come on when he was six years of age, apparently owing to sudden fright. The patient was strong and well-made, and the power of moving the tongue and lips seemed normal, but whenever he tried to speak, the hyoid muscles, as well as those of the abdomen, were affected by tonic spasm, and the breathing was suspended for a moment. On opening the mouth the tongue was found to remain depressed. This condition was renewed at each effort to speak, and passed away when he abandoned the attempt. Telling him to repeat his name, Dr. Mossdorf waited for ten minutes. After many attempts he said, "I am called Boehmer," quite distinctly. One month was vainly spent in passing the constant current through the head and applying the interrupted current to the muscles of the abdomen. In the second month electricity was applied to the phrenic nerves, because Dr. Mossdorf suspected the action of the diaphragm had a good deal to do with the stammering; but finding this also ineffectual, he applied the positive pole of a galvanic battery to the occipital, and slowly descended with the negative pole to the tenth dorsal vertebra. After six applications a decided improvement was noticed. The treatment was much interrupted by the irregular attendance of the patient, but after fourteen months it ended in complete recovery.

Dr. Mossdorf tells us that he was induced at the end to apply the galvanism to the occipital region by the study of Kussmaul's work on "Derangements of Speech." This author traces the sensory

fibres necessary to the exercise of speech from the optic thalami to the occipital lobes.

Curative Effect of Stretching of the Nerve Trunks in Tabes Dorsalis.—A tradesman, forty years of age, was admitted into the Lazarus Hospital, at Berlin, on the 11th August, 1879. He was suffering from tabes dorsalis dolorosa. Besides the ataxia, there were intense darting pains in the legs and arms. Sensibility was much diminished in the lower extremities. The patient would allow his slippers to come off his feet without noticing them. The feeling of tightness round the body was sometimes present and sometimes absent. The reflex irritability was much increased; the tendon reflex of the patella could not be brought out, but there was great tenderness of the skin, especially in the femoral region. The arms were affected by the same symptoms, but in a less degree. All sedative drugs failing to afford relief, Dr. Langenbuch determined to try stretching of the sciatic nerve. The nerve, which was found to be red and swollen, was pretty stiffly stretched, and the incision was treated in the antiseptic manner. When the patient came out of the chloroform the pain was found to have disappeared, but there was motor and sensory paralysis of the parts supplied by the nerve, which, however, soon disappeared. Encouraged by the success of this treatment, the stretching was applied to the sciatic and right and left anterior crurals. When the patient came to walk again it was found that the sensibility had returned to the feet, and even the ataxia in the gait disappeared. Soon after he left the hospital, but Dr. Langenbuch heard that his patient had gained admittance to another one. It was, however, ascertained that the disorders in the legs had not returned, and that he had sought admittance in the hopes of getting relief from the symptoms in the arm.

Koch's Statistics of Insanity.—Dr. Koch has, in writing on the statistics of insanity in Wurtemburg, produced a quarto book of 230 pages. Like the "Almanach de Gotha"—which religiously commenced with the ducal family of Saxe-Cobourg Gotha, and then passed on to the other sovereigns of the earth—the doctor's treatise soon wanders beyond the little kingdom in which it begins its statistical career. Everything is compared with Wurtemburg, but then Wurtemburg is compared with everything; and so we have a perfect quarry of statistical matter about insanity, from which I can only select a few pieces.

Notwithstanding all his industry, Koch could arrive at no decided opinion as to whether the frequency of insanity is really greater than formerly. The increase in the returns seems general wherever we have statistics. In Prussia there was in 1867 one insane person to every 631 inhabitants; in the year 1871 there was one to every 448. In France, in 1835, one to 2,016; in 1872 one to 410. In Belgium, in 1835, one to 816; in 1868 one to 594. In the Netherlands, in 1825, one to 1,232; in 1876 one to 656. In Sweden, in 1855, one

to 935; in 1870 one to 464. In Norway, in 1825, one to 551; in 1865 one to 328. In England and Wales, in 1859, one to 536; in 1876 one to 373.

This increase is put down by some writers as the result of civilisation, a very complex term, including influences which heighten cerebral activity and create susceptibilities of its own, and also influences which help to set the mind at ease, diminish poverty, and banish starvation. Moreover, the statistics of a country always improve with its civilisation, and we have no reliable information as to the frequency of insanity in savage peoples. Dr. Koch shows that it may be fairly held that the increased number in the statistics of lunacy simply indicates an increased care and success in getting correct returns. Assuming that these new statistics are correct in indicating a real increase in the number of lunatics, we have two questions to ask : Do more individuals than formerly become insane? or do incurable lunatics live longer than they formerly did? No doubt they do.

In some cases, too, the number of the insane appears to have diminished, as in Lombardy, where, in 1824, there was one lunatic in 1,555, while in 1854, there was one in 1,612. In Brunswick, too, the last four census have given a decrease in the number of the insane.

In some states the number of idiots is greater than that of lunatics, and this even in countries in which cretinism does not prevail. Thus in Prussia, there are 3,740 idiots, and 2,103 insane; and in Saxony, 3,763 idiots to 2,328 insane. Dr. Koch shows that in the Canton of Berne the number of idiots has diminished, which is also the case in Constance, and Sulzheim in Bavaria, in Aigle in France, and in the Hartz; but this is really a decrease in cretinism, a disease confined to well-defined areas, and which can be escaped by avoiding these localities and other precautions.

According to Dahl there has been a diminution of idiocy of other forms in Norway, and this both in the town and country, though Koch, I believe erroneously, says that there was no decrease in the idiocy of the land population in the census of 1865. According to Neumann, a decrease in idiocy appeared in Silesia in the census of 1862. In most other countries idiocy appears to have increased. In France, as I have elsewhere shown, there are grounds for believing that the number of idiots and cretins is about three and a half times as large as that given in the census of 1872.

The table which Dr. Koch gives of the relative number of the insane to the idiot is worth re-producing :—

For to a hundred lunatics there are—

In Prussia	. . .	158 idiots.
„ Bavaria	. . .	154 „
„ Saxony	. . .	162 „
„ Austria	. . .	53 „
„ Hungary	. . .	140 „

In the Canton of Berne	. .	117 Idiots.
„ France	. . .	66 „
„ Denmark	. . .	58 „
„ Sweden	. . .	22 „
„ Norway	. . .	65 „
„ England and Wales	. .	74 „
„ Scotland	. . .	68 „
„ Ireland	. . .	69 „
„ America	. . .	79 „

It appears that in Germany at least there is a great majority of idiots over lunatics, while in most of the other countries of Europe the reverse is the case. These statistics, however, are open to question, though it is likely that the number of idiots is generally rather under than over-stated. In Wurtemburg, from the census in 1853, there were 195 idiots for every 100 lunatics; but in 1875 the proportion stood as 97 idiots to every 100 lunatics. Are we to believe that there was such a very great change in the proportion of congenital and acquired insanity, or was it simply owing to some error in the statistics? By the census of 1875, out of every 1,000 males there were 2·13 insane, and out of every 1,000 females 2·17 insane. Of male idiots the proportion was 2·18; of females, 1·98; and this predominance of male idiots is true of every country of Europe. In the Canton of Berne, there is a slight majority of male idiots, probably constituted by cretins.

In idiots, Dr. Koch observes, we find almost always a majority of males, in the insane always a majority of females; but so much greater is the majority of male idiots than the majority of insane females, that when the insane and idiots are classed together there remains a majority to the male sex. Dr. Koch finds that male idiots are more subject to epilepsy than female ones.

It has long been believed that idiots are a short-lived class, and this is borne out by Dr. Koch's statistics, though not in such a marked degree as one might have supposed. He finds that the duration of the life of epileptic idiots is shorter than that of the others.

The statistics presented in this book do not bear out in a decided manner the presumption that illegitimate children are more disposed to idiocy than children born in wedlock. Dr. Koch quotes the statement that, in eight counties in Scotland, a country in which natural children are in the ratio of 10·9 to all births, among 632 idiots (he calls them cretins), 108, *i.e.*, 17 per cent. were illegitimate, but idiots when illegitimate are more likely to turn up to official notice than if borne by married women. On the other hand, it was found that there was only 2 per cent. of illegitimate idiots in Wurtemburg, and though this may be owing to faults in the returns, he found double the number (8·66 per cent.) of illegitimate idiots to illegitimate lunatics (4·79). The author adds, "I do not believe that on a large percentage there is really displayed a greater influence of illegitimate births on the pro-

duction of idiocy. In some cases idiocy in the child is the result of imbecility or extreme simplicity on the part of the mother."

Dr. Koch found that 33·68, that is about one-third of the insane, had a hereditary tendency. In 20·47 per cent., that is one-fifth of the cases, hereditary tendency did not occur; while in 45·85, about half of the cases, heredity could neither be decidedly proved nor disproved. If we take only the cases in which the hereditary tendency could be certainly proved or disproved, in 62 per cent. there was such a heredity, and in 37 per cent. no such heredity existed. It is, however, much easier to prove hereditary insanity in a family than the absence of it. Czermack found in the census of the insane for 1857, in Moravia and Silesia, 37·47 per cent. of insanity, which could be traced to hereditary tendencies.

Enquiries in Oldenburg showed only 13 per cent. of heredity; in Hanover, about 16 per cent.; in Nassau, 17 per cent.; in Mecklenburg Schwerin, 22 per cent.; in Brunswick and in the Canton of Berne, 23 per cent.; and in the Department of the Lower Rhine, 20 per cent. was made out. If one put down heredity as the cause in one-third of all the cases of insanity, it would not be too high. He finds that 24 per cent. of idiots have brothers or sisters who are abnormal, while the insane have only 16 per cent., hence he is inclined to the belief that heredity is a more powerful cause of disease amongst idiots than amongst the insane, all the more so that, if we believe that in families where idiots are born, the number of children are fewer. This, Dr. Koch does not prove, and I believe it to be a mistake. He gives some other figures which show how high hereditary connection must count in the production of idiocy.

Amongst others, Dahl, in some inquiries made in Norway, in the year 1860-61, found the hereditary cause in 43 per cent. of the idiots whom he examined. Dr. Koch ascertained that in the collateral relations of idiots, 7·8 per cent. showed a neurosis, and that in the collateral relations of the insane, the proportion was 5·74. Here is his opinion on the question of consanguineous marriages:—"I am convinced that marriages between near blood-relations exercise a prejudicial influence upon the nervous system of their descendants only when there are already abnormalities in the family from which both the married people came. In that case there is an accumulation of the baneful influences." From his tables, Dr. Koch makes out the tendency of consanguineous marriages to be greater in producing idiocy than insanity.

In examining the question whether a hereditary tendency to insanity acts more strongly through the father than through the mother, Dr. Koch differs from the majority of authors, who seem to have accepted the view of Esquirol and Baillarger. These physicians thought that insanity comes upon the children oftener through the mother than through the father, and that when it does so, the female children are in greater danger than the males. "My statistics," Dr. Koch observes,

" do not bear out this view, for they show that the hereditary tendency is most powerful towards the same sex. The hereditary tendency is more often transmitted to the male children than to the female, while the same neurosis transmitted through the mother, is somewhat more apt to affect the female children. Both insanity and idiocy seem more frequently transmitted through the male parent than through the female."

Much of this the author traces to the bad effects of drunkenness.

B. Danilewsky.—A method of estimating the proportions of white and grey matter in the brain. (" Centralblatt, f. d. Med. Wissenchaften," No. 14, 1880).

Danilewsky's method is founded on the Archimedean principle:— Given the specific gravities of the whole brain (p) of the grey (a) and white (b) substances, and the weight of the whole brain (P), calculate the quantity (x) of white or grey matter by the formula $x = \frac{Pb\ (p-a)}{p\ (b-a)}$

By carefully avoiding such sources of error as variations of temperature, moisture, &c., Danilewsky found that his results were satisfactorily uniform.

Thus, one set of results is given by the figures:

Human cerebrum.

Grey matter, 39·0—38·7—38·2—37·7 per cent.
White „ 61·0—61·3—61·8—60·3 „

He further finds that of the total 39 p.c. of grey matter, 33 p.c is contributed by the convolutions and 6 p.c. by the basal ganglia. With these data we can calculate easily the square surface of the brain, if we ascertain the depth of the grey matter of the convolutions. Assuming this latter to be on the average 2·5 mm., Danilewsky finds 1,588 square centimetres in one brain, and 1,692 in another.

EDWARD G. GEOGHEGAN.

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4. *Retrospect of Mental Philosophy (Periodical Literature.)*

Psychology No. II.

By B. F. C. COSTELLOE, B.Sc. and M.A., Glasgow, B.A., Oxon.

Mind: A Quarterly Review of Psychology, Nos. xviii. and xix. (April and July, 1880.)

Our English philosophical quarterly amply maintains its interest, although the number of papers devoted to our more special subject is not great. The April number contains a sketch by Prof. Croom Robertson, the Editor, of the contents of Prof. Goltz's third Memoir on brain-localisations, in opposition to the recent work of Hitzig and Ferrier. The main point of Prof. Goltz's criticism, which will not be

unknown to most of our readers, is the insistence upon a distinction between *permanent* and *temporary* effects of a destruction of portions of the cerebrum. He has found, after most extensive washing-out of the grey matter of the cortex, that neither total loss of touch, sight, smell, &c., nor permanent paralysis of any muscle followed. And his conclusion from these and various corroborating experiments is, that any part of the cortex seems to be a possible organ of voluntary motions, and that, if all its parts are not perfectly equivalent and adaptable *inter se*, they are at least so far able to take up the functions of any parts destroyed as to negative the theory of circumscribed cortical centres. The whole criticism, of course, is only a stage in the development of the theory of brain functions, upon which no one imagines that the last word has by any means been yet said.

Of a bearing more psychological is the paper by Mr. Grant Allen, on "Pain and Death." In a word, it is like so much else of the author's work—an ingenious, unsatisfactory, and suggestive attempt to apply the dogmas of Herbert Spencer to questions of æsthetics. Mr. Grant Allen is a devout believer in this new creed. He receives its articles with implicit and faithful orthodoxy; but, at the same time, like most ingenious disciples, he pleases himself by expanding and varying the details. This paper is a good example of the philosophical vices of the system he upholds. Pain is a difficult subject, if you treat it in any but a superficial manner. For it seems a thing so purely organic that, as the writer here remarks, it ought to be "perfectly explicable upon merely mechanical grounds." Yet, pleasure and pain are inconceivable apart from a conscious subject. "The whole set of movements could be mentally pictured as similarly occurring in a perfectly *insentient* automaton." What and why the difference? "Physiologists might have dissected for centuries, and they would never have known anything of pleasure or pain if they had not been able to *feel* it. Where, then, did the surplus attribute of "consciousness," of *feeling* in the true sense, come from? If we are simply products of evolution, how did this begin? Mr. Grant Allen is not unaware of the difficulty. He premises that he feels obliged to believe in an unconscious world, when sentience had not yet developed. How such feelings as pleasures and pains, which as he opines, must have been the beginnings of conscious life—how such items of consciousness could ever have originated out of the unconscious, he cannot divine. In truth, the transformation is distinctly inconceivable, and may be fairly called impossible. There is a gap here which Mr. Herbert Spencer cannot bridge.

So much for the origin of pleasure and pain. Mr. Allen has, besides, as might be expected, a vast idea of their importance to our lives. Surely even the most thorough-paced Utilitarians and Hedonists will be startled by such language as this:—"All perception and all intelligence have only a meaning so far as they relate to possible pleasures and possible pains. Every increment in intelligence is

merely an increase in the number of combinations by which the organism anticipates the one positively and the other negatively, through an ever-widening distance in space and time. In fact, *pleasures and pains are the real central substance of our whole lives*, all other portions of consciousness being merely subsidiary to these fundamental and all-important primary feelings." If we live for nothing but increase of pleasures—for more and purer "pulsations," as the æsthetic followers of Mr. Pater would say—life is a poor affair, and pessimism will soon become the only ethics. However, we will not stop to argue with the theory. We are only concerned here to notice that, as a consequence of the importance which it assigns to Pleasures and Pains, the physiological and psychological bearings of these are being studied at present with exceptional care. Even in the small batch of Reviews now under notice, there are more articles on this topic than on any other.

Mr. Grant Allen's paper, which is somewhat confused in its reasoning, is, in reality, directed to show how Pain is in many cases a *survival* from a former state of life, now become useless or even disadvantageous by the advances of intelligence, which enables us to look to our self-preservation as an end in itself, apart from feelings of pain. He paints, for example, a curious picture of a wonderful animal—the result of a long evolution—which should be so completely "adapted to its environment" under all possible circumstances, that it would never act wrongly or foolishly. In that case he believes the sense of Pain would cease to exist by a sort of atrophy, since there would be nothing to excite it. Would this eminently intelligent being, we wonder, have any pain in the reflection that most of his fellow-creatures were not so happily endowed as he, and lived in anguish accordingly? Perhaps the writer would say that this was a legitimate source of pleasure. But it is to be feared that the view partially laid down in this paper is a very hasty one, and far from fitted to explain to an inquirer all the mystery of suffering.

This paper, to which we have devoted more space than it is properly entitled to, is preceded in "Mind" by another from Mr. James Sully on "The Pleasures of Visual Form"—a translation of which appears also in the May number of the "Revue Philosophique." Its object is to analyse the diverse sources of the æsthetical pleasure derived from Form, separating therein the Sensuous element, or the sense of pleasure aroused by the mere sweep of the eye and the easy muscular movements involved therein, and the Intellectual factor, the explanations of which is made to rest upon the peculiar theory of "local signs," put forth by Lotze and accepted by Helmholtz.

Of the other papers in the same number of "Mind," the first is a clever reply by Mr. Leslie Stephen, in the anti-theological interest, to Mr. Balfour's recent "Defence of Philosophic Doubt"—a work which restates the old argument that Science is so riddled with necessary antinomies and scepticisms as to make it mere dogmatism for the

scientists to decry Theology. There are two ethical papers—a criticism of Mr. Herbert Spencer's "Data of Ethics," by Prof. Sidgwick, and a criticism of Dr. Ward on "Free Will," by Mr. Shadworth Hodgson, which must be read along with Dr. Ward's own summary of his answers to Prof. Bain in a short paper among the "Notes and Discussions." The notices of "New Books," include "The Metaphysics of the School," by Thomas Harper, S.J.; "The Emotions," by James McCosh, D.D.; and Professor Sayce's "Introduction to the Science of Language"—all works of interest in their special spheres.

The July number of "Mind" opens with a striking and very noteworthy paper on "Statistics of Mental Imagery," by Francis Galton. It appears that the writer has been moved to investigate the question of how far the power of visual memory—of "seeing with the mind's eye"—is general. The results in this way are singular, though they are yet incomplete. It seems, for example, that scientific men and hard thinkers in general, seldom possess that special kind of memory. They remember the individual facts and circumstances: but they cannot recall the past scene. Painters, it appears, have sometimes a like incapacity, though they, of all men, should least suffer from it. But the interest of the paper depends chiefly on the exposition of the statistical method pursued in the investigation—a method which is here explained because it should be applicable at once to the statistical treatment of all kinds of problems which involve comparisons of mental experiences. The principle on which Mr. Galton relies is the "intercomparison" of various series of individuals. He puts a careful list of questions to a hundred persons, chosen at random, or selected if necessary, and when he gets from them their description (usually an unexpectedly clear one) of the results of their introspection, he arranges them "in order of merit," as it were. There is, of course, always a mass of average cases, little distinguished from each other; but there are also extreme cases, and others, both in excess and defect, which connect the extremes with the average by a regular gradation. In this gradation, he chooses certain fixed points at definite relative distances from the mean point or average case on either side. These he names the Quartile, Octile, and Suboctile; and they serve as the test points of every comparison. For example, in a series of 100 men questioned as to their power of recalling a pictorial memory of the morning's breakfast table, he would first determine the mean case, and the Quartiles, Octiles, and Suboctiles of excess and defect. He would next obtain *another* series of cases (boys, for example), and classify them similarly. Then, by comparing the Quartiles and Octiles of each series, he would find a measure of comparison as to the whole. The method, it must be confessed, is at least ingenious, and students of psychology, especially those who are concerned with insanity, may speedily find useful ways in which it can be applied.

The succeeding article is a very curious one, and is worthy of more attention than it is likely to receive. It is entitled, "The Unity of the Organic Individual," by Edward Montgomery, and it contains some very interesting but very oddly-stated reflections on the question of cell-life, and on the relation of the "organic individual" to the vital units out of which, according to the theories of modern biology, it is somehow built up. Among the other papers, most of which lie outside our more special limits, we would draw attention to an amusing dialogue, in which Mr. Shadworth Hodgson gives a wonderfully clear and lively exposure of the old sophistic fallacy of Achilles and the Tortoise. Mr. Sully sends a notice of one more of the many recent excursions into the long-neglected regions of baby-psychology, and also of Professor Schneider's book on "Brute Volition," which latter may profitably be read along with Mr. Bishop's discussion of Brute Reason and the fallacies which have usually beset all past inquiries into the subject.

Revue Philosophique, Nos. 51-56 (*March-August*, 1880.)

The French Review contains some admirable and most suggestive writing, to which our space will hardly allow us to do full justice. In the number for March the most interesting papers are the short notes of M. Guyau on the analogy between the mind in memory and the phonograph, and of Dr. Despine on "The Somnambulism of Socrates." These are followed by an unnecessarily lengthy review of Mr. Staniland Wake's book on "The Evolution of Morality," and an appreciative notice of M. Ribot's well-known work on "Contemporary German Psychology," by Dr. Charpentier, wherein the reviewer finds occasion to complain gently of M. Ribot's too physiological conception of psychology. It cannot be too often insisted upon that the physical concomitants of Thought are not the same thing as Thought itself, and that we know very little as yet either of the extent, nature, or cause of the difference.

The leading paper in the April number is, of course, the fourth part of M. Delboeuf's admirable essay on "Sleep and Dreams," which we have noticed previously. The present section is devoted to the explanation of the reproductive and reviving power of memory—the question of how our past becomes present again. In this are involved sundry deep discussions as to organic identity and reproduction in general, leading up to Remembrance and thence to Habit, from which finally, in the number for June, M. Delboeuf proceeds to evolve his explanation of the definite nature of Dreams. To the April number M. Perez also contributes yet another of the endless studies of child-life which have so fascinated psychologists lately, and discusses the *moral* development of children—a very knotty, but a very fruitful subject. Ch. Richet also furnishes a brief but useful note on the part played by muscular movements and adaptations in sensation. The

leading review is of Clifford's "Lectures and Essays," by M. Ephraim, who concludes, not, we believe, unjustly, that in this, its extremest form so far, "the School of Evolution has landed itself in an idealist metaphysics."

The number for May contains the commencement—which extends to thirty pages—of a forthcoming study of Memory from a biological point of view, by the Editor. M. Ribot starts from his own psychological standpoint, and bases his inquiry from the first upon physiology. For the same reason also he follows up a preliminary consideration of the healthy memory by another inquiry (which occupies a large space in the August number) into the Pathology of Memory, especially in reference to its more *general* disorders. *Partial* affections and aberrations will be treated of in the next section. Besides Mr. Sully's translated paper on "Visual Form," the May number contains the analysis of an Italian treatise on Pain and a notice of a new popular handbook of psychology called "Physiologie de l'Esprit," by M. Paulhan—a thorough satire, if one were needed, on the modern rage for pocket science and railway-carriage philosophy.

In the number for June the interest again centres in M. Delboeuf's concluding article already mentioned. The results at which he arrives are well worth stating, but since it would be impossible to do them any justice in the space at our disposal, we are reluctantly compelled to refer our readers to the original; by which, indeed, they will lose nothing, for M. Delboeuf's style is not less masterly than his reasoning. There are analyses of a marvellous book by M. Mamiani—"La Religione dell'avvenire"—and a suggestive little work by C. Vogt on the physiology of writing. The curious in such things will also find here a collection of all the courses of philosophical lectures announced by the Italian Universities.

The July number is less interesting. Its main paper is by M. Paulhan on the subject of "Personality," which Hume opened, and which no one has since closed. M. Paulhan is clear that our notion of personality and our belief therein does not imply the existence of any entity, spirit, or force in us other than the series of phenomena which we call our experience. To say that he does not prove his point is a lenient criticism. The writer appears to us to write out of a very imperfect appreciation of a very difficult problem, and the result is as little satisfactory as it ought to be.

The number for August contains, as we have already said, the continuation of M. Ribot's able treatise upon Memory, along with two other articles which will repay perusal—that by M. Debon on our power of organic localisation, or reference of psychological sensations to special points of our organism (with relation especially to the controversy as to our perception of space and extension), and that by M. Tarde on the question of a possible measure of Desires and Beliefs, as to which he is paradoxical enough to maintain not only

that these are quantities, but that they are in the end the *only* quantities in psychology.

Philosophische Monatshefte, 1880, *Vol. xvi.*, *Heft* 1, 2, 3.

The German periodical contains comparatively little that is likely to interest our readers. We may mention, however, a singular pair of papers by Gustav Knauer on the distinction between "Seele and Geist"—a distinction untranslated as yet in our psychological language. He maintains that modern writers since Leibnitz have lost sight of a distinction between that "soul" which we have in common with the animals, and that "spirit" which they have not, and which he finds not in our reasoning power, but in the moral consciousness. There is a review of a feeble book on Haeckelianism by L. Stern, and of a curious series of Hegelian lectures published by the Norwegian Professor Monrad.

Vierteljahrsschrift für Wissenschaftliche Philosophie, 1880, *Vol. iv.*, 1, 2.

After a profound paper on Volition, entitled "Die Causalität des Ich," the Quarterly gives us the second of a series of interesting papers by Dr. F. Tönnies upon the philosophy of Hobbes, followed by an essay on the philosophical value of the mathematical analysis of Space and its relations. Our readers will be chiefly interested in the very able and friendly review of Sidgwick's recent publications on Ethics, *àpropos* of his article "Ethics" in the Encyclopædia Britannica. It is always well to look at English thought through Continental spectacles, whenever possible. The question of the "Causalität des Ich" is continued in the second number, but there is nothing of special interest.

Journal of Speculative Philosophy, 1880, *Vol. xiv.*, 1, 2.

The American Review, in its first number for the year, is chiefly occupied by a controversy between two Scotch Hegelians—Prof. Edward Caird and Mr. J. Hutcheson Stirling—as to the interpretation of Kant's "Deduction of the Categories." The April number contains an article, unfortunately of little value, on the "Psychology of Dreams," by Julia Gulliver, and another by W. T. Harris, containing the outlines of a "Psychology of Education." The translations from the German philosophers are, as always, well selected, but hardly as well done.

PART IV.—NOTES AND NEWS.

REPORT OF THE THIRTY-FIFTH ANNUAL MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The thirty-fifth Annual Meeting of the Medico-Psychological Association was held on Friday, July 30th, at the Royal College of Physicians, Mr. G. W. Mould, of the Royal Lunatic Hospital, Cheadle, presiding. After the meeting of the Council

THE GENERAL MEETING

Assembled at eleven o'clock, the following members and visitors being present:—Dr. Bayley, Dr. Fletcher Beach, Dr. Blandford, Dr. Crichton Browne, Dr. Brushfield, Dr. R. Boyd, Dr. J. C. Bucknill, Dr. Buel (U.S.A.), Dr. David Bower, Dr. E. Maziere Courtenay, Dr. E. Marriott, Dr. Cooke, Dr. Crochley Clapham; Dr. J. A. Campbell, Dr. Chas. S. W. Cobbold, Dr. J. Langdon Down, Dr. T. W. McDowall, Dr. Wilson Eagar, Dr. Chas. Henry Fox, Dr. E. C. Fox, Dr. H. Clifford Gill, Dr. R. B. Gilland, Dr. J. Tregelles Hingston, Dr. Henry Hicks, Dr. R. W. Hewson, Dr. J. Dale Hewson, Dr. H. Maudsley, Dr. Octavius Jepson, Dr. J. Kirkman, Dr. J. A. Lush, Dr. Thomas Lyle, Dr. J. Murray Lindsay, Mr. H. Rooke Ley, Dr. Edward Liston, Mr. G. W. Mould, Dr. John Manley, Dr. W. J. Mickle, Mr. H. Hayes Newington, Dr. J. H. Paul, Dr. Sutherland, Dr. Henry Rayner, Dr. James Rutherford, Dr. T. L. Rogers, Dr. Edward Swain, Dr. James Stewart, Dr. Geo. H. Savage, Dr. Sherlock, Dr. H. Sutherland, Dr. D. Hack Tuke, Dr. George Thompson, Dr. Harrington Tuke, Dr. A. Law Wade, Dr. E. Sparshall Willett, Dr. John A. Wallis.

Dr. LUSH, the retiring President, expressed his regret that ill health had prevented him from taking as active a part as he could have desired in promoting the interests of the Association, but he was glad to be able to congratulate the Members upon the prosperous condition of the Association—he might add its respectability—and he had no doubt that in the hands of his successor it would continue to prosper and increase.

Mr. MOULD, the Superintendent of the Royal Lunatic Hospital at Cheadle, then took the chair.

Dr. HACK TUKE moved that the hearty thanks of the Association should be tendered to Dr. Lush, the retiring president, for the able manner in which he had discharged his duties during his year of office. The Members all deeply regretted that Dr. Lush was now no longer in Parliament, and they regretted especially that his state of health was the cause. He trusted that not a few years of enjoyment of life and of usefulness remained for him. Dr. Lush would carry with him into his comparative retirement the best wishes of every Member of the Association.

Dr. RAYNER seconded the motion, which was carried unanimously, with acclamation, and was responded to in suitable terms by Dr. LUSH.

The GENERAL SECRETARY (Dr. RAYNER), presented the minutes of the last Annual Meeting, which were printed in No. CXI, of this Journal (October, 1879).

The Minutes, having been taken as read, were confirmed.

The PRESIDENT stated that the next business was the election of Officers and Council which would be carried out by ballot in accordance with the new rules.

Dr. STEWART called attention to the fact that Scotland was unrepresented among the names of members nominated to act upon the Council.

A MEMBER pointed out that Dr. Clouston and Dr. Rutherford were actually

on the Council: but Dr. STEWART replied that that was only by virtue of their official positions.

The PRESIDENT said that what Dr. Stewart pointed out must have been overlooked by the Council. He was sure that either of the gentlemen named would be prepared to have his name struck out so that a representative from Scotland might be substituted.

Dr. CAMPBELL suggested that Dr. Yellowlees' name should be inserted in the place of the last on the list.

The Lists having been collected and scrutinized, the result was declared by the PRESIDENT to be as follows:—

OFFICERS AND NEW MEMBERS OF THE COUNCIL, 1880-81.

PRESIDENT-ELECT		DR. HACK TUKE.
TREASURER		DR. PAUL.
EDITORS OF JOURNAL ...	{	DR. CLOUSTON, DR. HACK TUKE, DR. SAVAGE.
AUDITORS		DR. ORANGE, DR. WOOD.
GENERAL SECRETARY		DR. RAYNER.
SECRETARY FOR IRELAND ...		DR. COURTENEY.
,, ,, SCOTLAND ...		DR. RUTHERFORD.

COUNCIL *(New Members.)*

Mr. J. BAYLEY.	DR. MAUDSLEY.
DR. JEPSON.	DR. YELLOWLEES.
DR. MURRAY LINDSAY.	

Dr. HACK TUKE thanked the Association for the honour they had conferred upon him in electing him to be their President for 1881, and for the confidence which they had thus reposed in him. In former years he had declined to accede to the proposals made to him by individual Members and by the Council, as the records of the Association would show, but on the present occasion he could not resist the opportunity of holding an office, election to which must be gratifying to anyone who valued the good opinion of his professional brethren. It would be his endeavour to discharge his duties to the best of his ability, and to promote in every way the interests of an Association in which, as a member, he had felt an interest for nearly thirty years.

Dr. CAMPBELL proposed a vote of thanks to the Editors of the Journal. He did so most cordially, and he begged especially to thank them for introducing the Index Medico-Psychologicus.

Dr. RAYNER seconded the motion.

Dr. HACK TUKE responded, saying that the suggestion of the Index Medico-Psychologicus was made in the Council last year, and the Editors had endeavoured to carry it out. He must ask their indulgence if it appeared at any time to err on the side of omission or insertion, as it was no easy matter to know where to draw the line. The Editors would always be happy to receive suggestions from the Members.

Dr. SAVAGE hoped that the Members would more readily come forward and would not require so much whipping up. The enormous number of interesting facts which came before them and were wasted for want of communication distressed the Editors, who wished to collect all they could. There was another suggestion which he hoped would be acted upon—that there should be, occasionally at all events, an addition to the Journal in the form of practical details—for instance, that one Member should take up the question of washing; other Members the best means of arranging kitchens, making ward decorations, &c. They were questions of immense importance. It was all very well for extremely scientific Members to say, "Oh! let someone else do that," but

in his opinion all these things came within the scope of a good physician, and if the administration of kitchens and other arrangements could be bettered, surely it ought to be done. He could say for himself, and also for the other Editors, with whom he had discussed the matter, that they would be only too glad if any Members (without requiring whipping up) would contribute such details, and it was to be hoped that next year this suggestion would be found to have borne some fruit.

Dr. HACK TUKE said that he was glad these suggestions had been made. Members would, perhaps, bear in mind his own remarks on a previous occasion when he proposed the setting apart of a corner of the Journal to be designated "Our Confessional," as more was often to be learnt from failure than success.

The vote of thanks to the Editors having been unanimously carried,

Dr. SWAIN proposed a vote of thanks to the Secretaries. Dr. STEWART seconded this, observing that the presence of so many Members was a proof of a good deal of whipping up. He was very glad to see present the Secretary for Ireland (hear, hear).

The motion was carried unanimously, and was responded to by Dr. RAYNER, the General Secretary.

Dr. RAYNER proposed that the next Annual Meeting should be held in London. He did so for several reasons. One was that the International Medical Congress would be held next year in London at which there would be a psychological branch, and as many Members of this Association would no doubt like to attend that Congress, it would be well to fix the date of the meeting of the Association as near to it as possible.

Dr. CAMPBELL seconded the motion, which was carried, the precise day being left to the Council.

NEW MEMBERS.

The election of new ordinary members was then proceeded with to the number of 13, viz:

Beattie, J. A., M.D., Hospital for the Insane, Paramatta, Sydney, New South Wales.
Dunlop, James, M.B., C.M., Woodilee Asylum, Lenzie, Glasgow.
Fox, Bonville Bradley, B.A., M.B., Brislington House, near Bristol.
Gibson, William R., M.B., C.M., Murthy, Perth.
Harrison, R. Charlton, Surgeon to H.M. Convict Prison, Wormwood Scrubs.
Jones, D. Johnson, M.D.Ed., Kent County Asylum, Barming Heath.
MacBryan, Henry C., L.R.C.S., South Yorkshire Asylum, Wadsley, near Sheffield.
Norman, Conolly, M.D., District Asylum, Monaghant, Ireland.
Seccombe, Geo., L.R.C.S., Caterham Asylum, Surrey.
Thomson, G., M.B., C.M., County Asylum, Derby.
Woollett, S. Winslow, Sussex House, Hammersmith.
Weatherley, Lionel A., M.D., Portishead, Somerset.
West, Geo. Francis, M.D., District Asylum, Omagh, Ireland.

HONORARY MEMBERS.

The following gentlemen, having been separately ballotted for, were declared duly elected as Honorary Members of the Association.

Dr. Sibbald—Proposed by Dr. CAMPBELL, seconded by Dr. BUCKNILL.

Dr. Motet, Honorary Secretary of the Medico-Psychological Society of Paris—Proposed by Dr. HACK TUKE, seconded by Dr. RAYNER.

Dr. Ball, of Paris—Proposed by Dr. RAYNER, seconded by Dr. HACK TUKE.

CORRESPONDING MEMBER.

Dr. Kornfield (of Silesia)—Proposed by Dr. BLANDFORD, seconded by Dr. SAVAGE.

STATEMENT OF ACCOUNTS.

The next business being the presentation of the Treasurer's Accounts for the past year, Dr. PAUL submitted and read the balance-sheet, which will be found on the next page, the same having been duly examined and certified as correct by Dr. Boyd and Dr. Murray Lindsay. Dr. Paul stated that it was on the whole a very satisfactory balance-sheet. The balance in hand was not quite so much as at the end of the previous year, but then there had been the heavy exceptional expenses of the Journal Index and the plate for Diplomas, the former costing £64 17s. 10d., and the latter £25 7s. Members would be gratified to see for the first time among the receipts an item of £6 0s. 8d. for interest on money invested in Government securities (hear, hear).

Dr. SAVAGE moved that the Report of the Treasurer now read be adopted, and that a vote of thanks be accorded to Dr. Paul for his satisfactory work as Treasurer. It was gratifying to find that they had money in hand and money to spend, and he trusted that the editorial department would spend money as satisfactorily and freely as they could.

Dr. BAYLEY seconded the motion, which was carried unanimously.

The GENERAL SECRETARY reported that the petition from this Association, that Mental Diseases should be made a subject of examination for all degrees and licenses to practice Medicine in the United Kingdom, had been duly presented to the General Medical Council, where it had elicited full discussion; but the proposal had been negatived by the Medical Council, and a polite intimation to that effect had been forwarded to this Association.

Dr. MCDOWALL stated that he had expected that Dr. Maitland would have been present to explain some ideas of his own in regard to the Statistical Tables. Members were aware that certain tables were prepared for the Commissioners in Lunacy, and Dr. Maitland thought it would be well if those tables could be used in the annual reports. Dr. Maitland having written to him on the subject, he (Dr. McDowall) had suggested that the matter should be referred to the Committee, which was appointed some years ago, and he now begged to propose that that Committee should take the matter up and submit a report thereon at the next annual meeting.

The GENERAL SECRETARY pointed out that the Committee referred to did not now exist, and would have to be re-appointed.

Dr. MCDOWALL accordingly moved the re-appointment of the Committee, and the proposal was seconded by Dr. SUTHERLAND.

After some discussion as to the constitution of the new Committee, it was resolved that the Committee previously appointed for Medical Statistics should be re-elected, with power to add to their number.

AFTERNOON MEETING.

Mr. G. W. MOULD, the President, again took the chair. In thanking the Association for electing him to preside over them, he stated that he felt very deeply the responsibility which he had undertaken, but he would fulfil his duties to the best of his ability. Before proceeding to read his Address, he referred to the long controversy which had been waged on one of the most prominent topics in his Address (viz., that relating to private asylums), a controversy which had engaged the pens of many able writers, especially Dr. Bucknill, and stated that, holding the position which he did in a public hospital, and having also had experience in a County Asylum, he had been induced to give to the Association the views which he himself had formed upon the subject, together with his experience upon other matters in which they were all deeply interested; and he should be amply gratified if he should be enabled by so doing to further, in the slightest degree, the interests of those patients to whom they had devoted their knowledge, their energy, and, he might say, the best portion of their lives. (For President's Address, see Original Articles, No. 1).

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Treasurer's Annual Balance Sheet, 1879-80.

RECEIPTS.	£	s.	d.
To Balance—Cash in Hand	299	6	10
To Subscriptions received	278	15	0
By Secretary for Ireland	29	8	0
By Secretary for Scotland	45	3	0
By Sale of Journal, Messrs. Churchill	108	18	0
By Interest on £205 7s. 10d., 3 per cents. ...	6	0	8
	£767	11	6

EXPENDITURE.	£	s.	d.
By Annual and Quarterly Meetings	27	1	0
By Editorial Expenses	12	12	0
Printing, publishing, engraving, advertising expenses, and postage of Journal	322	11	5
By Expenses of Index for Journal	64	17	10
By Plate for Diploma and Diplomas	25	7	0
By Printing and expenses of circulars for Meetings	18	15	5
By Treasurer	6	6	0
By Secretary for Ireland	0	4	2
By Secretary for Scotland	7	19	0
By General Secretary	0	17	0
By Balance in Treasurer's hands	281	0	8
	£767	11	6

Examined and found correct,

R. BOYD,
J. MURRAY LINDSAY, } AUDITORS.

J. H. PAUL,
TREASURER.

ROYAL COLLEGE OF PHYSICIANS, LONDON, *July* 30th, 1880.

Dr. LUSH moved that the thanks of the Association be accorded to the President for his very able Address. This was a pleasant duty, which was irrespective of any discussion which might follow; and although it was possible that there might be some differences of opinion as to the best solution of the difficulties connected with the subject, he was certain that the proposal which he now made would meet with a cordial and unanimous response (applause).

Dr. MONRO seconded the motion, saying that he felt especially grateful to the President for the sympathy and kindness which he had shown towards private asylum officials. Those gentlemen had been so belaboured hitherto that to have a word of sympathy from the Chair would be a matter of great gratification to them.

The resolution having been carried unanimously, the expression of the thanks of the Association was then conveyed to the President by Dr. RAYNER, the General Secretary.

The PRESIDENT, in thanking the Association for their vote of thanks, observed that he could not quite agree with Dr. Monro, for he thought that the private asylum officials had the sympathy of everyone. Their case had been very carefully brought before the public and thoroughly discussed in a spirit of fair criticism. As he had said at first, among other writers, their friend Dr. Bucknill had dealt with the subject very thoroughly, and without any disguise as to what he thought upon the subject, calling "a spade a spade." In any discussion that might ensue he (the President) hoped that due care and consideration would be given to all their little social amenities.

Dr. HACK TUKE said that having visited Cheadle on two occasions he could not let the subject pass without expressing his very great pleasure and admiration at what he there saw and studied. It seemed to him to have proved a very great success, and if the plan proposed was carried out more generally it would be a very great boon. On conversing with the patients he ascertained that many of them very much preferred being in the villas to being in the establishment. He had known exceptions to that rule elsewhere. He knew that in the case of a separate house, connected with the York Retreat, sometimes patients preferred being in the central establishment, saying that they were dull in the separate villa, but he believed that this was exceptional, and that the patients would be in general pleased to be in the separate building. As regards the patients' friends, they would infinitely prefer visiting the patients in the cottages to visiting them in the asylum itself, and in many cases they would be willing to have their friends placed in the cottage or villa, when they would entirely object to having their friends placed in the asylum. As to the expense of the cottages, as far as he remembered, their cost was, in the first instance, less than if additional rooms had been made to the asylum, but when the extra cost of supervision was taken into account, the expense was greater than it would have been if a small wing were added. It was, however, his own feeling that any slight additional expense would be counterbalanced by the resulting advantages. He wished, however, to remark that the success of this system would depend upon the thoroughness of the supervision and proper selection of cases. Under a superintendent like Mr. Mould, and carried out with the same amount of enthusiasm and energy as he devoted to it, the plan would be successful; but the same plan carried out under less favourable circumstances might be worse than having the patients all under good care and treatment in the main building. He wished most cordially to give his testimony to the success of Mr. Mould's experiment.

Dr. CAMPBELL said that he quite agreed with what had fallen from the lips of Dr. Hack Tuke in regard to Mr. Mould's experiment of cottage and villa residences. As regards the discharge of patients, he could not see why it should not be left in the hands of the medical superintendent. It was so in Scotland, and worked uncommonly well. He did not see why there should be

required two magistrates, or the man who signed the order. The latter arrangement had been found very inconvenient where the person who signed the order had since died. As to pauper patients in detached houses, the expense had always stood in the way. It would, no doubt, be most excellent for the patients. He had no doubt that the remarks made would induce several of the members present to take some steps in the matter. Patients were detained much less time in County Asylums than they used to be. The tendency was to quick recovery and quick discharge, and those patients who would benefit most by the suggestion would be chronic patients who were a little wrong in their minds. For his own part, he must thank Mr. Mould for the many hints which they had all derived from the Address.

Dr. SAVAGE could not speak authoritatively from any practical knowledge of Mr. Mould's establishment, but it struck him, in connection with acute cases solely, that Dr. Campbell's remarks were borne out by his own experience, that for this class these cottages would be managed with great difficulty. For chronic cases they would be of the greatest benefit, but for acute cases he could scarcely see how they would be managed. At Bethlem they had at one time plenty of patients—more than enough—to send down to their convalescent place, and at another time they would have a difficulty in finding a complement. There it was all in one building, but if there was to be a cottage for six patients, and no six patients to go, it would prove rather a difficulty. He thought, too, with Dr. Hack Tuke, in regard to the primary importance of supervision for the success of the plan, medical superintendents might get into ways of managing large numbers of patients well even though they might not themselves be scientific or thorough; but when it came to separate cottages, separate high organisms would be required at each cottage. A master mind might keep them all going, but if that was absent there was a much greater chance of getting into difficulties with so many separate houses. There would be more points of attack than if they were all under the immediate supervision of the superintendent. Then as to the advantage or disadvantage of rapid cures. He could not help thinking that there was too great a tendency to be proud of rapid cures, so that if he had to speak against private asylums, he should say it was because they yielded to the pressure of public opinion, which said, "Turn them out as soon as they are well." He had regretted nine times sending out patients too soon for once that he had regretted sending them out too late. This, he might say, perhaps, in favour of these cottages, against his former remarks—that if patients after being cured at Bethlem went down to the convalescent home, they did not relapse in such a large proportion as those who were discharged directly they appeared well. So that he did not think it was altogether an advantage to send patients out directly. They, as scientific men, must make a distinction between mental action in health—apparent reason—and the re-establishment of the whole tone of nervous system. He quite agreed about two or more medical men meeting to sign the certificates, and talking over the case. The present system was a farce. Much more would be gained if, instead of regarding consultation as contrary to the intention of the Legislature, it was honestly said, "You may talk about the case." Why draw a distinction between this and other diseases? Then in reference to the leaves of absence in Scotland, &c. It would be a very great advantage if in future legislation they were allowed to let their patients go beyond the limits of England. It had happened to him lately that patients had gone out on leave, and then he had had a letter from Scotland, saying, "My wife is getting on very well, and I will bring her back next month," and such like. Within the last few weeks a patient wrote to say that he was getting on very well, and was enjoying his trip in France. It would be a very great advantage if these absences were extended. As regards the promiscuous visiting of patients by other physicians—there were practical difficulties in the way. It might do in some county places; but if in places such as Bethlem the physicians who had

signed the certificates were to be expected to come and consult with the medical superintendent as to how the patients were getting on, the superintendent would have absolutely no time for anything else. As it was, it averaged from five to eight doctors a day enquiring about patients in Bethlem, and if it was to be encouraged still further and considered a recognised thing, he was afraid that he, for one, would suffer seriously by it. At general hospitals, such as Guy's or Bartholemew's, the physician in charge of the case did not see the general practitioner, and he (Dr. Savage) did not think that superintendents of Lunatic Asylums should be expected to do more than general surgeons or general physicians.

Dr. STEWART thought that the remarks made in regard to the encouragement of visits of private physicians were particularly good. He did not take it that the President wished to encourage the visits of those who signed the certificates, but rather that every encouragement should be given on the part of those who had private asylums or public hospitals under their charge to the medical men in the neighbourhood to see all the cases and in that way to have a guarantee on the part of the public, through their friends who were in the medical profession, that the place was being conducted as it should be; and he thought that as a rule the public had such a reliance upon the medical profession that it would be a very great help. Mr. Mould had referred to the possibility of the Commissioners attending at special meetings and having interviews with the medical officers. Now he (the speaker) remembered at the Irish asylums several instances in which that plan had been adopted. At one time it was attempted to make the Irish Commissioners, who were called "inspectors," *ex-officio* members of the committees, but it was considered that it lowered their dignity. At the present time although they did attend from choice and did give their advice and were asked to be present, they were not actually members of the committee. That, of course, the President would not advise; still it seemed to be a good thing that the Commissioners should be known more individually by the members of the committees themselves. With reference to the question of private patients in public institutions and the inadvisability of those whose friends contributed at all to their support being treated in public institutions differently from the ordinary paupers and others, he had seen several cases in which the President's remarks had been borne out, for all the patients of a pauper asylum being supposed to be dressed in the same way, there was an undoubted jealousy on the part of the females if one happened to have a different gown; while if the difference was carried further and there was a better diet the jealousy was still greater. Referring to Dr. Savage's remarks as to the pride with which people spoke of the rapidity of their cures and to the fact of that prevailing more among private asylums than public ones, he thought they did not hear so much about relapses as they ought to do. He hoped that that would be one of the points which would be brought before the committee for statistics, and it would be seen that in many cases in which the cures were very rapid the relapses would be above the average. Dr. Savage had stated that those patients who were sent down to tne convalescent home from Bethlem did not relapse so soon. He (Dr. Stewart) could well understand that, and those proprietors of private asylums who advised the friends of the patients to send them on to the care of a private medical man had found that that course had tended ultimately to the advantage and perhaps the final cure of the patients.

Dr. RAYNER said that the discussion really bristled so with points of interest that it was difficult to choose where to begin. He would first take up the point relating to early cures which Dr. Stewart had just been speaking about. He quite agreed with Dr. Savage that the early cure was not always satisfactory. The most satisfactory cure was the late cure. The man who got well after three or four years' residence in an asylum would very likely remain well all the rest of his life; but the man who got well in two or three months was very

likely to relapse. The difficulty under which medical superintendents laboured was that as soon as a patient had regained his sanity he could argue in defence of his liberty, and the superintendent was obliged to discharge him. That could be met by the superintendents having the power to report, to the Commissioners in the case of private patients, and to the magistrates in the case of pauper patients, that it was their opinion that the patient should still remain under medical superintendence for a certain time. That would prevent the too early discharge of patients which now very frequently took place both in public and private asylums. Very many cases relapsed simply from premature discharge, and premature discharge was necessitated by the state of the law. In regard to the treatment of patients in small adjuncts to the asylum, he thought that those adjuncts would be of great use in a large institution. Two or three such could be perfectly well managed and would be of the greatest service for the temporary residence and temporary treatment of a certain class. He questioned whether too much consideration could not be shown to the feeling of the patients in regard to such places, for cases of melancholia would be naturally attracted to them for which the main building, where they would be stimulated to exertion, would be more suitable. With reference to the point alluded to by the President as to power being given to the county court judge to exercise control over a lunatic's property during temporary detention, he thought that that was a very desirable measure. Power is proposed to be given for the property of lunatics in Ireland being treated in this way. As to the separate examination of lunatics by two medical men, he quite agreed with Dr. Savage and the other speakers on that point, viz: that medical men should consult together in giving certificates, and also should not be bound by the law to examine their cases separately.

Dr. Thompson wished to ask whether it was not a fact that the public hospitals now, with the exception of Bethlem, were becoming more or less mercantile ventures, the object of which was to make money and a great show. He did not mean to say that the medical superintendents shared in the spoil, but were poorly paid patients hustled out to make room for better paid patients? He did not think that public hospitals ought to be the best private asylums. He had no sympathy with private asylums beyond this. There were people who had invested in private asylums, and they had a right to look for a return, but the public hospitals came in the way: they made a boast that they were public property, and that the patients received all the superior care, and they had the preference. He had heard that at Northampton they were making thousands a year, and they did not know what to do with it, and yet the poor patients whom it was meant for, were swept up and sent into the pauper lunatic asylums. He thought that it was a great shame.

Dr. Hicks said that he did not know that anyone who had yet spoken was connected with private asylums. Speaking on behalf of the private asylum proprietors, he felt that he must thank the President for the balm which he had administered to them. He might say, however, that most medical proprietors had been prepared to accept at any moment some such fair and equitable arrangement as that which he had suggested. They had been told that they must be driven out of the market. The largest number of the proprietors at the present time were not those who had gone into that branch from mere pecuniary motives. Some had gone into it from the love of the work; some had been led into connection with private asylums and found themselves as it were drifting into it. The proprietors were in duty bound to thank the President for his admirable Address, which went to the root of the whole thing; which was that if they were equitably treated they would be ready to leave the market. If, however, the present agitation were carried on, the upright men would all leave, for it could not be expected that the honest and upright men connected with private asylums would remain long if the medical men, members of their own profession, continued to throw dirt at

them. They would throw up their connection to companies and others, and then there would result those complaints which had not yet been substantiated. Everything connected with the asylum was looked upon with suspicion. Every medical man one spoke to had the idea that the proprietor must be doing something different from everyone else. Now it was not the scum of the profession who were doing this work. They had their professional feeling and wished to do their very best. One might say to medical men of any sick person that they were continuing to keep that man on. It would be equally applicable to every kind of disease. Private consulting men might be equally liable to such a charge. If there were such, private asylum proprietors had an equal right to throw the dirt back, and say that they kept their cases longer than they ought.

Mr. Hayes Newington said that it was very idle for any body of men like themselves to discuss the question at all. All they could do was to rattle out some very crude propositions. The Select Committee of 1877 had gone into the matter, and the outcome was simply a few statistics and opinions. The matter had never been submitted to the test of counsel. The only way would be to have a Committee who invaded their rights distinctly. Then they would be represented by Counsel. Many points went unnoticed because there was no one to point them out. All the propositions made were crude. Dr. Mould's contained some very valuable things, but they could not be carried out. It was easy enough to talk over these matters, but one was none the wiser. There was one little suggestion that patients should have liberty to go abroad. Now, if a patient went to France and refused to return, who was going to get him back? A good deal had appeared in medical papers and other papers of what ought to be done with private asylums. People read these things, and thought that, because they were in print and uncontroverted, they must be true; but he (Dr. Newington) hoped that the public would wait, and not make their judgment in one way or other until they had really seen a pitched battle between the opponents of private asylums and the proprietors. He repeated that he hoped (and he had only spoken because it might be thought that unless a little opposition were made to Mr. Mould's suggestion, it was approved by the Society), that the profession and the public would withhold their judgment until the matter had been threshed out thoroughly by competent counsel with well-ascertained facts.

Dr. Hack Tuke said that it ought to be clearly understood whether it really was the legal view that two medical men should not consult together, as indicated by Dr. Savage. Ought they to acquiesce in that? Although he believed that one of the Judges, Lord Coleridge, held that it was the spirit, though not the letter of the Act, that medical men should not consult together, he (Dr. Hack Tuke) had not supposed that that was what the law intended, but there was a general impression with some that it would tell against a medical man if he admitted that he had had any consultation. The question was mooted recently in one of the medical journals, and the opinion was expressed that it was improper, from a legal point of view, for two medical men to consult together about the patient.

The President—I distinctly recollect Lord Coleridge saying that, to his mind, it was a very great impropriety that the certificates should be upon the same piece of paper.

Dr. Bucknill said that that was what Lord Coleridge did say. He said it was inconvenient, and it certainly did not appear to him to be consistent with the spirit of the Act that the certificate of the first medical man should be taken to the second medical man, who would read that certificate, and see what the first man had said. He (Dr. Bucknill) thought that Lord Coleridge was quite as capable of forming an opinion of the spirit of the Act on this point as any medical man and any lawyer, and he was inclined to agree with him in that matter, and say that if medical men were to be kept apart, the certificates should be also kept apart. With regard to medical men consulting together,

Lord Coleridge never said anything about it, inasmuch as the question was never raised. The two medical men in that particular case had never seen each other, and the first man did not know who the second medical man who signed the certificate was. It was clear there was no law to prevent medical men consulting together, nor, in fact, from seeing one another's certificates. He quite thought that, when any reform or reforms of the law under which they acted should be considered, and improvements made upon a broad principle of reform, aud not merely by a tinkering-up of the whole affair, it would be recognized as right that medical men should consult in cases of disease of the mind, and that the report should be a matter of joint consideration, just as it was in any other disease. It was a curious comment upon the spirit of the law with regard to the certification of insane persons placed in asylums, that it was not adopted in the Court of Chancery. He went to see an alleged lunatic under the care of the Lords Justices during the then present month, and the order went to the effect that he might go by himself or with Dr. Harrington Tuke, separately or conjointly. If they went conjointly, the medical man attending the case would be present. He (Dr. Bucknill) examined the patient for an hour and a-half, while Dr. Harrington Tuke and the other gentleman were taking notes. There were many points upon which it was a question for a jury whether he said so-and-so or so-and-so. He thought that every alleged lunatic about whom there was a doubt, ought to have the chance of the decision of two or more medical men, and that the spirit of the thing should be a consultation, or a joint report—or, if they could not agree to that, a separate report might be agreed upon as to what took place; not the present mode of certification which, as someone had observed, was a farce.

Dr. Rayner suggested whether separate certificates, given on separate pieces of paper, would not be invalid in a court of law, since the certificates might be alleged to relate to different persons of the same name.

Dr. Bucknill—Oh! no, The certificate describes the patient as living in a certain place.

The President, in reply, said that, with regard to the question which had been raised as to the expense of the separate buildings, the cost of the cottages was certainly less than the cost of other places, and in some of those cottages where thirteen or fifteen patients were well housed, the cost per head amounted to £80, and that would be a very low rate in county asylums. The cottages which he had brought under their notice did not exceed that sum, and some were less than £80 per bed. Comparing them with other asylum buildings, the cost of the cottages was smaller, and the advantages great; and he did not think that the cost of administration would be heavier. A little time ago he had proposed to build an asylum for 1,000 chronic cases. The persons who were to contribute the necessary capital were to get nothing more than five per cent. out of it, and no one building was to have more than twenty or thirty cases, under the charge of a man and his wife. The advantage of this method of supervision was that there was a great competitive desire to do well. If a man and his wife were placed in charge of one of those cottages, containing from ten to fifteen or twenty patients, that man and wife would appreciate the advantages of the situation, and would do all they possibly could—perhaps from selfish motives—to do well. As regards Dr. Campbell's remarks as to medical superintendents having the power of discharging patients, he (Mr. Mould) had been speaking more particularly in reference to private asylums and the power of detention. With respect to Dr. Savage's excellent remarks as to the trouble which would result from outside medical men interfering by frequent visits to the patients, he would observe that at Cheadle there were a great number of medical men visiting. If he himself could not meet them, he allowed them to see for themselves the mode in which their patients were treated; they were thus themselves satisfied, and conveyed that satisfaction to the friends of the patients, and in the mind of the public that was a

very great safeguard as to the treatment of their friends in the hands of strangers. Now, Dr. Savage was at Bethlem a kind of centurion, who could say, "Do this," and it would be done, because there the patients came free of cost and free of charge. If all the hospitals were like this, there would not be the charge that unfortunate patients, who could not afford to pay, were turned out. He agreed with Dr. Thompson that this did obtain, but to a small extent. Although the Cheadle Asylum was a very large one, he was glad to say it was in debt, and he intended to keep it so. Any profit which was made upon the richer patients was invariably expended upon the poorer patients, and the debt had been steadily increasing. He could make allowance for the indignation shown by Dr. Thompson, who, he thought, must have been receiving patients who had been improperly turned out of a hospital very recently. Such an occurrence was very rare—at all events, in his experience. Then, with regard to the statements as to the crudeness of his proposals. The Association met for the purpose of bringing forward proposals, and they must, of necessity, be somewhat crude. Let them, at all events, be considered. What he felt was, that they allowed outsiders to bring forward those proposals which ought to be originated by themselves. They ought themselves to go to the Legislature, and not leave it to Mr. Dillwyn or some other gentleman to do it. He must very sincerely thank the Members of the Association for the consideration they had shown to his proposals, which might seem crude, but which were the result of nearly a quarter of a century's experience both public and private (applause).

Dr. Bucknill wished to add that he had had the pleasure and advantage of seeing the cottages, and examining them carefully, within the last few months, and he was greatly pleased and quite convinced that for a certain class of patients they were capable of conferring much greater happiness and a greater probability of cure than the institution itself, excellent as that institution was. There was a great variety of them, and people there seemed to be very free and to appreciate their freedom. He was altogether very much delighted with what he saw, and was quite sure that it was in that direction that the hospitals might be improved. As to individual patients preferring to remain in the main block, he might say that he went down to see an opulent lodger in the main block who would not go out into one of the best villas. She alleged that the big building and everything in it belonged to her, and she was not going to leave it (laughter).

Dr. Boyd then read a paper upon

The Cure and Care of the Insane.

As early treatment is most essential in the cure of the insane, why not—in order to obviate the delay so frequently incurred in procuring through the Relieving Officer the required order and certificate for the admission of a patient to an Asylum—why not authorise the Superintendent to admit the patient on the certificate of the medical officer of the parish or Union, and, when entered in the admission book, the signature of the Chairman of the Committee of Visiting Justices, after they have seen the patient at their usual visit, to be the authority for retaining the patient in the Asylum? The orders would thus be abolished, and the early treatment of the patient facilitated.

The copies of the certificates are very frequently re-

turned for correction, and, if not properly amended within the allotted time, the discharge of the patient is insisted on. I have known of a case of suicide consequent upon such a discharge from "informality" in the certificate; also a case of homicide from *delay* in obtaining the needful order for admission. In the latter case the man was kept in Broadmoor Asylum for many years, until his death, although he had recovered. His brother, a hard drinker, had the same homicidal tendency, but was speedily removed to the Asylum, where he soon recovered, and was discharged "on probation," his name being retained on the books, and the police instructed to bring him at once to the Asylum when excited. After some time he abstained from drink altogether, and attended to a large business.

Dr. Prichard, in his "Treatise on Insanity" (1835), page 129, states, on the authority of Pinel, that "the greatest number of recoveries from madness take place in the first month of its duration."

Dr. Burrows reports 221 cures out of 242 recent cases.

At the Retreat near York seven out of eight recovered. My own experience in the treatment of acute cases, for many years, in the Marylebone Infirmary, verifies the above statements. After the passing of the Lunacy Acts in 1845, with the approval of the Commissioners in Lunacy, a license was obtained by the Infirmary for 95 patients, and the treatment of the cases was successfully carried on until the additional Asylum at Colney Hatch was available. No certificates were required in these cases.

In the Reports of Superintendents abundant evidence can be found that the Pauper Lunacy Acts are constantly used in the *manufacture* of lunatics, so as to empty Workhouses of their refractory, infirm and aged paupers, who, after having once enjoyed the luxuries of Asylum life, can seldom be got rid of. I have known numbers sent to the Asylum at the "point of death."

Instead of constantly adding to Asylums, would it not be better to place the Workhouses under the enlightened management of the Visiting Justices and Commissioners in Lunacy, and substitute Medical Relief Acts for Pauper Lunacy Acts—the latter a most inapplicable title—and thus rid the Asylums of many of their inmates who are really only in a state of fatuity, and make room for recent, acute, and curable cases?

Dr. BOYD having read his paper, briefly referred to his experience at the Marylebone Workhouse, and said that for many years he treated cases of insanity there without any orders. The acute cases were merely sent in, and were treated and cured in much greater numbers than in any other cases. He also referred to the advantages of early treatment and to the inexpediency of allowing as much as fourteen days to elapse before the removal of the patient.

The PRESIDENT said that the course proposed by Dr. Boyd would be a very simple matter, and was rather like what was done in Scotland. He thought they would all agree upon the subject.

Dr. THOMPSON thought it would be very much to the advantage of the patient and to their own satisfaction if they were empowered to receive the patients upon the representation of a medical man, and then the magistrate at his official visit should sign the case book and authorise his detention. In some cases patients were received in a state when they could not be cured.

Dr. RAYNER said that facilitating the admission of patients would have another advantage, for if the facilities of admission were increased the facilities of discharge would be likewise increased. As it was, the Workhouse authorities were only too prone and ready to take advantage of the present state of the law to send to asylums unfit cases who could not be legally discharged except after the usual formalities.

Dr. LUSH considered that Dr. Boyd deserved the greatest possible credit for his boldness, because he was attacking that very form of *dilettanteism* which degraded the medical profession and raised the magistrate. Interference in these matters would not continue if the medical profession could be upheld in the independent exercise of their judgment. One of the recommendations of the Select Committee of 1877 was that in every case there should be two medical certificates. If, instead of the relieving officer and clergyman, there should be two medical certificates, it would show that medical men were to be relied upon in that matter alone.

Dr. STEWART said that it was a striking comment upon the way in which the lunacy law had been handled for so many years that when the lunacy acts were passed it was complained that they were used for the manufacture of lunatics, and possibly the same complaint was made at the present day. He thought they were all under a debt of obligation to Dr. Boyd for the fearless way in which he tried to elevate the medical profession in the matter of the admission of patients into asylums.

A vote of thanks having been accorded to Dr. BOYD,

It was resolved, upon the motion of Dr. CAMPBELL, seconded by Dr. HACK TUKE, that the thanks of the Association be given to the Royal College of Physicians for the use of their room upon the present occasion.

The proceedings then terminated.

The Members of the Association dined together in the evening at Willis' Rooms, St. James's. Among the guests were the Earl of Shaftesbury, Mr. J. T. Hibbert, M.P., the President of the Royal College of Physicians, &c. The customary toasts were duly proposed and honoured. The health of the Earl of Shaftesbury having been proposed, and enthusiastically received,

His LORDSHIP, in reply, said:—

You will, I am sure, readily believe that I feel very deeply the manner in which my health has been proposed and received. I feel it especially as coming from a body of medical and scientific gentlemen of whose services I can speak with

the greatest gratitude. I became connected with lunacy work in 1828, and I believe that at that time there was almost entire ignorance of the whole nature and treatment of insanity. The condition of the insane was the most deplorable you can well conceive. From perfect ignorance they were looked upon as outcasts of the earth, and were reduced to a condition which I have not the power of language to describe. At that time it would have been impossible to collect, not only such an assembly as I see before me here, but one tithe, in the whole City of London, of gentlemen such as yourselves. Well, you have worked up this state of things to a point to which that previously existing can, I assure you, bear no comparison. Nevertheless, there is great improvement yet to be made (hear, hear). In the progress of science, I believe much will be done for the alleviation of the ills of the human race. And do not think that all the past time has been lost; great things have been achieved. Let me tell you of a statement which I made before the House of Commons. We were examined over a period of sixteen or seventeen years, from 1859 to 1877. I showed that 185,000 certificates had been issued, and persons shut up upon those certificates; and, though the Committee sat for six months, yet they did not discover a single instance in which the patients had been shut up without good and sufficient reason for their being shut up (hear, hear, and applause). That is a proof of what may be done by further enquiry and devotion on your part in the interests of the insane. Now at the present time there is rather a tendency in another direction —a tendency which ought to be rather checked; because, recollect, we who are in charge of the legal duties in regard to lunacy, must consider not only the interests of the insane, but also the interests of the public (hear, hear). We must be very careful indeed how we hastily let loose upon the public persons whom we are not quite certain have been restored to the power of self-control. The tendency now is to let out everybody who is shut up, and henceforward to shut up nobody at all. Now every advance which you make in your great and important studies is a step towards the removal of the most profound affliction that has ever been permitted. I can conceive of nothing more sublime and more Christianlike than the institution and application of these studies, and, though there were in former times great instances of cruelty and abuse, my experience of the various

asylums—private as well as public—is not only favourable to the highest order of intellect, but to the truest and deepest sentiments of humanity towards the poor creatures who are there confined. I wish, however, you could see as much as I can tell who have seen so much (I am only speaking as regards age now, and many of you could not have seen those things which existed at the time I began this work); but I think some of our friends sitting near me may call to mind some of the old arrangements of the Manchester Hospital in regard to the various appliances of which I feel sure that, had Sir John Lubbock's Bill been in existence, those appliances would have been carefully scheduled for preservation. You will agree with me that, with any laxity on your part of superintendence and care, things might go back to their former condition; hence the necessity for perpetual progress. I am not going to say that our own department is not capable of many important reforms. All that I wish is that those reforms should be made gradually, step by step, as the result of great and tried experience. There are two things which I should like to impress upon the legislature of our country. The first is that all the asylums, public and private, must be constantly inspected by an independent body of men, acting independently, upon their own authority, and untrammelled by the *ipse dixit* or fancy of any one who may be in office at that particular time—perfectly independent men. The next point is this—I hope that nothing will ever be done in legislation that shall in the least degree prevent the early treatment of all cases of lunacy. I say this because there is a very great fear—it is a natural fear—of curtailing the liberty of the subject, and people are justly fearful lest persons should be improperly confined upon insufficient evidence, and have the stigma of insanity fixed upon them. I know the difficulties which abound upon this point; I know the extreme delicacy with which it is approached; I know it happens that the first development of eccentricity is put down as if it were the proof of a long-seated disease; but I know also the benefits which attend early treatment, and that if a larger proportion of cases were taken in due time, an enormous proportion would be restored to health. Therefore I hope that, when the time comes, nothing will be done which will throw unnecessary impediments in the way of early treatment by a mistaken delicacy in regard to the "liberty of the subject." The two prin-

ciples must, at all events, be maintained, viz., a thoroughly efficient, permanent, and independent body of visitors, and every facility given, under proper control, for the early treatment of every case. Well, gentlemen, I will only add that it is my humble prayer to Almighty God that associations such as this may ever flourish and abound. (Loud applause).

Mr. J. T. Hibbert, M.P., responded for the House of Commons.
Dr. Farquharson, Mr. Birley, M.P., and others responded to their healths.

BRITISH MEDICAL ASSOCIATION ANNUAL MEETING, CAMBRIDGE, 1880.

President : J. C. Browne, M.D., LL.D.; *Vice-Presidents :* Dr. Dees, Dr. Blandford ; *Secretaries :* Dr. Bacon, M.A., Dr. Sutherland.

SECTION OF PSYCHOLOGY.

It is impossible to do justice to the President's Address by a short abstract. Its most important feature is, that it fully recognises the real as well as the apparent increase of insanity and allied nervous disorders amongst us. The former position was maintained some years ago by Dr. C. Browne, when he endeavoured to show that the usual explanations brought forward to account for the numerical increase were falsified by the experience of the West Riding Asylum, of which he was at that time the Superintendent.

Another feature of the Address is the emphatic approval of the decision of the General Council of Medical Education, not to make Mental Diseases a subject of separate examination in the licensing bodies of the Kingdom, as proposed by Dr. Clouston and Dr. Bucknill at the 1879 Meeting of our Association. It must be admitted that, so long as the present immoral crowding, not only of subjects, but their minutiæ, into pass examinations continues, this conclusion possesses a certain melancholy force, but could not a compromise be made between the claims of Psychological Medicine and an exhaustive knowledge of every other subject that can by possibility be dragged into the curriculum of the medical student? If this conclusion to exclude the former is justified by present demands on the student, no greater argument could be adduced to support Mr. Huxley's condemnation of medical examinations as now conducted.

Cases of Alcoholic Insanity in Private Practice. By H. Sutherland, M.D. (London).—Dr. Sutherland read a paper on Cases of Alcoholic Insanity in Private Practice. From a careful investigation of 200 private cases—100 male and 100 female, he had arrived at the conclusion that, in many cases intemperance was put down as a cause of the mental disorder, when it was in reality only a premonitory symptom. The Commissioners' tables give 14 per cent. of cases of insanity caused by intemperance in drink, but of these 14, probably three at least were cases in which intemperance was a premonitory symptom. This would reduce the percentage to 11. The differential diagnosis between cases of insanity caused by and those accompanied by intemperance, was given at length. The paper concluded with a relation of cases illustrating the difference between the two forms of insanity produced by intemperance.

Mr. Mould (Cheadle), proposed a vote of thanks to the President for his Address.

Dr. Hack Tuke (London) seconded the motion, which was carried.

Discussion on the Influence of Alcohol in the Causation of Insanity.—The discussion on the Influence of Alcohol in the Causation of Insanity was

opened by Dr. G. M. BACON, M.A. He commenced by alluding to the prevalent opinion that a large proportion, both of insanity and crime, was be to attributed to intemperance ; and declared it to be his opinion that the matter was by no means proved, and was greatly exaggerated. He contended that, as a sole or main cause, intemperance did not hold the chief place, and that the most reliable statistics did not support this conclusion. Dr. Bacon showed that, in several of the agricultural counties, the proportion of cases attributed to drink varied from 5 to 14 per cent.; that in several others, where coal-mines and iron manufactures existed, the percentage varied from 3 to 29 ; while, in certain large towns, the rate varied from 2 to 30 per cent. He argued that such figures disproved themselves, and were unreliable. He further showed that, in a majority of cases, numerous potent causes were associated with intemperance—such as the existence of organic disease, like general paralysis, or hereditary influences, blows on the head, sunstroke, etc. ; and urged that these influences were not sufficiently regarded. He proceeded to illustrate his views by his experience in the Cambridge Asylum. He had analysed 1,950 separate cases, and found that of 75 attributed to drink, at least 40 could be assigned to other causes—such as those before alluded to ; and, moreover, that the ages of the patients and the history of their symptoms were inconsistent with the common experience of those cases in which intemperance was the main or sole cause. It was, therefore, he said, impossible to accept the statement that 14 per cent. of the insanity of the kingdom could be properly attributed to drink ; and suggested that 4 per cent. would be nearer the truth, though admitting that great differences existed between the large towns and the rural population. He exhibited tables, showing the proportion of cases attributed to drink in eleven rural and in five mining districts, and in several large towns. It appeared from these that, while Ipswich had only 2, Norwich was credited with not less than 30 per cent. ; and hence Dr. Bacon suggested the absurdity of the inference, as there could not be this difference in the habits of the people of the two adjacent towns.

Tables showing percentage of Insanity attributed to intemperance in the following districts :—

TABLE A.

	Total.	M.	F.
Cambs.	7·8	8·6	7·1
Bucks.	10·7	14·5	6·6
The Three Counties	14·03	25·0	3·3
Norfolk	6·0	9·4	2·6
Suffolk	7·8	17·2	—
Wilts.	11·1	21·6	3·2
Dorset	14·2	23·3	8·5
Oxon	5·5	8·1	3·7
Table B.			
Derby	16·5	20·1	9·2
Durham	29·2	41·2	15·4
Hereford	26·09	37·5	18·3
Worcester	21·9	35·2	8·5
Cornwall	3·5	7·6	—
Table C.			
Newcastle	18·9	27·2	6·9
Ipswich	2·0	3·7	—
Birmingham	24·6	39·3	11·1
Bristol	12·06	6·4	15·9
Norwich	30·0	43·7	20·0

Dr. HACK TUKE said that, whatever opinion might be entertained as to the question now under discussion, all would concur in holding that it was only by following out the method which had been adopted by the readers of the

papers that they could arrive at correct conclusions. Those who wished to arrive at the truth must base their deductions upon ascertained facts, and not rest satisfied with vague generalisations. With reference to the statistics of Commissioners, he agreed with Dr. Bacon's criticism that they had in some particulars broken down, though the general result might be about right. There were so many factors requiring careful observation and consideration that they need not be surprised at its being shown that some mistakes had been made in the figures. He had at one time collected particulars respecting a great number of cases, and had come to the conclusion that there were 12 or 13 per cent. of cases of insanity due to drink. Though no doubt many cases were, as alleged, put down to this cause which ought not to be, yet it should not be forgotten that many of the friends of patients did their best to conceal the cause of insanity when it arose from drink. In reference to the amount of insanity produced by it in Cornwall, to which reference had been made as the lowest in the list in the tables of the Commissioners, he remembered the estimate given to him when visiting the asylum at Bodmin. The superintendent told him, that up to that time drink had produced only about 5 per cent. of the insanity there, and any one who had any experience of Cornwall knew that one would expect to find a low percentage of insanity from this cause. In this particular the Lunacy Blue-Book was confirmed. The percentage was high at Birmingham, as he had reason to know from Dr. Whitcombe, and in this instance also the Commissioners' tables were correct. Reference had been made to the York Retreat; and, as he had lived some years in that institution he was able to say it was a fact that the patients who came there were very rarely intemperate in their habits. One of the remarkable results of his experience at that institution was that along with this fact, though whether in consequence of it he did not pretend to say, he had rarely seen cases of general paralysis there, to study which he had at that time to go to the neighbouring County Asylum. As to the relative prevalence of the insane in the Society of Friends, to which Dr. Bacon had referred (quoting Dr. Clouston), that was a difficult question to decide, because, while their number could be accurately ascertained in a small body, this could not be done in the population at large. He differed entirely from the statement that 50 per cent. of the cases of insanity were due to drink; at the same time he should expect to find that a considerable portion of the insanity existing owed its origin to this cause, but there was a great difference between 14 or 15 per cent. which the Commissioners' tables showed, and the estimate put forward by Lord Shaftesbury. Certainly a strong *à priori* argument might be raised in favour of the probable influence of drunkenness, for they all knew the action of alcohol in producing morbid products in the brains of animals fed upon it, and no one denied that it caused delirium tremens in man. It was, however, only by a careful analysis of cases, such as they had had that day, that they could arrive at the real proportion of cases of insanity caused by drink. When at the Paris International Congress of Mental Medicine, he met with M. Dagonet, who had investigated three hundred cases of patients who were drunkards before they were insane. These should go side by side with Dr. Sutherland's two hundred cases. Supposing that in Cornwall the drinking habits of the people increased, what might be expected to be the result, as regards the frequency of mental disease? We might judge from the experience of France. M. Lunier, one of the Inspectors of Asylums, had shown that the Departments in which the consumption of alcohol had increased most were those in which there had been a corresponding increase of insanity. This was shown most strikingly in regard to women, at the period when the natural wines of the country gave way to the consumption of spirits. He had given a most instructive table of the increase per head in the consumption of alcohol from 1831 to 1869, accompanied by the corresponding increase of cases of insanity. It could not be said that this resulted from an insane craving for

drink. It was not a premonitory symptom. The alcoholic beverages had been brought to the people. Without taking an exaggerated view of the general subject, there were not only reasons, therefore, for expecting alcohol to cause a considerable amount of insanity, but there appeared to be facts within reach to prove this to be actually the case.

Dr. James Edmunds (London) said nothing could be more difficult than any attempt to disentangle the facts connected with our drinking habits and the occurrence of insanity. Insanity seemed to crop out as the result of two directly opposite conditions of life. One condition existed among the Society of Friends, in which the weaklier members were taken so much care of that they survived to reproduce weakly and neurotic members, who might be said in the next generation to go on adulterating the national stock. Out of such a condition a large number of insane persons would naturally grow, inasmuch as under ruder conditions of life their progenitors would have been killed out in the struggle for existence. Thus it was, that among the Society of Friends, where intemperance was very uncommon, there was a large proportion of insanity. Without attempting to define the exact relationship of drunkenness and insanity as cause and effect in these various communities, he would refer to certain things on which every one present would be agreed. Firstly, men, if of strong constitutions and fairly organised all round, might go on drinking considerably and continuously to an advanced age without apparent injury, although, in point of fact, they underwent a slow degeneration of tissues. Certainly, also, such drinkers did accumulate masses of spongy tissue which had been referred to by Dr. Crichton Browne as denoting not the highest type of human development, while in their children much more serious degenerations were seen. Then, again, where alcohol was taken in somewhat large quantity, it produced in the individual drinker, firstly, disease of the liver; secondly, disease of the kidneys and of other excretory organs; thirdly, coarse forms of degeneration, such as atheroma, and fatty change in the blood-vessels and other structures. Out of these degenerations came ruptures of the blood-vessels, clotting in the arteries, heart-failure, and as a direct consequence, paralysis, apoplexy, and other coarse neuroses. In acuter forms of alcoholic poisoning, also, epilepsy occurred in consequence of urea accumulating in the blood, and fœtid breath demonstrated a generally putrescent condition of the drinker. Dr. Hack Tuke had stated that, in the Friends' Retreat at York, he had almost never seen a case of general paralysis, and that the effects of drinking were extremely rare in the patients. As the result of much careful observation, he was distinctly of opinion that the free use of alcoholic beverages brought those cases which Dr. Crichton Browne had described as neurotic into the crazy or insane circles; and that, where the brain itself was much exposed to other injurious influences, a reliance on alcohol brought strong healthy persons into the neurotic or crazy circles.

The Intemperance of Parents a Predisposing Cause of Imbecility in Children. By Fletcher Beach, M.B., M.R.C.P. (Darenth Asylum).—His experience led him to assign to parental intemperance a more important part in the production of imbecility than was assigned to it by the other superintendents of public institutions for imbeciles in the United Kingdom; and he believed that the prevalence of parental intemperance, in his cases, was due to the fact that his patients were drawn from a lower class of society, in whom intemperate habits largely prevail. The history of the subject was then given, reference being made to a table drawn up by the medical officers of American institutions for idiotic and feeble-minded persons, showing that parental intemperance was present in 38 per cent. of the cases. Eight hundred and thirty-three patients had been under the care of the author of the paper, and of these he was able to obtain histories in 430 cases. Of these 430 patients, there was a history of parental intemperance in 138—an average of 31.6 per cent. Statistics of these 138 cases were given, showing that 72 were males and 66 females. Of the 72 males, 47 were congenital and 25 acquired cases; of the 66 females, 44 were congenital

and 22 acquired origin. It was shown that parental intemperance was far more common among the fathers than the mothers of the patients ; and that all degrees of intemperance, from occasional drunkenness up to delirium tremens, were present. In a few cases it was found that drunkenness was a family failing. The following classification of the 138 cases in which parental intemperance prevailed was adopted: 1. Intemperance alone apparently the only predisposing cause; 2. Intemperance accompanied with fright ; 3. Intemperance associated with phthisis ; 4. Intemperance complicated by insanity or imbecility ; 5. Intemperance in conjunction with neuroses of different kinds ; 6. Intemperance associated with insanity, or neuroses and phthisis ; 7. Intemperance complicated by several predisposing causes. Taking these classes in the above order, it was found that 27 were included in the first; 16 in the second ; 22 in the third ; 15 in the fourth ; 17 in the fifth ; 26 in the sixth ; and 15 in the seventh class. The author concluded by stating that parental intemperance alone, in a few cases (27 out of 138), acts as a main or direct cause ; but that, in the great majority of cases, it was only an indirect, accessory, or predisposing one. He did not believe it to be usually the chief cause ; but he thought it was one which the medical profession should not overlook. [The paper was illustrated by excellent photographs.]

Dr. SHUTTLEWORTH (Lancaster) remarked that the statistics of Dr. Fletcher Beach, as to the influence of parental intemperance in the causation of idiocy, showed a much larger percentage than did those brought forward by himself in a paper read some years ago at the Manchester Annual Meeting of the Association. Whereas in that paper he himself ascertained parental intemperance as a factor of idiocy in no more than sixteen cases out of three hundred cases investigated at the Royal Albert Asylum, Lancaster, Dr. Beach showed no less than 31 per cent. of his cases in which parental intemperance was traced. Whence arose this discrepancy? Mainly, no doubt, from the difference of social level of the two classes of patients. Dr. Beach's patients belonged to the class of metropolitan paupers, amongst which there was undoubtedly much intemperance, and the vice was readily acknowledged. The patients of the Royal Albert Asylum, who furnished his own statistics, were not paupers, and many of them came from agricultural districts. In estimating intemperance as a cause of idiocy, the negative as well as the positive aspect of the question should be considered. In how many cases was drunkenness a cause of pauperism, without being also a cause of idiocy in the offspring? and what more natural for a pauper to assign as the cause of idiocy in the offspring than intemperance, overlooking hereditary neuroses or other influences? In making these remarks, he only desired to speak in the interests of scientific accuracy, and not to diminish aught from the excellent moral lessons of Dr. Beach's paper. He might add that, in his own paper, he had considered none but congenital and non-epileptic cases. With regard to the more recent statistics of Dr. Kerlin (of the Pennsylvania Institution), his impression was that the 38 per cent. quoted by Dr. Beach was scarcely comparable with the 31 per cent. derived from Dr. Beach's own observations, inasmuch as not only parents, but grandparents, on either side, had been taken account of by Dr. Kerlin ; and, as he read the tables of the latter, out of one hundred idiotic children thirty-eight would have had intemperate *parents or grandparents ;* that is to say, for this percentage, the history of *six hundred* progenitors (parents and grandparents) would be scrutinised, against *two hundred* (fathers and mothers only) for the percentage (31.6) quoted by Dr. Beach. The method adopted by Dr. Kerlin of extending his inquiries to two generations of progenitors, was much to be commended ; and in this way the influence of intemperance would come into the etiology of idiocy to a considerably increased extent. He himself was of opinion—and he knew of several instances—that not unfrequently idiocy was connected with the intemperance, not of parents, but of grandparents.

Dr. MORE MADDEN (Dublin) would not regard the question of intemperance and insanity from a sensational point of view. Different people were differently

affected by alcohol. Some were better without any. Others could take large quantities and live a long life; but he believed that such persons accumulated spongy elements of tissue in their brains, which prevented them doing justice to themselves. The question as regards the mother's intemperance should be considered under the heads of drunkenness during pregnancy, during parturition, during lactation, and under chloroform.

Dr. J. SEATON (Sunbury) was disappointed with the experiences of Drs. Beach and Sutherland. He had never met with a case in which intemperance was a premonitory symptom. He was unable to remember any case of general paralysis caused by intemperance.

Thursday, August 12th.

The Influence of Alcohol in the Causation of Insanity.—The discussion on this subject was resumed.

Dr. LANGDON DOWN (London) remarked that his statistics corresponded almost exactly with those produced by Dr. Shuttleworth, and believed that the discrepancy between Dr. Shuttleworth's and Dr. Beach's statistics was due to the fact that they had to deal with different classes of society. Dr. Down remarked that Dr. Beach had not alluded to developmental cases—these were those connected with the first, with the second dentition, and with puberty—as immediate causes. He thought that if Dr. Beach had analysed his cases more carefully in this mode his statistics would have more nearly assimilated those of Dr. Shuttleworth at Lancaster, and his own at Earlswood; which showed that 15 per cent. of the cases were those in which intemperance was a very strong factor. In the institution at Normansfield intemperance could not be placed as a factor in more than 2 per cent., but then they were patients of a special class. Thus then, taking the middle stratum, the percentage would be 15 per cent., and in the higher class only 2 per cent.; whilst Dr. Fletcher Beach dealt with a special class of cases in which, from the circumstances and habits of the parents, intemperance might be expected to be a very important factor. There was no doubt in his mind that there were cases of idiocy the cause of which was intemperance *pure et simple*. He had known as many as four children born of parents whose intemperance was most distinctly the cause of the idiocy of the children. He was also satisfied that there was a kind of idiocy which was produced by acute intemperance at the time of procreation. He had no doubt that procreation under the influence of intemperance was a strong cause of idiocy.

Dr. HARRINGTON TUKE (London) considered that we ought not to be too hasty in setting down intemperance as a cause, in our present condition of histological knowledge. He had never met with a case, in the upper classes, of general paralysis being produced by alcohol; and considered that this disorder ought to be removed from the category of those diseases produced by alcoholic excess.

Dr. RIDGE (Enfield) believed that Lord Shaftesbury, and those who had recorded large percentages of cases of insanity caused by alcohol, had been misunderstood. The indirect influence of alcohol in the production of mental disease was more to be considered.

Dr. BRUSHFIELD (Brookwood) said that he thought that alcohol was undoubtedly a factor in the production of insanity. Unfortunately, as he thought, this was denied by some, whilst others described it as a very powerful cause. Dr. Seaton said that no case of general paralysis or insanity had been caused by intemperance. He was sorry to say that his own observation was directly opposed to that. He agreed with Dr. Down that it was often, when not a direct cause, a contributory one. Insanity very often occurred to men who were ordinarily temperate, who, finding themselves breaking down, resorted to drink.

With respect to the contention that sexual excitement was not unfrequently a cause of general paralysis, he was unable to concur, being of opinion that sexual indulgence was a *consequence* more than a *cause* of the disease.

Dr. BATEMAN (Norwich) remarked that Dr. Kerlin of America had produced some valuable tables, in which 32 in 100 cases of idiocy were considered due to intemperance in the parents.

Dr. EASTWOOD (Darlington) remarked on the difficulty of treating cases of dipsomania. He believed Lord Shaftesbury's statement, that 50 per cent. of the cases were due to intemperance, was excessive. He considered that intemperance was seldom a cause of general paralysis; that it was more often due to overwork, and to not taking proper holidays. Such a man would take alcohol as an artificial stimulant. It should, therefore, be considered as secondary.

Dr. TURNBULL (Liverpool) had seen cases of idiocy in private practice, but none due to intemperance in the parents.

The PRESIDENT remarked upon the great moderation and temperance which had been displayed during the discussion. He thought medical psychologists could not sanction extreme views on the one side or the other as to the relations of intemperance and insanity. They could not admit that 50 per cent. of mental disease was due to drunkenness; nor could they allow that alcohol was a harmless agent, that never did any mischief in the nervous system. Alcohol seemed to him to have an immediate and deleterious effect upon the highest nerve-centres, and might induce insanity where there was no predisposition to nervous disease, and no intermediate conditions of tissue-degeneration Perfectly healthy persons, if saturated with alcohol for a sufficient length of time, might be made insane; and there was a continuous series of mental diseases which might be traced to the toxic action of alcohol upon the nervous system. This series consisted of—1, delirium tremens; 2, mania à potu; 3, the monomania of suspicion; 4, alcoholic dementia. In these diseases, no question could possibly arise as to whether drinking was a cause or an early symptom. In all of them it was a cause, and an efficient cause, which might by its sole action establish the pathological state; just as lead might, unaided, bring on colic or wrist-drop. But alcohol might be not only an efficient and direct cause of insanity, it might also be a contributory or a remote cause. It was a contributory cause when, in conjunction with hereditary predisposition or enfeeblement of the nervous system produced in other ways, it brought on mental derangement, in the causation of which it was an important, but not a sole, factor. Under these circumstances, it was the spark applied to a prepared train, or the last straw that broke the camel's already overstrained and yielding back. In general paralysis, alcohol was, when it played any part in the ætiology of the disease, invariably a contributory cause, conspiring, with functional abuses of other kinds, to bring about the pathological catastrophe. But alcohol might also be a remote cause of insanity, as when a state of drunkenness led to a cranial injury in the tottering drunken man himself, or in some one who was the victim of his violence—this cranial injury resulting in mental degeneration; or, as when a career of intemperance led to the squandering of wages which ought to have been spent on food, and consequently to the partial starvation of wife and children, and to an attack of melancholia in the former, made anæmic by lactation, an inadequate supply of nutrition, and household cares. Dr. Crichton Browne referred to the researches of Marcet, Anstie, and Magnan, as supporting the conclusions at which he had arrived; and mentioned that he had himself at one time produced in dogs, by continuously administering small doses of alcohol to them, a succession of disordered mental states strikingly analogous to those which were seen in the human subject as the results of alcoholic poisoning, again and again repeated. He thought that the statistics of the Commissioners in Lunacy as to the influence of intemperance in the production of insanity, notwithstanding the discredit that had been thrown on them, represented pretty nearly the true state of the case. No doubt, in these statistics, there were included, under the heading of "Intemperance as a Cause of Mental

Disease," a certain proportion of cases in which intemperance was an expression of a diseased state already established, and had nothing to do with causation; but, on the other hand, there were certainly included in that large mass of cases at the end, in which the cause of the insanity was unknown, a certain proportion of cases in which secret, or concealed, or unrecognised drinking was really the undiscovered cause. The one error, he thought, balanced the other; at any rate, in two distinct and very minute investigations in which he had himself engaged, embracing 1,000 cases, and in which he had carefully distinguished between intemperance as a cause and as a symptom of insanity, the result obtained corresponded closely with that of the Commissioners, and showed that about 15 per cent. of the insanity of Yorkshire must be ascribed to alcoholic excesses in that county. He offered a physiological explanation of the action of alcohol on the nervous system, maintaining that it first excited and then paralysed every nerve-centre in succession, beginning with the highest and ending with the lowest, and that its action was not simple, but doubly and trebly compound. The highest inhibitory and controlling centres upon which its primary action was exercised could not be paralysed repeatedly without grave danger to mental integrity. To weaken volition was to promote anarchy in mind.

Mr. MOULD remarked that the discussion had proved that figures were not of any very great value. General paralysis, in his experience, was often caused by alcoholic excess. With regard to dipsomaniacs, his experience pointed to a recurrence of bad habits. One patient had been maniacal not less than one hundred and fifty times, and on each occasion he recovered in three days. He believed that the effects of alcohol were the same in both classes of life, although the quality of the alcohol might differ.

Dr. HARRINGTON TUKE believed that a rich man might drink with less risk to his prospects than a poor one, who would by such conduct be thrown out of work and become destitute.

Dr. MARTIN contrasted the percentage of insanity from drink of Cornwall, 3·5 per cent., with that of Durham, 29·2 per cent.

Dr. STEWART considered that all remote causes of insanity from alcohol should be excluded from the discussion. We should rely only on the statistics of those who had read papers, which could be thoroughly depended on. The poorer classes, however, supplied a larger proportion of statistics. He believed that the word "dipsomania" should be excluded from our nomenclature. Alcohol might produce very bad effects upon a patient, without such patient having been ever intoxicated. This was frequent in the upper classes. Constant contact with persons of stronger will was the only mode of curing dipsomania.

Dr. CHEVALLIER (Ipswich) could not speak so respectfully of statistics as did Drs. Bacon and Sutherland. He believed the reason for the differences in the asylum statistics with regard to etiology were due to the loose method which existed in taking the cases on admission, the statements of the relieving officers being frequently untrustworthy. The relieving officer was not the proper person to say what is the cause of the insanity. The medical men who signed the certificate should alone be depended on. His experience differed from that of Dr. Seaton, having met with two cases in which intemperance alone was the cause. In one, the mental disease undoubtedly came first, and the disease afterwards.

Dr. BACON was glad that his statements had been so favourably received. He did not agree with Dr. Stewart's statement, that general paralysis was so infrequent in Ireland, because there whisky was drunk instead of beer. Nor did he agree with Dr. Ridge that insanity should be stamped out. The strongest criticism had come from the President. He was ready to accept his statement that out of 1,000 patients (in Yorkshire) he had found 15 per cent. attributable to drink. The discussion showed how careful they ought to be as to the way in which they made their observations.

Dr. SUTHERLAND remarked that he relied upon a group of symptoms, not a

single one, in his distinctions between insanity caused by, and that accompanied by, intemperance. He was unable to understand how Dr. Seaton could state that general paralysis was not caused by alcohol, when the tables of the Commissioners gave such large percentages.

Dr. FLETCHER BEACH remarked that his paper was founded upon careful inquiries directed to the parents of idiot children, by a series of questions he had prepared on the subject. In many cases, tedious labour and the use of instruments produced asphyxia and subsequent stupidity.

Certain Cases of Functional Ischæmia of the Brain.—By Professor BALL, M.D. (Paris).

The PRESIDENT observed that this paper could not well be discussed. While agreeing with Dr. Ball as regards symptoms, he thought possibly the etiology of the cases might be different from that brought forward.

Dr. STEWART related a similar case, where deafness had been produced by the firing of a large gun, with subsequent recovery.

Dr. WOOD (Nova Scotia) recorded a case where a language had been suddenly restored. The patient at first could only speak in Irish, till the sight of a canary bird made her speak English, which she knew perfectly before the attack.

Professor BALL agreed that such cases agreed entirely with those mentioned in this paper.

Cutaneous Discolourations in the Insane resembling Bruises.—By G. F. BLANDFORD, M.D. (London). The object of the writer was to draw attention to certain discolourations which were occasionally seen on the bodies of insane patients, and which, at first sight, so closely resembled bruises, that blame might be unjustly cast upon attendants, unless considerable care were taken in the diagnosis. Attention was directed to such cases by Dr. Bucknill so far back as 1855; and, in the first volume of the "Asylum Journal," was a paper by him on the subject, and some examples were given, to which, in a subsequent paper, others were added by another gentleman. In the rest of the volumes of the "Asylum Journal" and "Journal of Mental Science," no mention was made of such cases, and, for this reason, the writer described one in his own practice: a gentleman in a state of acute melancholia, over whose gluteal region a large discolouration was discovered, of a dark plum colour, exactly resembling a bruise, and at first thought to be one. Gradually, however, it spread up the back; and, as he was lying in bed, the idea of bruising was precluded. Such discolourations might appear in parts where it would be difficult to apply external violence, and they were uniform in the parts affected at the same time, whereas bruises presented different degrees of shade and colour. They depended on the condition of the patient, a condition allied to scurvy, and it was important to consider the diet of such patients, and to take care that the necessary elements were supplied.

Dr. CHEVALLIER (Ipswich) asked whether or not such discolourations were found in those not insane?

Dr. HARRINGTON TUKE had seen such discolourations in alcoholic cases not insane

Dr. RICHARDS (Hanwell) had seen such discolourations in patients fed only with a spoon, without vegetable diet. Such spots were allied to purpura.

The PRESIDENT believed that such ecchymosis occurred in old people, but believed they were more common in the insane.

Dr. BEACH (Darenth) had seen similar discolourations in low imbeciles.

Dr. SUTHERLAND had seen a case where slight injury produced a large bruise in an insane patient who died shortly after from natural causes, proved by *post-mortem* examination.

Dr. DE WOLF (Nova Scotia) also spoke on the subject.

Dr. HUGGARD remarked on the similarity of the cases to purpuric affections.

Dr. BLANDFORD remarked upon the medico-legal importance of recognising

the fact that such ecchymosis could be produced in the insane apart from injury.

Rapid Death from Hæmorrhage into the Pons Varolii and Medulla Oblongata. By W. Julius Mickle, M.D., M.R.C.P.—In the case described there was sudden profound apoplexy; respiration ceased at once; slight momentary revival followed artificial respiration, which was carried out effectually; but life was extinct within seven or eight minutes (at the most) of the sudden seizure. Although the lesion present was too severe to permit of recovery, yet one of the practical bearings of the case was in support of Schiff's teaching that artificial respiration was the appropriate remedy when death was imminent from such intracranial hæmorrhage as threatened to suspend the functions of the medulla oblongata more especially. Very obvious medico-legal importance also attended a case such as this in which death occurred with extreme or unusual rapidity. Some pathologists had denied to intracranial hæmorrhage the power to kill very rapidly, much less instantaneously. Nevertheless, that the rapidity with which intracranial hæmorrhage might prove fatal had been underrated by some, was obvious, from the examination of certain cases already on record, few although these might be. If one examined the question of rapid death from hæmorrhage into the pons Varolii and medulla oblongata, more especially, the easily available examples were apparently rare. The usual explanation of more or less rapid death in the latter group of cases was, that suspension of the respiratory function occurred from injury or inhibition of centres in the medulla oblongata, ministering to respiration. But in the case forming the basis of this paper, artificial respiration was fully carried out. Death, therefore, was here apparently due to the influence of shock, and the inhibitory influence on the heart of the lesion of the medulla oblongata and pons.

Friday, August 13th.

On the Best Mode of Tabulating Recoveries from Insanity in Asylum Reports.—By D. Hack Tuke, M.D. (London). Dr. Tuke insisted on the importance of distinguishing between recoveries of patients and recoveries from more than one attack of insanity in the same person. He illustrated his observations with several tables, which he proposed to have introduced into future reports of asylums, the time for making the improvement being especially opportune, as the annual meeting of the Medico-Psychological Association has just appointed a Committee to revise the statistical tables of asylums. (See Original Article, No. 5.)

Dr. Blandford agreed with Dr. Hack Tuke's proposal, that the mode of taking statistics at present in vogue required amendment. He pointed out the fallacies which might arise if a patient were admitted to an asylum different to that he first became an inmate of.

Dr. Sutherland hoped that Dr. Tuke would supplement his paper on a future occasion by informing them what forms of insanity were most liable to recurrent attacks. This was most important in private practice, where the relations were not only anxious to know if the patient would recover from a first attack, but also what his or her liability might be to a second one.

The President while agreeing with Dr. Tuke's proposal as regarded the reform in statistics, believed that the disease ought to be more prominently considered than the patient, who merely afforded the soil upon which the disease was sown. What was meant by a "relapse?"

Dr. Hack Tuke agreed with Dr. Blandford that statistics were more reliable in public than in private asylum practice. "Relapse" he had used to mean return to an asylum after having been discharged "recovered," as it was impossible to fix upon any particular limit in the statistical table.

A Plea for the Minute Study of Mania.—By J. Crichton Browne, M.D. (London).

Dr. Ferrier (London) had listened to Dr. Browne's paper with much interest, it being the first attempt that had been made to correlate his experimental researches with the phenomena of insanity. He considered mania to be, perhaps, too difficult a subject to commence with in this line of inquiry, as so many of the movements in that disorder depended upon external irritation, as well as upon disease of the cortex.

Dr. Hack Tuke mentioned a case in which a man had sustained an injury to the right occipital lobe. He not only became insane, but there were involuntary movements of the left arm and leg, except when the attention was directed to them.

On Subvarieties of Neurasthenia.—By G. M. Beard, M.D. (New York). The paper was illustrated by a diagram on the black board, in which three circles of disease were represented: 1. Insanity (inside); 2. The borderland (central); and 3. Neurasthenia (outside); with which his paper had to deal.

The President expressed his opinion that the circles drawn by Dr. Beard should be subdivided into certain sections expressing neurasthenia, locomotor ataxy, and chorea.

Dr. Hack Tuke said that Dante's circles seemed to foreshadow the various degrees of mental horrors which we might witness on our planet. The facts showed how incomplete the evidence of mere statistics is, when studying the question of the increase of insanity, as persons on the borderland of insanity, or affected with neurasthenia, were not included.

Dr. Beard remarked that he and Dr. Browne were agreed as to the sections into which the circles should be divided, but that time prevented his entering into further details.

Case of Menstrual Epileptic Mania treated by Oöphorectomy.—By Lawson Tait, F.R.C.S. The case was that of a girl aged 17, an inmate of the Birmingham Borough Asylum, who had suffered all her menstrual life from severe menstrual epilepsy. Lately, this had assumed the additional character of acute mania at the periods. Dr. Green and Dr. Lyle, the superintendent and assistant-superintendent, were of opinion that oöphorectomy afforded a possible means of relief; and, for the purpose of having this operation performed, she was, with the consent of the Lunacy Commissioners, placed under the care of Mr. Lawson Tait. Her ovaries were removed, and proved to be perfectly healthy. The effect of the operation was an immediate and most marked improvement in her physical health, an entire arrest of the mania, and a diminution of the fits from fifteen in the month to three, with a marked amelioration of their severity. Mr. Tait thought further improvement was to be expected.

Dr. Bacon had castrated two male epileptics, with the result, in one case, of great improvement.

Dr. Hack Tuke asked under what conditions such an operation would be indicated?

Dr. Bacon replied, in cases of confirmed masturbation in incurable cases of epileptic insanity.

The President considered Mr. Tait's paper suggestive and illustrative of the importance of what he had long urged, an increased attention to the state of the sexual organs and functions in insane females. In various forms of insanity, the thorough investigation of these by a person having special skill ought to be a matter of routine practice. Surgical procedures such as those adopted by Mr. Lawson Tait and Dr. Bacon, ought only, of course, to be resorted to in extreme cases and with great caution. He referred to a case, seen in consultation with Mr. Tait many years ago, in which a bearded lady had been benefited by the introduction of a galvanic pessary. The beard subsequently fell off, and the patient's mental condition, which was

that of melancholia, improved so that she recovered completely. He alluded to Dr. Sutherland's researches at the West Riding Asylum, which proved that menstrual irregularities were more common amongst the insane than the sane.

Dr. BLANDFORD believed that the improvement from such operations would be temporary.

The following were taken as read:—

A Case of Multiple Apoplexies Simulating General Paralysis in a Woman. By G. H. SAVAGE, M.D. (Bethlem Hospital).

On the Necessity for a School of Medical Psychology in London. By J. CRICHTON BROWNE, M.D. (Edin.)

The Accommodation of the Insane in Workhouses. By T. M. DOLAN, L.R.C.P. (Halifax).

SECTION OF PSYCHOLOGY.

DISCUSSION ON SLEEP AND HYPNOTISM.

Mr. Braid appears likely to have justice done to him at last. Some years ago we pointed out the important bearing of hypnotism on mental disorders in this Journal, in an article entitled "Artificial Insanity." Subsequently, in 1872, the writer, in his work on the "Influence of the Mind upon the Body," insisted on the interest and influence of hypnotism in mental therapeutics. The progress of scientific truth, if certain, is rather slow. It has taken some forty years for the British Medical Association to repair the error then made in refusing to hear a paper by Mr. Braid on his discoveries, when it met at Manchester.—[D. H. T.]

Professor PREYER said he felt deeply honoured by the invitation which had been given to him to open the discussion on sleep and hypnotism. In view of the extreme complexity and obscurity of both phenomena, and the diverse and contradictory views respecting them, he had found it impossible, on such an occasion as the present, to treat the physiology of the sleeping and the hypnotised brain as fully as it deserved to be treated. He deemed it advisable rather to indicate the problems which must be solved empirically, and to state what he considered to be new in his own researches into the causes of sleep and hypnotism, than to enter into a detailed description of the facts. Four years ago he published a theory of the cause of sleep, which was founded on the fact that natural sleep is the direct consequence of fatigue, whenever the conditions of the fatigued animal are such as to exclude all continuous and intense stimuli. According to the theory, there occurs, during muscular and cerebral activity, the formation and accumulation of certain substances, which hinder further activity by attracting to themselves the oxygen which, in the last instance, is necessary as well for the activity of the muscular fibre as for that of the nervous cell. Both these organs fail to execute their specific function if they are not supplied with oxygen by the red blood-corpuscles. To these noxious substances the term *Ermüdungsstoffe* (fatigue-products) has been applied. They are easily oxidisable bodies; and, according to this theory, they accelerate the dissociation of the oxygen and hæmoglobin in the capillaries of the brain and muscles. Sleep then ensues, and the tissues which most depend upon a regular supply of oxygen, viz., the grey substance of the hemispheres and the muscles, are the first to be affected by the accumulation of *Ermüdungsstoffe*. As soon as the oxidation-process has reached a certain degree, the oxygen of the blood is no longer used up so quickly, and now even weak stimuli suffice to arouse into activity the nervous and muscular tissues; and the animal is awake once more. If this theory of sleep be true, the following two inferences should stand the test of experiment: 1. The artificial injection of the products of activity which accumulate during fatigue ought to

cause sleep. 2. The direct withdrawal of oxygen from the brain ought also to cause sleep. Both consequences have been put to the proof. With regard to the first, the results have been conflicting. But most experimenters have agreed with Professor Preyer in finding that one of the principal products of muscular and of cerebral activity, viz., lactic acid, is a true hypnotic. Others have denied this, because in many cases, and especially in cases of insanity, no hypnotic effect is brought about. Nevertheless this point is by no means settled. We know very little about the products of cerebral activity; and even if lactic acid *alone* fails as a hypnotic in many cases, we yet cannot say that it would have no hypnotic action when combined with other fatigue-products. It is highly probable that creatin is a hypnotic; but we must await other experiments before this first inference can be fairly criticised. The second inference that withdrawal of oxygen from the brain should cause sleep, is verified by many experiments in which the want of oxygen produces hypnotic effects. Observations conducted in Professor Preyer's laboratory have proved the great affinity of the grey substance of the brain for the oxygen of the blood-corpuscles; and have shown that, by slowly diminishing the quantity of oxygen in the air breathed by animals, somnolence is invariably induced. Other observers have reached a similar conclusion by a different way. Nevertheless, it is not proved that common sleep is identical with the condition which is the effect of continued and slow withdrawal of oxygen. In fact, the word sleep is applied to many different states of repose of the mind of various characters but closely linked together. Thus, somnolence, drowsiness, reverie, on the one hand; and coma, lethargy, asphyxia, hybernation, syncope, alcoholism, narcotic intoxication of different degrees, on the other, may show identical symptoms in depression of mobility and sensibility, and cessation of the intellectual faculties, without the same changes in the brain being the cause in each case. Even common sleep is of variable intensity; and children, who sleep deeper and longer than grown-up people, are individually of a widely varying inclination to sleep and dream. With men also, individual differences in this respect are of daily occurrence. Now, if natural sleep have the same etiology for all men and all animals, then such individual differences must all be accounted for on one principle. The theory proposed does, in Professor Preyer's opinion account for them, *assuming the quantity of oxygen which is necessary for activity to vary greatly according to the mode of life and hereditary or acquired qualities of the individual.* This is proved by experiments on animals; and Professor Preyer believes that the different capacity of individuals to support the want of oxygen, is also a fact of great importance for understanding the genesis of artificial sleep, and especially hypnotism. But the first who investigated the matter in a scientific way, and who deserves more honour than he has yet received, was an Englishman, James Braid, a Manchester surgeon. At first a sceptic, holding that the whole of the so-called magnetic phenomena were the results of illusion, delusion, or excited imagination, he found in 1841 that one, at least, of the characteristic symptoms could not be accounted for in this manner: viz., the fact that many of the mesmerised individuals are quite unable to open their eyes. Braid was much puzzled by this discovery, until he found that the "magnetic trance" could be induced, with many of its marvellous symptoms of catalepsy, aphasia, exaltation and depression of the sensory functions, by merely concentrating the patient's attention on one object or one idea, and preventing all interruption or distraction whatever. But in the state thus produced, none of the so-called higher phenomena of the mesmerists, such as the reading of sealed and hidden letters, the contents of which were unknown to the mesmerised person, could ever be brought about. To the well defined assemblage of symptoms which Braid observed in patients who had steadily gazed for eight or twelve minutes with attention concentrated upon a small bright object, and which were different from those of the so-called magnetic trance, Braid gave the name of *Hypnotism* in 1843. This was in his book bearing the un-

fortuate title of *Neurypnology*, a name which doubtless went far to gain for the book the unmerited oblivion which has been its fate. In addition to *Neurypnology*, Braid published in 1846 an interesting paper on *The Power of the Mind over the Body*, which conclusively showed how erroneous is the view that anything passes over from the operator to the patient in the course of these experiments. In his paper on the so-called *Phenomena of Electro-Biology*, printed in 1851, his views are again and more explicitly proved by experiments. *Hypnotism* is a condition or series of conditions which may be induced in a person by rigorously concentrating attention on some one point, even when no other person is present, and when the patient is wholly ignorant of mesmerism and the like. Although thirty-seven years have elapsed since Braid published his numerous experiments, his works are very little known. In Germany and France many of his discoveries have been re-discovered; as for example, by M. Ch. Richet, of Paris, in 1875, and by Professor Heidenhain in Breslau, during the present year; while Professor Arthur Gamgee's careful and judicious account of Charcot's wonderful hystero-epileptics, published in 1878 in the "British Medical Journal," goes far to make us think that these cases also resemble exactly cases of hypnotism. It is hard to withstand the suspicion that Braid over-rated the curative powers of hypnotism; but, in respect of his statements on this head, nobody has, as yet, publicly proved him to have been careless or uncritical like the mesmerists. Are the main symptoms of hypnotism well established? From the results of his own experiments, Professor Preyer could admit no doubt whatever that they are. The only objection which has been urged against them, and which has not been entirely removed, is the possibility that the operator might be deceiving, or might himself be deceived. To meet such an objection, as far as possible, Professor Preyer was careful, when experimenting on men, to make use of such only as might reasonably be supposed to be trustworthy; and, further, to extend his experiments wherever it was practicable to the lower animals. In the latter case, he found that two different states of *abulia* (want of will?) can be artificially obtained; one by suddenly and strongly irritating or frightening the animals, the other by a slow, continuous, uniform irritation. The latter is the hypnotic state; the former, Professor Preyer proposed to call *cataplexy*. So far as we know—and thousands of experiments have been performed—hypnotism is entirely harmless, at least if not practised to excess; and whether or not any beneficial curative results are obtained from its practice in nervous affections, at least the physician can collect and group the facts for the physiologist. Assuming, then, that the hypnotic phenomena are admitted to be beyond doubt established as facts, the question arises: Is hypnotism merely a species of the genus sleep, or is it something totally distinct? Cataplexy is undoubtedly very different from sleep. At first sight, hypnotism also seems to belong to another category; but a closer inspection and comparison of the two conditions discovers so many points of analogy, that it becomes difficult, if not impossible, to say where exactly the distinction lies. Physiological researches on common sleep have been so neglected in our day, that we are not able to mention the particular changes in the brain during sleep; nor has the natural normal sleep of those who may be readily hypnotised been accurately observed or controlled. Professor Preyer had himself seen cases of persons who answered questions in their sleep exactly as hypnotised persons will do; and on the other hand, he had, amongst the students hypnotised in his laboratory this year, some who, after having steadily fixed their eyes on a glass bottle, placed about four inches in front of the forehead, appeared to be in every respect asleep, and not hypnotised. Certainly some of the phenomena of hypnotism—*e.g.*, catalepsy—are not phenomena of common sleep; but who can say whether these inconstant symptoms may not be found to make their appearance during the natural sleep of the hypnotised? Somnambulism may be said to be natural hypnotism. The only specific dif-

ference which exists between hypnotism and sleep seems to be the curative power of the former. But such curative power is altogether doubtful; and the so-called hypnotic cures, where they do exist, may possibly have to be ascribed to some emotional or psychical cause rather than to the artificial sleep. This influence is the most intricate problem of all relating to hypnotism and sleep, the limit of physiological inquiry being here drawn by the impossibility of ascertaining the physiological conditions of the brain when attention is directed to one point and when it is not. Professor Preyer found that a concentrated attention is the only *conditio sine quâ non* in order to hypnotise an individual. If the attention is to be the least distorted or distracted, hypnotism becomes impossible. If, by strong and sudden stimulation, attention be forcibly concentrated on one impression, as in fright, then cataplexy is the consequence in both man and in animals. If the will direct consciousness to a certain point without any excitement, it will in many cases lose its power, and hypnotism is the consequence—*abulia*. Possibly, this occurs because the oxygen of the arterial blood in the brain has so quickly been used up, that there is not enough left to keep the grey matter of the hemispheres awake. The nervous cells are separated from each other by inactive regions, and, as in natural sleep, only certain centres remain active—for example, the respiratory and other co-ordinating centres. Here, then, is the *terra incognita*, ready to be explored.

The following gentlemen took part in the discussion: Dr. Brown-Séquard, Mr. Braid (a son of the late Mr. James Braid), Dr. Bowditch, Dr. Glaister, Dr. Beard (New York), Dr. A. Gamgee, Dr. Harvey, Mr. Langley, Dr. Norris, Dr. Gerald Yeo, and Dr. Hack Tuke. Professor Preyer replied on the whole debate, and the discussion was brought to a close.

THE EASTERN COUNTIES ASYLUM FOR IDIOTS.

The July meeting, 1880, of this institution was held at Norwich, under the presidency of the Duke of Norfolk, who, in his speech, observed that one might say that the instinct of self preservation made us find homes for the insane; whereas it was the divine angel of charity which urged us to procure homes for the idiot.

Dr. Bateman, the consulting physician, who endeavoured to remove certain misconceptions about idiocy, of frequent occurrence, held that one of the most fruitful causes of idiocy is the abuse, not the proper use, of alcoholic drinks. Dr. Bateman made an earnest appeal to his audience for their merciful aid.

Mr. Millard, the well known and estimable superintendent, wished that the number in the asylum (99) could be doubled. He pointed out that at the Hospital for Incurable Children in London, idiots were no longer received on account of their injurious influence on the other inmates. He said that in France there were 230 cretins and idiots to 100 lunatics, and not 60 to 100 as stated in the 1872 census; hence he inferred that in England there were many more idiots than the returns of the census showed. The asylum needed a large increase of annual subscriptions.

The Mayor, the Dean of Norwich, the Sheriff, Mr. Cadge, and others addressed the meeting, which appears to have been very successful, £400 being promised on the spot.

"AFTER CARE."

A meeting of the "After Care" Association was held, on the 1st July, at the house of Dr. Bucknill, 39, Wimpole street. There were present Dr. Bucknill, President; Dr. D. Hack Tuke, Dr. Savage, Rev. H. G. Henderson, Mr. W. G. Marshall, Rev. H. Hawkins, Secretary; Lady Frederick Cavendish, Miss

Antrobus, Miss Cons, Miss Agnes Cotton, and several other ladies. The minutes of the last meeting were confirmed. The Secretary read abstracts of letters since received, a communication was read from Lord Shaftesbury, accepting the office of Patron of the Association, also a subsequent intimation that he would have been happy to have attended the meeting, had he not been prevented by a previous engagement.

It was proposed and seconded that Mr. W. G. Marshall, Medical Superintendent of the Female Department, Colney Hatch Asylum, should be requested to act as President in succession to Dr. J. Bucknill, who kindly offered his house for the next general meeting. The following resolution having been carried, the meeting separated:—

"That a letter having been received from the Secretary of the 'Servants Home Society,' expressing his willingness to afford a home for at least a few days, for young women leaving an asylum recovered, and in search of a situation: Resolved, that the Secretary be instructed to write to the Secretary of the 'Servants Home Society' stating that this Association will be glad to avail themselves of the opportunity afforded by his letter."

Several physicians, conversant with Lunatic Asylums, and with the need of "After Care" for convalescents, have expressed themselves as favourable to the general objects of the Association.

INTERNATIONAL MEDICAL CONGRESS.

We have received the following for publication:—

The International Medical Congress is to be held in London, August 3rd to 9th, 1881, under the presidency of Sir James Paget, Bart.

Section, Mental Diseases.—President, Dr. Lockhart Robertson; Vice-presidents, Dr. Crichton Browne, LL.D., Dr. Maudsley; Secretaries, Dr. Gasquet, Dr. Savage.

The meetings will be chiefly held in the Hall of the University of London, and in Burlington House.

The expenses to be incurred must necessarily be considerable, and the Committee appeal to the whole profession of the United Kingdom to subscribe funds sufficient to relieve them from all difficulty in making suitable arrangements.

All communications to the Congress should be addressed to—

WILLIAM MAC CORMAC, ESQ.,
Hon. Secretary General,
13, Harley Street, London, W.

QUESTION OF SUIT ON BEHALF OF A HUSBAND, INCAPACITATED BY INSANITY, FOR DISSOLUTION OF MARRIAGE.

Before Lord COLERIDGE, the President, and Sir R. J. PHILLIMORE.

(DIVORCE COURT.)

BAKER *v.* BAKER, WHEELER, AND OWEN.

In this case, John Alfred Baker, of the City of Bristol, steam saw-mill proprietor the committee of the estate of William Baker, a person of unsound mind, so found by inquisition, presented on his behalf a petition for dissolution of marriage with the respondent by reason of her adultery with the co-respondents. The petition was presented by the leave and under the direction of the Lords Justices. The respondent denied the adultery, and also demurred to the petition, the broad question raised by the demurrer being whether it was competent for

any one to institute on behalf of a husband, who was incapacitated by insanity from giving his assent to it, a suit for the dissolution of the lunatic's marriage. The question was touched upon, though not decided in the case of Mordaunt *v.* Moncreiffe," before the House of Lords, and it became necessary, therefore, to determine whether or not there was a distinction between the case of a lunatic being made a respondent in a suit of dissolution of marriage and that of a committee of a lunatic bringing such a suit on the lunatic's behalf; and whether or not, to the proposition that a lunatic may be sued in such an action, it was a corollary that a lunatic may sue. The demurrer was argued before the President in March last, and on the 6th of April he delivered judgment, being of opinion that the decision of the House of Lords in "Mordaunt *v.* Moncreiffe" was by necessary implication binding upon him, that the insanity of a husband or wife was not a bar to a suit by the committee for the dissolution of the lunatic's marriage. From this judgment the respondent appealed, and the appeal now came on for hearing before the full Court as above constituted.

Dr. Deane, Q.C., and Mr. Byford, appeared for the respondent in support of the appeal; Mr. Inderwick, Q.C., and Mr. Searle for the petitioner.

Lord Coleridge, on the conclusion of the argument, said that if anything could be gained by further consideration of the case, and if the judgment of the learned President had been less able and exhaustive, he should be disposed to give it that further consideration. But it was clear that the case fell within the principle of the judgment of the House of Lords in "Mordaunt *v.* Moncreiffe," on which alone the learned President based the decision which was now under review, and as that was the judgment of the highest authority, he was bound to follow it. He therefore thought that the judgment of the learned President ought to be affirmed.

Sir R. J. Phillimore concurred; and the appeal was dismissed.

The President, in the course of the argument, took the opportunity to point out a curious anomaly in the law regulating the procedure of the Court in matters of appeal. If he had decided the case, he said, in the opposite way to that which he had done, the appeal from his judgment would have been taken to the Court of Appeal; but having decided it, the appeal was to the full Court. He did not think that that was a satisfactory state of the law.—*The Times* June 23, 1880).

OBITUARY.

Dr. Williams.

A former Secretary of our Association has recently passed away, in his 66th year. William White Williams, M.D., F.R.C.P., born April, 1815, died at his residence at Cheltenham on the 6th of August. His health had been impaired for some time, but it was not until the occurrence of a paralytic seizure, a few days before his death, that alarm was excited.

He was a Gloucestershire man, and became Medical Superintendent of the asylum for that county in 1845. After 18 years' service, but mainly in consequence of the ill-health resulting from an injury to his hand, inflicted by one of the patients, he resigned, had a pension conferred upon him, and was appointed Consulting Physician. He belonged to the school of Conolly, from whom he derived his taste for medical psychology and his practice of the non-restraint system. He continued to take an active interest in medical science, and especially in asylum affairs, up to the time of his death, and was extensively consulted in mental cases. Of a modest and retiring disposition, he did not seek, although he had, an extensive acquaintance; but he found his pleasure in a limited circle of close friends, who valued him for his kindly heart, great intelligence and pure life, and to whom it was his delight at all times to show a ready and a genial hospitality.

He has left a family of two sons and one daughter, his elder son being the energetic and successful Superintendent of the Sussex County Asylum.

In the office of Honorary Secretary of this Association, held from 1847 to 1855, the late Dr. Williams succeeded Dr. Hitch (his predecessor also at the Gloucester County Asylum), who was the first secretary and the earliest promoter of the Society, and who still survives, at a very advanced age.

M. Broca.

When in a recent number we chronicled M. Broca's elevation to the Senate, we little thought that in so brief a space of time we should have to lament his death, at the comparatively early age of 56. The loss to science, more or less nearly allied to our own department, is simply irreparable. He was, by his brilliant researches into the function of the convolution which bears his name, directly associated with medical psychology.

"He was born in 1824, at Sainte-Foy (Gironde), the birthplace also of Gratiolet, and was the son of a physician.* In 1866 he became a member of the Academy of Medicine, and in 1867 was promoted to a chair at the Faculty as a teacher of clinical surgery.

"The natural bent of Broca's mind received an additional impulse by the foundation (in 1860) of the Anthropological Society, in which he met his old friend Gratiolet. From that moment the activity of Broca's intellect seemed to have found its proper channel. Anthropology is a compound of so many other sciences—in which anatomy, natural history, ethnology, archæology and philology take an equal part—that the intervention of a grasping and encyclopædic mind like Broca's is almost invaluable to form the connecting link between so many different branches of human knowledge which, at first sight, would seem to lie widely apart. An excellent mathematician, a first-rate anatomist, a good Greek scholar, Broca combined in himself that diversified knowledge which the subject requires, with the synthetical tendencies which condense these disseminated forces and make them converge upon a single point.

"On Tuesday, the 6th inst. (July), he fainted in the Senate House; on the ensuing Wednesday he felt sufficiently recovered to resume his labours; but towards midnight on Thursday he was suddenly seized with a fit of dyspnœa, rose from his bed, and expired in ten minutes. Strange to say, the post-mortem examination gave no clue to the mystery of his unexpected death, all the organs being apparently sound. We shall probably not be far from the truth in attributing the catastrophe to cerebral exhaustion, arising from too protracted a course of severe intellectual exertion.

"At the banquet which his friends offered him on the occasion of his election to the Senatorial dignity, Broca observed, in returning thanks, that if he believed in ancient superstitions he ought to expect some great misfortune, as the penalty for too complete and long-continued prosperity. That misfortune came in the form of sudden death; but in the very bitterness of their grief his friends can scarcely regret that he should have been spared the protracted sufferings of chronic disease, and that he should have disappeared from sight in the fulness of his glory."

The *British Medical Journal*, after saying that M. Broca was below the ordinary stature, but had a remarkably large head, states that at the autopsy the brain was not found to be so large as anticipated, but the frontal lobes were greatly developed. The brain and its membranes weighed nearly 50ozs. avoirdupois. The writer refers his death to angina pectoris.

He was buried in the cemetery of Mont Parnasse, the funeral service being performed by a Protestant pastor, and eight orations being pronounced over his grave.

* We are indebted to the notice in the *Lancet*, July 24, by Prof. Ball, for the facts stated in this obituary.—[Eds.]

Dr. Flemming.

Dr. Carl Friedrich Flemming, Privy Medical Councillor, Hon. President of the Society of German Medical Psychologists, formerly Director of the Sachsenberg Asylum, Mecklenburg, died Jan. 27, 1880, aged 81, of apoplexy.

"He was one of the most eminent medical psychologists, a man of high scientific position, a thoroughly accomplished scholar, and at the same time a most amiable colleague.

"In friendly union with the veterans of psychiatry who had preceded him, he has, by speech and pen, most powerfully promoted the development of our science and the amelioration of the treatment of our patients, while he has helped to smooth the path on which we younger men proceed.

"To the end of his remarkably useful life he retained the most lively interest in psychiatry. His life, as a man and a colleague, has won for him all our hearts, and in profound mourning for his decease we lay upon his silent grave the well-merited laurel wreath."

So writes the Editor of *Der Irrenfreund.* We lay ours also on the grave of our colleague, the late editor of the *Zeitschrift für Psychiatrie,* and an honorary member of our Association.

INDEX MEDICO-PSYCHOLOGICUS.

JOURNALS AND TRANSACTIONS.

ENGLISH.

The Journal of Mental Science. London. Quarterly.

The Journal of Psychological Medicine and Mental Pathology. London. Semi-Annual.

Brain. A Journal of Neurology. London. Quarterly.

Mind. A Quarterly Review of Psychology and Philosophy. London.

AMERICAN.

The American Journal of Insanity. Utica, N.Y. Quarterly.

The Journal of Nervous and Mental Disease. Chicago. Quarterly.

Proceedings of the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons. Philadelphia. Annual.

Neurological Contributions. New York. Quarterly.

The Quarterly Journal of Inebriety. Hartford. Conn.

The Alienist and Neurologist. St. Louis. Misso.

FRENCH.

Annales Médico-Psychologiques. Paris. Bi-Monthly.

Annales d'Hygiène Publique et de Médecine Légale. Paris. Quarterly.

BELGIAN.

Bulletin de la Société de Médecine Mentale de Belgique. Gand. Quarterly.

GERMAN.

Archiv für Psychiatrie u. Nervenkrankheiten. Berlin. Irregular. 3 Hefte p. vol.

Allgemeine Zeitschrift für Psychiatrie u. psychish-gerichtliche Medicin. Berlin. Irregular. 3 Hefte p. vol.

Centralblatt für Nervenheilkunde, Psychiatrie u. gerichtliche Psychopathologie. Leipzig. Fortnightly.

Der Irrenfreund. Heilbronn. Monthly.

AUSTRIAN.

Psychiatrisches Centralblatt. Wien. Bi-Monthly.
Jahrbücher für Psychiatrie. Wien.

ITALIAN.

Archivio Italiano per le Malatie Nervose e più particolarmente per le Alienazioni Mentali. Milano. Bi-Monthly.

Gazzetta Sicula di Freniatria e Scienze Affini, organo del Manicomio di Palermo. Quarterly.

Rivista Sperimentale di Freniatria e di Medicina Legale in relazione con l'Antropologia e la Scienze giuridiche e Sociali. Reggio-Emilia. Quarterly.

WORKS AND ARTICLES IN JOURNALS.

ACCIDENTAL DISEASES IN THE INSANE. Contributo allo studio delle Malattie Accidentali dei Pazzi. Seppelli Giuseppe e Riva Gactano. Annali Universali di Medicina e Chirurgia. Vol. 251, p. 193, fasc. 753. 1880.

Uno Studio Clinico sulle Malattie Accidentali dei Pazzi. Spallanzani Modena. 1880, ix, p. 51.

ALCOHOL. The Physiological Action of Alcohol in its Relationship to Animal Heat, and its influence upon the Vasomotor Nervous System. W. Bevan Lewis. Journ. of Ment. Science, 1880, No. 77 n.s., vol. xxvi., p. 32.

ALCOHOLISM. Law against Alcoholism and to institute Temperance Asylums. Petithau. The Alienist and Neurologist. St. Louis, 1880, vol. i., n. 1, p. 98.

Rapport à M. le Ministre de l'Intérieur sur la question de l'Alcoolisme telle qu'elle résulte des travaux les plus récents, notamment du Congrès International de Paris de 1878. Bull. de l'Acad. Royale de Méd. de Belgique. Bruxelles, 1879, 3 s., xiii., p. 1083.

Note sur une nouvelle forme d'alcoolisme latent professionel et sur le moyen de le combattre. Luton. Annales d'Hygiène et de Médecine Légale. Paris, 1880, f. iii., 3 s., n. 18, p. 525.

Bericht des Vorstandes über die Ausführung früherer Vereinsbeschlüsse (Verein der deutschen Irrenärzte) (Trinkerfrage, Staatsaufsicht der Irrenanstalten). Allg. Ztschr. f. Psych. Berlin, 1879, xxxvi., p. 633.

Ueber Trunksucht und Verbrechen. Baer. Arch. f. Psych. Berlin, 1880, x., p. 542.

AMERICAN INSANE ASYLUM. A visit to the American Insane Asylums. Earl von den Steinen. Arch. of Medicine, New York, vol. iii., n. 2, 1880, p. 231.

AMSTERDAM. Proceedings of the Psychological and Neurological Section of the International Medical Congress at Amsterdam. Translated by E. M. Nelson. The Alienist and Neurologist, Saint Louis, 1880, vol. i., n. 1., p. 98.

APHASIA. The medico-legal aspect of cerebral localization and aphasia. C. H. Hughes. The Alienist and Neurologist, Saint Louis, 1880, vol. i., n. 2, p. 142.

Deux cas d'Aphasie dans la Paralysie Générale. Magnan. Gaz. Méd. de Paris, 1880. 6, s. ii., p. 66.

ASYLUM. A Public Asylum for 414 beds, capable of extension to 600, with plans. Richard Greene. Journ. of Ment. Science, 1880, n. 78 n.s., vol. xxvi., p. 233.

BIOLOGY. Principes de Biologie. Herbert Spencer. Traduit de l'Anglais par M. E. Cazelles, tome i., Paris, 1880, 8°.

BLOOD. Recherches sur l'Anatomie du Sang dans la Folie. Gallopain. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 164.

BORDERLAND between Physiology and Psychology. Rev. W. G. Davies. Journ. of Ment. Science, 1880, n. 114, n.s. vol. xxvi., p. 201.

BRAIN DISEASE. Topische Diagnostik der Gehirnkrankheiten. Eine klinische Studie. Von Dr. Hermann Nothnagel, Berlin, 1879.

BRAIN. The Functions of the Brain: a popular essay. J. Althaus. London, 1880, 8°.

Architecture and Mechanism of the Brain. Edward C. Spitzka. Journ. of Nervous and Mental Diseases, Chicago, n.s. vol. v., n. 2, p. 208.

Sulle Funzioni dei lobi anteriori del cervello umano. Prof. Filippo Lussana Milano, 1879.

Brain work and overwork. H. C. Wood. Philadelphia, 1880, 8°.

On Giacomini's method of preserving the brain. W. Osler. Medical Record, New York, 1880, vol. xviii., p. 315.

Le Cerveau, sa Topographie anatomique. C. Morel. Paris, 1880, 4°, with 17 plates.

BROADMOOR. L'Asile d'Etat pour les Aliénés criminels d'Angleterre. D. Hack Tuke. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p, 35.

CARE OF THE INSANE AND THEIR LEGAL CONTROL. John Charles Bucknill. London, 1880.

CARLINO GRANDI. Il processo contra Carlino Grandi l'incisore dei bambini e gli studi medico-legali dei periti Livi, Bini e Morselli. Reggio, 1879.

CATALEPSY. Experimentelle Katalepsie (Hypnotismus). Berger. Neue Beiträge Deutsche Méd. Wchnschr., Berlin, 1880, vi., p. 116.

Catalepsy, Cervelletto, e magnete. Magiorani. Archivio Italiano per le Malatie Nervose, 1880, fasc. i. e ii., p. 118.

CEREBELLUM. Defect of the cerebellum occurring in a brother and sister. D. Fraser. Glasgow Medical Journal, 1880, xiii., p. 199.

Sopra un caso di atrofia del cerveletto. G. Seppelli. Riv. Sperim-di Freniat. Reggio-Emilia, 1880, v., p. 229.

CEREBRINE. The chemical constitution of Cerebrine. Edward G. Geoghegan. Journ. of Ment. Science, 1880, n.s. n. 77, vol. xxvi., p. 32.

CEREBRAL LOCALISATION. Contributo allo studio delle localizzazioni cerebrali. Edoardo Gonzalez e G. B. Verga. Archivio Italiano perle Malatie Nervose, 1880, fasc. i. e. ii., p. 3.

Sulle lesioni della circonvoluzione parietale inferiore (lobulo della piega curva) in rapporto alla teoria delle localizzazioni cerebrali; Giovanni Angelucci. Archivio Italiano per le Malatie Nervose, 1880, fasc. i. e ii., p. 74.

CHARCOT. Notes on a visit to Prof. Charcot's ward, by Dr. Yellowlees. Journ. of Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 131.

CHOREA at an advanced period of life. Mackenzie Bacon. Journ. of Ment. Science, 1880, n. 78, n.s. vol. xxvi., p. 253.

CHLORAL. Beiträge zur Chloralwirkung. Shïler. Allg. Ztschr. f. Psychiat., Berlin, 1879, xxxvi., p. 677.

CLASSIFICATION OF MENTAL MALADIES. Vander Lith. The Alienist and Neurologist, Saint Louis, 1880, vol. i., n. 1, p. 98.

CLITROPHOBIA. Intorno alla clitrofobia o claustrofobia. Antonio Ragi. Archivio Italiano per le Malatie Nervose, 1880, fasc. i. e ii., p. 145.

COERCITIVE MEASURES. Their use in Mental Maladies. M. Van Andel· The Alienist and Neurologist, 1880, vol. i., n. 1, p. 102.

Sur l'Emploi des Moyens coercitifis dans le traitement des Maladies Mentales. Billod. Ann. Méd. Psychologiqùes, Paris, 1879, 6 s., tome ii., p. 349.

COMMISSION of Lunacy on the Rev. W. Basset. The Journ. of Psychological Medicine and Ment. Pathology, 1880, part 1, n.s. vol. vi., p. 136.

COMMITMENT of the Insane. B. Cushing. Boston Medical and Surgical Journal, 1880, c. ii., p. 32.

CONDITION OF THE INSANE. A glance at the past and present condition of the Insane. Abraham Marvin Shew. Middletown, Connecticut, 1880, 8°.

CONGESTION. Sur la fréquence et les effets de la Congestion Cérébrale chez les Aliénés et plus particulièrement chez les paralytiques généraux. Mordret. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 144.

CONGRESS. Comptes Rendus Sténographiques du Congrès International de Médecine Mentale tenu à Paris du 5 au 10. Août, 1878. Paris, 1880.

CONSTIPATION. A case of obstinate constipation and inactivity of the liver. F. Wilton. Journ. of Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 67.

CONSTRUCTION OF HOSPITALS. On the proposition of the Association of Superintendents of American Hospitals for the Insane. John Curwen. The Alienist and Neurologist, St. Louis, 1880, vol. i., n. 1 and 2, pp. 1 and 165.

CRIMINAL ACCOUNTABILITY of the Insane. E. Mead. Bull. Medico-Legal Society, New York, xiii., p. 215.

Rapport sur la législation relative aux aliénés criminels, presenté au nom de la première section de la Société générale des Prisons. Paris, 1880, 8°.

De la protection donnée par la loi du 30, Juin, 1838, contre les aliénés dits "criminels." Billod. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 16.

Quelles mesures peuvent être prises a l'égard des aliénés dits criminels? Auzouy. *Ibid*, p. 23.

Des Aliénés dits Criminels. Dagonet. *Ibid*, p. 28.

Des Aliénés Criminels. Lunier. *Ibid*, p. 41.

Discussion sur les Aliénés Criminels. *Ibid*, p. 47.

Les Asiles de Sûreté. Michel Möring. *Ibid*, p. 99.

Note sur les mesures a prendre a l'égard des aliénés dits criminels. Barbier. *Ibid*, p. 106.

Von Behörden verkannte Irreseinsfälle. (Zum Art 29, des franz. Irrengesetzes von 30 Juni, 1838.) Haunhorst. Irrenfreund Steilbr., 1879, xxi., p. 166.

CURABILITY OF INSANITY, vs. Recovery from Mental Disease. Pliny Earle. The Alienist and Neurologist, Saint Louis, 1880, vol. i., n. 1, p. 82.

Subsequent history of twenty-five persons reported recovered from insanity in 1843. Pliny Earle. The Alienist and Neurologist, Saint Louis, 1880, vol. i., n. 1, p. 62.

The Curability of Insanity. A. F. Browne. The Journ. of Psych. Medicine and Mental Pathology, 1880, part 1, n.s. vol. vi., 1880, p. 76.

DAVID LAZZARETTI. Davide Lazzaretti e la pazzia sensoria. A. Verga. Archivio Italiano per le Malatie Nervose, 1880, fasc. i. e ii, p. 27.

DELIRIUM. Des Délires Instantanées, transitoires (Délires par accès) au point de vue de la Médecine Légale des Aliénés. Lasègue. Comptes Rendus du Cong rès International de Médecine Mentale, Paris, 1880, p. 227.

Das Delirium Acutum. E. Mendel. Berlin Klin.. Wchnschr., 1879, xvi, p. 741.

Ueber Klinische Aeusserungen der Reaktionszustände acuter, Delirien (Jehn.) Allg. Ztschr. f. Psychiat., Berlin, 1879, xxxvi., p. 676.

DELUSIONAL INSANITY. Extraordinary case of delusional (homicidal) insanity, with hallucinations of hearing and other senses; religious fanaticism, and murder of child, the mother being a consenting party. Charles F. Folsom. Journ. of Ment. Science, 1880, n. 78, n.s. vol. xxvi., p. 258. (Abst. from Boston Med. and Surg. Journ., March 18th, 1880.)

DEMENTIA following Alcoholism. J. M. Da Costa. Med. and Surg. Reporter, Philadelphia, 1879, xli., p. 535.

DEMONIACALS. Les Demoniaques d'autrefois. Richer. Revue des Deux Mondes, Paris, 1880, vol. xxxvi.

DIAGNOSIS. Leçons sur le Diagnostic de la Folie. Bull. Gaz. Hebd. de Méd. et Chir., Paris, 1879, 2 s., xvi., p. 805.

DIGITALIS. Effects of digitalis on excitement. Schaefer. Allg. Ztschr. f. Psych., Berlin, 1879, 36 B., 3 Heft.

DIVORCE. On mental alienation as a cause for divorce. Vander Swalne. The Alienist and Neurologist, St. Louis, 1880, vol. i., n. 1., p. 89.

DREAD. Some observations upon the treatment of conditions of Dread Gastrowitz. The Alienist and Neurologist, St. Louis, 1880, vol. i., n. 2, p. 224.

DUTIES OF THE STATE WITH REFERENCE TO THE INSANE. Ramaer. The Alienist and Neurologist, 1880, vol. i., n. 1, p. 106.

DYSTHYMIA. Ueber Dysthymia und die offenen Curanstalten. Jahrb. f. Psychiat., Wien., 1879, i., p. 171.

ENCEPHALON. Essai sur la Physiologie Normale et Pathologique de l' Encéphale. Ed. Fournié. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 288.

EPILEPSY, and its relation to Insanity, and cases of doubtful responsibility before judicial tribunals, with remarks on expert testimony. A. O. Kellog. Physician and Bull. Med. Legal Society of New York, 1880, xiii., p. 205.

On temporary loss of speech from shock after a series of severe epileptic fits. F. Beach. Proceedings Assoc. Med. Officers American Institutions for Idiots and Feeble-Minded Persons. Philadelphia, 1879, p. 52.

Relation of Epilepsy to Insanity. J. L. Cleveland. Cincinnati Lancet and Clinic, 1880, n.s. iv., p. 49.

A case of partial epilepsy apparently due to a lesion of one of the vasomotor centres of the brain. W. A. Sturge. Trans. Clinical Society of London, vol. xii., 1879, p. 162.

The Epilepsy of Othello. Robert Lawson. Journ. of Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 1.

The Gulstonian Lectures on Epilepsy. W. R. Gowers. London, Lancet, 1880, vol. i. 1880, pp. 315, 353, 391, 433, 473, 515, 552.

A case of Epilepsy terminated by Apoplexy, and complicated with hemorrhagic cysts surrounding the left kidney. T. B. Worthington. Journ. of Ment. Science, 1880, n. 78, n.s. vol. xxvi., p. 254.

L'Épilepsie Larvée. Christian. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 234.

Considérations Cliniques sur la Folie Epileptique. M. G. Echeverria. *Ibid*, p. 238.

Délire Épileptique, coexistance chez un épileptique d'un double délire; l'un chronique avec idées de persécutions, l'autre de nature nuptique passager et consécutif aux attaques. Garnier. Gaz. Hebdom. de Méd. et Chirurgie, Paris, 1880, 2 s., xvii., p. 136.

Des Rapports entre les convulsions et les troubles circulatiores et cardiaques dans l'attaque d'épilepsie. Magnan. Comptes Rendus de la Société de Biologie, Paris, 1879, 6 s., iv., p. 183.

Der Cataleptiseur und Epileptiseur. Hansen. B. Krans. Allg. Wien. Med. Ztg., 1880, xxv., p. 59.

EXPERTS. Le perizie medico-legali in Italia. Prof. Arrigo Tamassia. Firenze, 1879.

FANATICISM. Case of Insanity and Fanaticism. C. F. Folsom. Boston Med. and Surg. Journ., 1880, cii., p. 265.

FITZJAMES COLONY. Compte Rendu Médical et Administratif des Colonies de Fitzjames et Villiers. Gustave Labitte. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 95.

FORCED ALIMENTATION OF THE INSANE. Billod. The Alienist and Neurologist, Saint Louis, 1880, vol. i., n. 1, p. 98. (Tr. from Proceedings of International Medical Congress at Amsterdam.)

FREE WILL. Freie Willens bestimmung in theoretischer und practischer Beziehung. Schulz. Allg. Ztschr. f. Psych., Berlin, 1879, xxxvi., p. 604.

GAILLON. Statistique de l Infirmerie spéciale de Gaillon. Hurel. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 54.

GENERAL PARALYSIS. On General Paresis. N. E. Macdonald. The Journ. of Psych. Médicine and Mental Pathology, part 1, vol. vi., n.s. 1880, p. 99.

Des Variétés Cliniques de la Paralysie Générale. Falret. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 124.

De la Paralysie Générale à double forme. E. de Lemaestre. *Ibid*, p. 138.

Variétés Cliniques de la Paralysie Générale. Daniel Brunet. *Ibid*, p. 138.

GENERAL PARALYSIS OF THE INSANE. Wm. Julius Mickle, M.D., M.R.C.P. Lond. London, 1880, 8°.

GHOST. An Antiquary's Ghost Story. Journ. of Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 147.

HEREDITY. De l'Hérédité Psychique ou Morale. Fournet. Comptes Rendus du Congrès International de Médecine Mentale. Paris, 1880.

De quelques exemples relatifs à l'antagonism entre l'hérédité et le Milien. E. Mer. Comptes Rendus de l'Académ. de Sciènces, Paris, 1880, tome xc., p. 375.

HOMICIDE. Todschlag im Affect. Zweifelhafter Geisteszustand (Epilepsie und dadurch bedingte krankhafte Gemüthsreizbarkeit) des Thäters (Facultätsgutachten der Grazer Med. Facultät. Krafft-Ebing). Allg. Ztschr. f. Psych, Berlin, 1880, 37 B, 1 Heft, p. 40.

Versuchter Todschlag im Zustande eines patologischen Rausches. Von Gellhorn. *Ibid*, p. 43.

Ferimento ed Omicidio, delirio di persecuzione: perizia medico-legale. Riv. Sper. d'Freniat. Reggio-Emilia, 1880, v., p. 401.

HYOSCYAMIA in Insanity. John P. Gray. American Journ. of Insanity, 1880, vol. xxxvi., n. 4, p. 394.

HYPNOTISM, Spontaneous. Sidney Coupland. Journ. of Ment. Science, 1880, n, 77, n.s. vol. xxvi., p. 41.

Halbseitiger Hypnotismus: Hypnotische Aphasie; Farbenblindheit und Mangel des Temperatursinnes bei Hypnotischen. R. Heidenhain und P. Grutzner. Bresl. Aerztl. Ztschr., 1880, ii., p. 39.

HYSTERIA. Case of, with Somnambulism. Ernest Chambard. Journ. of Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 55. (Tr. from Revue Mensuelle de Médecine et de Chirurgie, April, 1879.)

Recherches cliniques sur les causes de l'hystérie; relation d'une petite epidemié ed' hystérie observée à Bordeaux dans une école de jeunes filles. Journ. de Médecine de Bordeaux, 1879, ix., p 170.

Attaqué hystéro-épileptique; catalepsie artificielle; achromatopsie hystérique. Charcot. Gaz. des Hôpitaux, Paris, 1880, liii., 1.

Accidents hystériformes chez unjeune homme de, 26 ans; attaques spontanées, attaquées provoquées par les inhalations d'éther ou de chloroforme; arrêt des attaques par la compression du testicule gauche: hémianesthésie gauche. Dreyfus. Comptes Rendus, Société de Biologie, Paris, 1879, 6 s. iv., p. 466.

HYSTERO-EPILEPSY. L'attaque hystéro-épileptsique ; points hystérogènes. Charcot. Gaz. des Hôpitaux, Paris, 1879, lii., p. 1179.

IDIOCY and Imbecility not Insanity. H. Howard. Canada Medical Record, Montreal, 1879, viii., p. 59.

The relation of speech or language to idiocy. H. B. Wilbur. Proc. Assoc. Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons, Philadelphia, 1879, p. 66.

Recent progress in the training of Idiots. E. Seguin. *Ibid.*, p. 60.

Recherches Anatomo-pathologiques sur l'idiotie. Mierzejewski. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 215.

IMBECILITY associated with Sclerosis. F. Beach. British Medical Journal, London, 1879, ii., p. 815.

IMBECILE. The Present Public and Charitable Institutions for imbeciles, compared with the existing legislation respecting them. W. M. Wilkinson. Journ. of Ment. Science, 1880, n. 77, n.s. vol. xxvi,, p. 141.

Legislation as to imbecile and other afflicted children and adults affecting the whole country. *Ibid.*, p. 145.

INEBRIETY. Clinical studies of Inebriety. T. D. Clothers. Med. and Surg. Reporter, Philadelphia, 1880, xlii., p. 157.

Cerebral trance, or loss of consciousness and memory in inebriety. Quart. Journ. Inebriety, Hartford, 1880, iv., p. 1.

L'Ivrognerie, ses effets sur l'individu, la famille et la Société, Rouen, 1879, 8°.

INTERCURRENT DISEASES. Contributo allo studio delle malatie intercorrenti nei pazzi ; del vajuolo. G. Verga. Ann. Univ. di Med e Chir., Milano, 1879, ccil., p. 465.

JUVENILE INSANITY. Kerlin, J. N. Proc. Assoc. Med. Officers of American Inst. for Idiots and Feeble-Minded Persons, Philadelphia, 1879, p. 86.

I disturbi psichiciè nella fanciullezza. G. Lit. Gazz. Med. Ital. Prov. Venete, Padova, 1879, xxii., p. 369.

KALATONY. Etiology and Treatment of. Donkerloof. The Alienist and Neurologist, St. Louis, 1880, vol. i., n. 1, p. 104.

KIDNEYS. Insanity associated with contracted kidneys. Dr. Savage. Journ. of Ment. Science, 1880, n. 78, n.s. vol. xxvi., p. 245.

LEAD POISONING. Insanity from lead poisoning. H. Rayner, A. Robertson, G. H. Savage, and R. Atkins. Journ. of Ment. Science, 1880, n. 78, n.s. vol. xxvi., p. 222.

Insanity from Lead Poisoning. Discussion on Dr. Rayner's paper at the Medico-Psychological Association. Journ. of Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 129.

Geisteskrankheit nach Bleivergiftung. Bartens. Allg. Ztsch. f. Psych., Berlin, 1880, xxxvii., p. 9.

LIVI. La Mente di Carlo Livi pei Dottori E. Morselli e A. Tamburini. Riv. Sperim. di Freniat e di Med. Legali, Gennaio, 1880.

LOCALISATION. De la localisation dans les maladies cérébrales. J. Grasset. 3e edit., 1880, with plates.

LUNACY LAW. English Lunacy Law. American Journal of Insanity, 1880, vol. xxxvi., n. 4. p. 460.

LUNATIC ASYLUMS. De la Capacité civile des Asiles d'aliénés d'origine Departamentale, Rousseau. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 77.

MAD ARTISTS. The Journ. of Psych. Medicine and Mental Pathology, 1880, part 1, n.s. vol. vi., p. 33.

MAGNETISM. Ueber die Erscheinungen und das Wesen des sogenannten thierischen Magnetismus. Berger. Bresl. Aerztl. Ztschr., 1880, ii., p. 41.

Thierischer Magnetismus. P. Boerner. Deutsche med Wchnschr., Berlin, 1880, vi., p. 89.

Der sogenannte thierische Magnetismus im Lichte moderner Wissenchaft bebrachtet. M. Rosenthal. Wien. Med. Bl., 1880, iii., p. 153.

Der sogenannte thierische Magnetismus. R. Heidenhain. Wien. Med. Bl., 1880, iii., p. 169.

MARRIAGE. Les Marriages Consanguins. H. Boens. Journ. d'Hygiène. Paris, 1880, v., p. 37.

MEDICAL JURISPRUDENCE. Isaac Edwards. American Journ. of Insanity, 1880, vol. xxxvi., n. 4, p. 381.

MEDICO-LEGAL. Conférences pratiques de Médecine Légale. E. Clement. Lyon, 1879, 8°.

MEDICO-LEGAL EXPERTS. Le perizie medico-legali degli alienati. B. G. Miraglia. Resoconto Academ. Med. chir. di Napoli, 1879, xxxiii., p. 185.

MELANCHOLIA. D'un Élément Symptomatique secondaire de la Melancholie et de son Traitement. Hildebrand, Paris, 1879, 8°.

MENTAL EXPERTS. On Mental and Criminal Experts. D. Hack Tuke. Abstract of paper and its discussion at the Medico-Psychological Association. Journ. of Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 126.

MENTAL DISEASES. Beiträge zur Formenlehre der Geisteskrankheiten. Leidesdorf. Mith. d. Wien. med. Doet. coll. 1879, v., p. 360.

METALLOTHERAPY. Case of Hysteria with Paralysis, treated by Metallotherapy. Franz Müller. Trans. by William Samuel Tuke. Journ. Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 56.

MICROCEPHALIE ET IDIOTIE. E. Glaucher. Bull. Société Anatomique de Paris, 1879, 4 s., iv., p. 31.

MIND. On Mind, Insanity and Criminality. J. L. Teed. Journ. Nervous and Mental Diseases, Chicago, 1880, n.s., v., p. 63.

MORAL MANIA. The Legal Aspects of Partial Moral Mania. E. H. Crosby. Bull. Medico-Legal Society, New York, 1880, xiii., p. 161.

MORTALITY. The comparative Mortality of different classes of patients in asylums. T. A. Chapman. Journ. Ment. Science, 1880, n. 77, n.s. vol. xxvi., p. 11.

MURDER OF COL. KUMAROFF. Report on the mental condition of the assassin of Col. Kumaroff by Doctors Mongeri, etc. Archivio Italiano per le Malatie Nervose, 1880, fasc. i. e. ii., p. 153.

NEW ENGLAND. Psychological Society (Proceedings). The Alienist and Neurologist, St. Louis, 1880, v. i., n. 2, p. 255.

NEWARK. Remarks and notes upon the Branch Asylum at Newark, U.S., for Adult Imbecile Women. William W. Ireland. Journ. of Ment. Science, 1880, n. 78, n.s., vol. xxvi., p. 216.

NERVOUS EXHAUSTION. A Practical Treatise on Nervous Exhaustion (Neurasthenia). Its Symptoms, Sequences, Treatment. George M. Beard. New York, 1880, 8°.

NEURASTHENIA and Hysteria; cured by Massage, Rest, Feeding, etc. S. Sutton. Chicago, Med. Gazette, 1880, i., p. 47.

NON-RESTRAINT. Besprechung des gegenwärtigen Standes der Non-restraintfrage in Deutschland. Allg. Ztschr. f. Psych. Berlin, 1879, xxxvi., p. 564.

Discussion über die Frage des Non-restraint. All. Ztschr. f. Psych. Berlin, 1879, xxxvi., p. 623.

OVERCROWDING in Pauper Asylums and its Remedies. Journ. Ment. Science, 1880, n. 78, n.s., vol. xxvi., p. 321.

PARALYTIC DEMENTIA. Considérations sur la Folie et sur l'une de ses terminaisons, la démence paralytique ou peri-encéphalite interstitielle diffuse. Girard de Cailleux. Comptes Rendus du Congres International de Médecine Mentale, Paris, 1880, p. 231.

PATRONAGE. Patronage des Aliénés. Brosius. *Ibid.*, p. 269.

PELLAGRA. Studi statistici sulla diffusione della pellagra in Italia, specialmente considerata nella provincia di Modena e sulla Follia pellagrosa. Dott. Dario Maragliano, Milano, 1879.

PIGMENTUM. Delle alterazioniè del pigmento coroideo negli alienati. G. Riva. Riv. Sper. di Freniat. Reggio-Emilia. 1880., v., p. 257.

PREMONITORY SYMPTOMS of Insanity improved by medical and moral treatment. H. Sutherland. Medical Times and Gaz., London, 1879, ii., p. 509.

PRIVATE ASYLUMS. Private Lunatic Asylums. Discussion on Dr. Bucknill's paper. Journ. Ment. Science, 1880, n. 77, n.s., vol. xxvi., p. 134.

Discussion on Private Lunatic Asylums. The Journ. of Psych. Med. and Ment. Pathology, London, 1880, part 1, vol. vi., n.s., p. 109.

Remarks on Private Lunatic Asylums. W. G. Balfour. Brit. Med. Journ., London, 1880, i., p. 319.

PROCEEDINGS of the Psychological Society of Berlin. Trans. by W. Saunders. The Alienist and Neurologist, St. Louis, 1880, vol. i., n. 2, p. 219.

PROTECTION-BED and its Use. W. L. Lindsay. American Journ. of Insanity, 1880, vol. xxxvi., n. 4, p. 404.

PSYCHIATRY. Lehrbuch der Psychiatrie auf klinisher Grundlage, für practische Arzte und Studirende. Von Dr. R. v. Krafft-Ebing. Band iii., klinische Casuistik, Stuttgart, 1880, 8°.

PSYCHOLOGY in its relations to Medicine. Major Greenwood. The Journ. of Psych. Medicine and Mental Pathology, London, part 1, vol. vi., n.s., 1880, p. 89.

Études Psychologiques. E. Leblois. Paris, 1880, 8°.

PSYCHOSES. Klinische Beiträge zur Lehre von den combinirten Psychosen. F. Siemens. Arch. f. Psych., Berlin, 1879, x., p. 128.

Ueber die Wirkung fieberhafter Krankheiten auf Heilung von Psychosen. B. Oks. Arch. f. Psych., Berlin, 1879, x., 249.

Ueber die Eintheilung der Psychosen. Leidesdorf. Wien. Med. Bl., 1879, ii., p. 1209.

Beiträge zur Formenlehre der Geisteskrankheiten. Leidesdorf. Mith d. Wien Doet Coll., 1879, v., p. 360.

Ueber Psychose beim Militär nach Feldzügen. Lochner. All. Zeitsch. f. Psych. Berlin, 1880, xxxvii., p. 1.

PUPILS. The connection between the Mental State and Inequality of the Pupils in General Paralysis. Francis Wyatt Thurnam. Journ. Ment. Science, 1880, n. 77, n.s., vol. xxvi., p. 36.

Recherches Statisques sur les diverses modifications de l'orifice pupillaire dans la Paralysie Générale. Doutrebente. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 152.

REPORT OF DR. NORTON MANNING, Traduction par M. Michel Möring. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 313.

RESPONSIBILITY. Notes of a case illustrating the question of Criminal Responsibility. G. Mackenzie Bacon. Journ. Ment. Science, 1880, n. 78, vol. xxvi., p. 247.

Responsabilité partielle des Aliénés. Lagardelle. Comptes Rendus du Congrès International de Médecine Mentale. Paris, 1880, p. 260.

RETROSPECT. Rückblicke auf 50 Jahre einer Irren. Pflegeanstalt (Colditz) Voppel. All. Ztschr. f. Psych., Berlin, 1879, xxvi., p. 564.

REVULSION. Della cura rivulsiva nelle malattie mentali. S. Venturi. Gazz. Med. Ital. Proc. Venete, Padova, 1879, xxii., p. 379.

SALIVATION in the Insane, by Dr. Reinhard. Trans. by Edward W. Saunders. The Alienist and Neurologist, 1880, vol. i., n. 2, p. 203.

SERVICE OF LUNACY in the Department of the Seine. Reform in the mode of Admission. (From Progrès Médical, January 3, 1880.) Tr. by Alex. Harbinson, M.D. Journ. of Ment. Science, 1880, n. 78, n.s., vol. xxvi., p. 257.

Le Service des Aliénés. F. de Ranse. Gaz. Médicale de Paris, 1880, 6 s., ii., p. 53.

SEXUAL NEUROSES. J. F. Kent. St. Louis, 1879, 8°.

SKULL. Resultats fournis par la mésure des capacités de crânes ayant appartenus à des hommes célèbres. G. Lebon. Comptes Rendus Académie des Sciences, Paris, 1879, lxxxix., p. 870.

Kraniologische Beiträge zur Lehre von der Psychopatischen Veranlagung. F. Meynert. Jahrb. f. Psych. Wien, 1879, i., p. 153.

SLEEPLESSNESS. Nature and Management of Sleeplessness. J. S. Jewell. Journal of Nervous and Mental Diseases, Chicago, 1880, n.s., vol v., n. 2, p. 189.

SOMNAMBULISM. Etude Scientifique sur le Somnambulisme. Prosper Despine. Paris, 1880, 8°.

SOMNAMBULIST, Murder by a. The Alienist and Neurologist, 1880, n. 1, vol. i., p. 115.

SPASMODIC NEUROSES. Des Névroses Spasmodiques, de leur origine, de leurs rapports et de leur traitement. E. Gelineau, 1er. fasc., Paris, 1879, 8°.

SPINAL CORD. The diagnosis of Diseases of the Spinal Cord. W. R. Gowers. London, 1880. 8°.

STATISTICS. De la meilleure manière d'établir la statistique des causes de l'aliénation Mentale. D. Hack Tuke. Comptes Rendus du Congrès International de Médecine Mentale, Paris, 1880, p. 88.

Projet de Publication Administrative des Statistiques d'asiles d'aliénés. Guignard. *Ibid*, p. 93.

SUICIDE. Il suicidio. Saggio di Statistica morale comparato del Prof. Morselli. Opera premiata dal R. Instituto Lombardo, Milano, 1879.

SULCUS ROLANDO. The importance of the position of the fissure of Rolando, as an index of the intelligence of animals. S. V. Clevenger. Journal of Nervous and Mental Diseases, Chicago, 1880, n.s., vol. ii., n. 2, p. 272.

SYPHILIS. Affections Syphilitiques précoces des centres nerveux. Ch. Mauriac, Paris, 1880.

SYPHILITIC EPILEPSY. M. G. Echeverria. Journ. Ment. Science, 1880, n. 78, n.s., vol. xxvi., p. 165.

Ein Fall von Epilepsia Syphilitica. M. Charlonis. Vrtljschr. f. Dermat. Wien, 1879, vii., p. 541.

SYPHILITIC MANIA. Storia d'una mania con emiplegia sinista per arterite sifilitica del cervello. M. Palmerini. Arch. Italiano per le Malat. Nervose. Milano, 1879, p. 539.

TEMPERATURE. Experimentale researches on the Temperature of the head. J. S. Lombard, London, 1880, 8°.

Étude sur la température des paroies de la tête. Auguste Voisin. Comptes Rendus du Congrès Internationale de Médecine Mentale, Paris, 1880, p. 157.

TRAUMATIC INSANITY, in its medico-legal relations. D. R. Brower. Chicago Medical Journal and Examiner, 1879, xxxix., p. 609.

TREATMENT of Insanity in the United States. Journal of Mental and Nervous Diseases, Chicago, 1880, n.s., vol. i., n. 1 and 2, p. 293.

TREPHINING for traumatic Epilepsy. J. F. West. Lancet, 1879, ii., p. 798.

Appointments.

BENHAM, F. L., M.B., Resident Clinical Assistant to the West Riding Asylum, Wakefield.

DUNLOP, J., M.B., C.M., Assistant Medical Officer to the Lenzie Asylum, near Glasgow.

JOHNSTONE, J. C., M.B., C.M., Assistant Physician to the Royal Edinburgh Asylum, Morningside.

MACBRYAN, H. C., L.R.C.P.Ed., Assistant Medical Officer to the South Yorkshire Asylum, Wadsley, near Sheffield.

MITCHELL, R. B., M.B., C.M., Assistant Physician to the Fife and Kinross District Asylum.

SHAPLEY, F., M.R.C.S., L.S.A., Assistant Medical Officer to the Wonford House Hospital for the Insane.

STRAHAN, S. A. K., M.D., Assistant Medical Officer to the East Riding Asylum.

THOMAS, E. G., M.B., and C.M., Second Assistant Medical Officer to the Gloucester County Asylum.

Dr. IRELAND, the Superintendent of the Larbert Institution, has received the diploma of Corresponding Member of the St. Petersburg Society of Psychiatry, and his work on "Idiocy and Imbecility" has been translated into Russian by Dr. Tomaschewski, with a preface by Professor Mierzejewski, of the Medico-Chururgical Academy of St. Petersburg.

Dr. BATEMAN, of Norwich, and Dr. HACK TUKE, of London, have been elected Corresponding Members of the Society of Psychiatry of St. Petersburg. Dr. Tuke has also been elected an Honorary Member of the American Association of Hospitals for the Insane.—"Lancet," Sept. 4.

Dr. Bateman's Researches on Aphasia, appeared first in this Journal, namely, in 1868 and 1869.

Reviews of Bastian on "The Brain as an Organ of Mind," McCosh on "The Emotions," &c., have been crowded out.

THE JOURNAL OF MENTAL SCIENCE.

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

No. 116. NEW SERIES, No. 80. JANUARY, 1881. VOL. XXVI.

PART 1.—ORIGINAL ARTICLES.

Alcoholic Epilepsy. By M. G. ECHEVERRIA, M.D., late Physician in Chief to the Hospital for Epileptics and Paralytics and to the City Asylum for the Insane, New York, &c.

Alcoholic excess is associated with epilepsy in two different ways, as cause or as an effect of it. In the first instance, intemperance may appear as a hurtful habit of the individual favouring the development of the spasmodic neurosis, or again, as a constitutional tendency entailed by parent on offspring with similar dreadful consequences. In the second instance, the moral perversion ordinarily wrought by their disease on the character and conduct of several epileptics, drives them to vicious indulgence in drinking, which aggravates and changes the original character of their fits. The majority of writers have not distinguished in estimating the relationship of intemperance to epilepsy, or insanity, the number of cases immediately ascribable to vice from those in which the uncontrollable passion, or craving for drink, is, as it also happens with masturbation, merely the sign of the outbreak of an inherited predisposition to insanity, or epilepsy, or of the early stages in the evolution of either of these maladies as consequence of accidental causes. Nor has the influence which traumatic injuries to the head, syphilis, or other derangements possibly coincident with the abuse of alcoholics, by themselves exert, been taken into proper account in calculating the part of the latter in the spread, on a wide and increasing scale, of mental and nervous affections. Although this discrimination is by no means always practicable, we may yet arrive at it by diligent inquiry and with a material change in the results, as evinced by the cases we pass on to analyse.

Let us briefly remark, that whisky, brandy, rum, gin, and beer were the liquors principally drunk by the individuals here referred to, and who used whisky more generally than any other spirits, or wines. In no instance have we met in America with absinthic epilepsy.

We will confine our study to 572 individuals—307 males and 265 females—affected with alcoholic epilepsy. Of the entire number, 212 belonged to the middle and upper classes, and 306 to the lower; among these latter 108 had never been taught how to read and write, and 37—15 males and 22 females—were outcasts not knowing their father or mother. We have generically grouped together all these cases under the head of alcoholic epilepsy, because they did not symptomatically differ from one another, although etiologically we have separately classed those in which drinking lies at the root as the inciting cause of epilepsy, from those in which it operated conjointly with other equally powerful and pernicious agencies, or where, on the contrary, it displayed itself as an effect of the epileptic malady exerting a specific influence upon its manifestations—which in this way run a course like that in the preceding cases.

These three divisions are respectively composed :—

First—of 257 cases, 140 males and 117 females, with alcoholism and epilepsy in plain sequential relationship.

Second—of 126 cases in which epilepsy resulted from alcoholic excess associated with the following agencies :—

Syphilis in 67 cases, 39 males and 28 females.

Traumatic head injuries in 42 cases, 31 males and 11 females.

Ague fever in two males.

Insolation in nine cases, seven males and two females.

Excessive chewing tobacco in one male.

Mental anxiety in five males.

Third—of 189 cases, 92 males and 97 females, in whom drinking was a consequence of the epileptic neurosis, contributing to its aggravation, and to induce the same symptoms as in the two other divisions.

We have been able to obtain the particulars of the habits and nervous affections of the parents of 139 patients, 75 males and 64 females, in the first division, and of 86 patients, 47 males and 39 females, from the third division. Both series offer an interesting family history ; that of 139 cases comprised 92 in which intemperance, either alone or associated with epilepsy, existed among the parents. In the

remaining 42 cases the tendency to alcoholic excess, with resultant epilepsy, was inherited from insane or epileptic parents, themselves free from alcoholic complications, but who sprung, some of them—seven fathers and nine mothers—from hard-drinking fathers, to which failing the nervous maladies of their descendants were attributed; it being no less worthy of account that in five of these families other individuals were congenital idiots. Leaving for the moment the remainder of these cases out of consideration, we only wish to point out now the presumed intemperance in the grandparents as a cause of ordinary epilepsy, or insanity, in the next generation, succeeded by the occurrence of one or the other, with reappearance of the intemperate instincts in the grandchildren. These, and similar instances of hysteria, paralysis, or neuralgia, that we could still cite, indicate that in the hereditary history of drink, parental intemperance is not invariably transmitted as such to offspring, but that connected with insanity, epilepsy, neuralgia, paralysis, or hysteria may alternate with them in successive generations. We say connected with these nervous disorders, because, when not occasioning idiocy, we have never seen the hereditary tendency of drunkenness to manifest itself in any other form; and by insanity we mean imbecility, weakness of mind, or eccentricity, indicative of an abnormal and defective cerebral organisation. The extensive and dangerous class of instinctive lunatics of this special sort afford most of the examples of moral insanity, and of the so-called epileptoid psychical states, in their sudden paroxysms of irritability and violence with uncontrollable impulses.

The following table shows the direct heredity in the 225 epileptics from the two above-noticed series :—

FIRST SERIES.

1st Class.	Males.	Females.	Total.
Father intemperate	13	7	20
Mother intemperate	6	9	15
Father and mother intemperate . .	8	5	13
Father intemperate, mother epileptic .	4	5	9
Father intemperate and epileptic . .	6	4	10
Mother intemperate and epileptic . .	9	12	21
Father intemperate and insane . .	3	1	4
Mother intemperate and insane . .	2	3	5
Total	51	46	97

2nd Class.			
Father insane	8	4	12
Mother insane	6	5	11
Grandparents insane	3	4	7
Father epileptic	2	1	3
Mother epileptic	5	2	7
Grandparents epileptic	0	2	2
Total	24	18	42

SECOND SERIES.

Father intemperate	6	7	13
Mother intemperate	9	6	15
Father and mother intemperate . .	14	9	23
Father intemperate, mother epileptic .	8	4	12
Father intemperate and epileptic . .	3	2	5
Mother intemperate and epileptic . .	5	11	16
Father intemperate and insane . .	1	0	1
Mother intemperate and insane . .	1	0	1
Total	47	39	86

The preceding inquiry has not been in every case carried beyond the fathers and mothers because the grandparents' history has been ignored, or uncertainly given, by the larger number of patients belonging to the lower classes. We refer, however, under the 2nd Class of the first series to epileptic and insane grandparents of patients, all proceeding from the middle and upper classes. It is, therefore, legitimate to assume, that had it been possible to take more extensively into account the grandparents' history, percentages would have been higher with our cases than as they stand in the above table.

From it, and considering the total, 572 epileptics, it appears that—

(1.) In 122, or 39·73 per cent., of the males, and in 103, or 38·18 per cent., of the females, making a net total of 39·33 per cent., there was a hereditary taint received directly from the parents.

(2.) Parental intemperance originated the predisposition to epilepsy in 56, or 18·24 per cent., of the males, and in 43, or 16·22, of the females; amounting to a net total of 17·30 per cent. of the whole aggregate of cases.

(3.) Parental intemperance, associated with epilepsy or insanity, existed in 49, or 15·96 per cent., of the males, and

in 51, or 19·24 per cent., of the females; making a net total of 17·48 per cent. of the entire number of patients. As to parental epilepsy, it stands in 39, or 12·70 per cent., of the males, and in 42, or 15·84 per cent., of the females; amounting to a net total of 15·73 per cent.

(4.) Classing together the two preceding kinds of cases of intemperance in the parents, we obtain respectively a proportion of 20·10 per cent. in the males and 35·47 per cent. in the females, or a net total of 36·53 per cent. of the whole cases.

(5.) Parental insanity or epilepsy, without any family history of intemperance, was met with in 17, or 5·53 per cent., of the males, and in 9, or 3·39 per cent. of the females, or in a net total of 4·54 per cent. of the whole epileptics.

The differences in the percentages between males and females is worthy of notice; parental intemperance not ingrafted into epilepsy or insanity, and the existence of these in the parents without any family antecedent of drink, being both two per cent. lower in the females than in the males. But on referring to the aggregate number of cases of intemperance in the parents, irrespectively put together, the results quite change, showing an increase of 16·43 per cent. on the females over the males. A preponderance of 3·28 per cent. results again on the female side when intemperance associated with epilepsy or with insanity appears as hereditary cause, and this difference in favour of the females does not alter, keeping almost the same—3·24 per cent.—in relation to patients sprung from parents tainted with epilepsy, the number amounting, then, as just set down, to 15·73 per cent. of the general total. This preponderance of hereditary epilepsy among females rises to a considerably greater degree as a predisposing cause of epilepsy and crime, the rates being under such circumstances 66·7 among females, against 38·1 among males, as shown by the valuable researches of Henry Clarke on Heredity and Crime in Epileptic Criminals.* He has equally observed among 119 epileptic prisoners—89 males and 30 females—at Wakefield Gaol, family history of drink in 50·5 per cent. of those with idiopathic epilepsy, and in 30·7 per cent. of those with traumatic epilepsy, their net total being 46·2 per cent. Direct hereditary history of fits, insanity, drink, or crime existed in 73·1 per cent. of the former and 34·6 per cent. of the latter; net total, 64·7 per cent.

* "Brain," Part VIII., January, 1880, pp. 514 and 524.

There are, says Clarke, more drunkards among the epileptics than among the non-epileptics, the proportion of temperate to intemperate prisoners among the latter being as two to one, and among the former as three to one. Among the epileptics the percentage of drunken fathers is greater, both for temperate and intemperate prisoners, than it is for the intemperate non-epileptic. With regard to the epileptic females, the case is a little different; the number of drunkards among them is even still greater than among the men. It is the exception to meet with an epileptic female criminal who is not at the same time intemperate. Among these intemperate epileptic women the percentage of sober fathers is greater than the percentage of drunken fathers. It is probable that a more perfect acquaintance with their family history would show a larger proportion of drunkards among the mothers; but making allowance for this, there is little doubt that the amount of hereditary alcoholism is considerably less with the women than it is with the men. On the other hand, we find that the amount of nervous and mental disease in the family is greater at least 20 per cent. Whereas, then, epilepsy in men is associated especially with alcoholism in the parents, in women it is found more frequently in connection with epilepsy and insanity in other members of the family.

Our own experience goes in support of the intemperate habits of female epileptic criminals, not one of the several who have come under our care having been of temperate habits; but among these low women, we have met, in addition, with a considerable number of drunken fathers, as shown by the preceding table. Counting the intemperate fathers in the female column, we get 20 per cent., as against 21·82 per cent. on the male side. In regard to intemperate mothers, the proportion is greater among the females than among the males, it being 20·75 with the former and 17·26 with the latter, making a net total of 18·88 per cent. These results do not bear out Clarke's assertion that the amount of hereditary alcoholism is considerably less with the women than it is with the men, nor that epilepsy in men is associated especially with alcoholism in the parents, whereas in women it is found more frequently with mental and nervous disease in the family. Clarke's own Table X. shows, under the head of idiopathic epilepsy, 57·1 per cent. of the males and 36·6 per cent. of the females with family history of drink, and 74·6 per cent. of the former against 70·0 of the latter with direct hereditary history of fits, insanity, drink, or crime. Considering the small number of women (30) in Clarke's statistics, these second percentages do not set forth much difference between

the sexes, while they seem to carry a refutation of the above conclusions in regard to hereditary alcoholism and epilepsy in females. We may further add, contrary to what one might expect to find, that there is scarcely any difference between the amount already noticed of 18·88 per cent. of intemperate parents among the alcoholic epileptics here analysed and the proportion of 17·71 per cent. (134) with a history of parental alcoholism which, on the other hand, we have met with among 700 ordinary epileptics without drinking instincts. And here, again, the relative proportions, instead of lowering, increase by over 2 per cent. with the females, it being 19·0 per cent. (61 out of 321), as against 16·62 per cent. (73 out of 379) with the males. This observation agrees with Clarke's conclusion, that the percentage of drunken fathers is practically the same for temperate and intemperate epileptic criminals.

Our statistics exhibit a much higher percentage than those of Voisin,* who found 12·63 per cent. with ancestors who died from alcoholic excess out of 95 ordinary epileptics. Scarcely, however, could such small numbers suffice to make a reliable computation. Lanceraux † asserts that 83 families, in which one or more members suffered from diseases of alcoholic origin, had 410 children, and of this number 108 (more than one-fourth) have had convulsions, and, in 1874, 169 were dead, but 83 (more than one-third) of the survivors were epileptic.

Referring to histories of the descent of 115 individuals, 68 males and 47 females, who have exhibited symptoms of alcoholism cropped up in various forms, we notice that the aggregate of children in their respective families amounts to 476—namely, 282 males and 194 females. Of this total

23 were stillborn,
107 died from convulsions in infancy,
37 died from other maladies,
3 committed suicide,
96 are epileptic,
13 are congenital idiots,
19 are maniacal or hypochondriacal,
7 with general paralysis,
5 with locomotor ataxy,
26 with hysteria,
23 with paralysis,
9 with chorea,
7 with strabismus,
19 are scrofulous and crippled,
3 are deaf,

And 79 adults, between 20 and 47, are healthy. Of the 227

* "London Med. Record," 1878, p. 9.
† "Gazette des Hôpitaux," 29 April, 1879, p. 377.

who are not sound, 137 have also had convulsions in infancy, and 53 exhibit their respective maladies, accompanied with symptoms of phthisis. Lastly, drinking instincts have manifested themselves in 205 of the above descendants, 28 of whom correspond to the healthy catagory.

In some of the instances the hereditary connection can be traced through three generations. Thus, one of the females, intemperate and epileptic, gave birth only to two children, carried away by fits in infancy, and she herself was offspring of an intemperate mother, who died demented. Another female, epileptic and phthisical, was daughter of a dipsomaniac, and married a hard-drinking man. They begot three children: two died from convulsions in early infancy, and the third, a daughter, was an epileptic idiot. The genealogy of two other congenital idiots discloses hereditary drunkenness running from their grandfathers to their fathers, and one of these died of general paralysis. Dipsomania has existed through four consecutive generations in the cases of two males and one female, all three of very intemperate habits. One of the males and the female are paretic, both with epileptic attacks. The other male is hypochondriacal, and has one surviving healthy son out of a family of four children, the remainder having died in early infancy of brain affections and fits. All the three children of the other male, and the two children of the female, died also of tuberculous meningitis and convulsions in infancy. In another case the grandfather was dipsomaniac, his two daughters intemperate; and one of them, hysterical and eccentric, has had a family of five children: two died in early infancy from cerebral affections. Of the surviving, one girl is an imbecile; another, with a choreic affection and *petit-mal*, is weak-minded; and one young boy is healthy, but subject to sudden paroxysms of blind fury, in which he breaks up everything, and which probably are forerunners of genuine epilepsy at some future time. Finally, insanity, dipsomania, and epilepsy follow each other through three successive generations in the paternal ancestors of one young male epileptic, who murdered his father during one of his fits.

In respect to congenital idiocy, deducting from the total 476 descendants those stillborn or who died in infancy, there are 13 congenital idiots, or 4·20 per cent. out of 309 surviving offspring. In one case both parents were intemperate, in three others only the mothers, and in the remaining the fathers. On the other hand, as we shall presently

point out, 27, or just 12 per cent. of the 225 epileptic-from the first and third divisions, with hereditary anteces dents of epilepsy, insanity, or intemperance, either alone or associated with one another, had brothers or sisters idiotic. Moreover, seven of the 13 patients belonging to the former category had also grandparents intemperate, habitual intemperance having existed in the families of two of them for three previous generations consecutively on the paternal side. In three of the 27 cases from the latter category, congenital idiocy and alcoholic epilepsy were related to intemperance, not of parents, but of grandparents. Dr. Langdon Down believes that intemperance in the parents produces only two per cent. of idiocy in offspring, which is by one-half lower than the results of our estimates. Dr. Fletcher Beach,* of Darenth Asylum, has found the history of parental intemperance on an average of 31·6 per cent. out of 430 patients, while Dr. L. N. Kerlin, of the Institution for Feeble-minded Children, Media, Pennsylvania, taking into account the history of parents or grandparents, has discovered that 38 out of 100 idiotic children had intemperate progenitors. We may further state, that we have met with parental alcoholism in 34·59 per cent., or in 73 out of 211 cases of simple and epileptic congenital idiocy, and in seven of them, or in 9·58 per cent. of the cases, the parents and grandparents were intemperate. In 17 instances the father and mother were habitually given up to drink; in 44 instances only the fathers; and in five others only the mothers, whose idiotic children, except in one case, were all females. Lastly, we have reason to believe that three of these idiots were conceived whilst their respective fathers displayed manifest signs of alcoholism.

Certainly, the great amount of epilepsy in the progeny of intemperate individuals—which from the foregoing estimate and exclusive of convulsions in infancy, reaches 20·25 per cent.—affords a definite point for comparison in our computation of the hereditary causes of epilepsy, when the inquiry has to be carried out in an inverse manner, *i.e.*, from offspring to parent. One process may serve to rectify the other, for both lead to results not dissimilar and differing only in a slight degree, as we have shown with the heredity of epilepsy and insanity, and is still evinced by the above percentage, which is not much beyond the ratio of 17·23 intemperate parents among ordinary epileptics. Therefore, con-

* "British Med. Journal," Sept. 4, 1880, p. 377. Proceedings of the Annual Meeting of the British Medical Association, Cambridge.

sidering the impossibility of acquainting ourselves with the family history of every individual, and the large scale of our reckonings, it is fair to regard 18 per cent. as very near the real proportion, in round figures, of cases of epilepsy arising from intemperance in the parents, not accompanied with mental or nervous disease.

Of the 225 epileptics tainted with a hereditary predisposition, 17 males and 12 females were the only surviving offspring in their respective families; 18, 7 males and 11 females, had all their living brothers and sisters sound, and the remaining 178 had either brothers or sisters who were

	Males.	Females.	Total.
Idiotic	7	5	12
Epileptic	18	14	32
Some epileptic, others idiotic	9	6	15
Some epileptic, others insane	8	12	20
Some epileptic, others paralytic	7	5	12
Insane	13	10	23
Weak-minded	6	4	10
Some insane, others paralytic	5	4	9
Paralytics	8	6	14
Blind	3	5	8
Scrofulous and crippled	14	9	23
Total	98	80	178

Furthermore, other brothers and sisters were also intemperate in the families of 68 males and 59 females, and phthisis existed in the families of 32 males and 41 females. Finally, 3 males and 1 female had brothers who committed suicide, and 1 male and 2 females had criminal brothers guilty of murder.

Of the 139 epileptics from the first division, 48 males and 53 females had suffered from convulsions in childhood, but remained free from fits until the supervention of the alcoholic excess. The explosion of epilepsy in these 139 cases occurred at the following ages:—

	Males.	Females.	Total.
From 18 to 25	36	23	59
„ 25 to 35	17	10	27
„ 35 to 40	11	9	20
„ 40 to 45	5	7	12
Over 45	6	15	21
Total	75	64	139

Reasoning from these records it is apparent that the larger proportionate number of cases occurred at the period from 18 to 25, during the prime of life, the age when the sexual passion, which then comes into activity, helps to bring forth the distressing consequences of hereditary predisposition. Thus, 48 per cent. of the males and 35·93 per cent. of the females displayed at such age the baneful effects of their inherited epileptic diathesis. On the other hand, and in further corroboration both of this latter, which seldom fails to reveal itself in infancy, and of the pernicious influence of parental alcoholism on offspring, we repeat, as just pointed out, the outbreak of convulsions at childhood in 48, or 64 per cent. of the males, and in 53, or 82·21 per cent. of the females. This higher proportion on the female side is not accidental, for, as we have shown,* it equally exists with epilepsy and insanity irrespective of alcoholism, while the amount of children with convulsions or who die in early infancy, is proportionately much greater, and the sound surviving progeny in much lesser number, when the mother has been the parent tainted with either of these affections. Lastly, in this series of 139 cases there were: 59 paralysed since infancy, namely, 10 males and 5 females with left hemiplegia, and 3 males and 2 females with right hemiplegia, these three latter being also imbeciles; 5 males and 4 females had infantile paralysis of one arm; 1 male and 3 females, wasting and infantile paralysis of one leg; 2 males facial paralysis; 7 males and 4 females strabismus: 2 males ptosis; and 3 males and 5 females deafness with otorrhœa.

In the 86 patients corresponding to the third division, epilepsy was developed in childhood, or before the age of 15, excepting in the instances to be presently noted. It is remarkable that every one of these patients suffered from convulsions in infancy, while, in addition, 9 males and 5 females had left hemiplegia; 1 male and 2 females right hemiplegia and idiocy; 3 males and 1 female, wasting palsy of one arm; 1 male and 4 females paralysis of one leg; 3 males and 1 female deformity of the spine from Pott's disease; 3 males and 1 female facial paralysis; 2 males and 3 females strabismus; and 1 male and 4 females deafness and otorrhœa. In all these foregoing instances the affection dated also from infancy. Among those who

* "American Journal of Insanity," Oct., 1880, vol. xxxvii, No. 11.

assigned an inciting accidental cause to their fits, there appears to have been—

	Males.	Females.	Total.
Fright	3	5	8
Dentition	2	6	8
Indigestion	2	1	3
Dysentery	1	0	1
Scarlet fever	2	1	3
Brain fever	3	4	7
Insolation	2	0	2
Onanism	5	0	5
Head injuries	3	1	4
Difficult establishment of menstruation	0	7	7
Post-partum hemorrhage	0	1	1

The last female, native of New York, presented almost every cause of degeneracy combined in her case. Her father and mother were first cousins; a great uncle, an uncle, and a cousin on the paternal side, and a great aunt, an aunt, and several cousins on the maternal side were epileptics. Her father, an inveterate drunkard, was very passionate, and, under liquor, murdered two of his own children, which were quite infants and twins. One of his brothers was also very intemperate. The patient, as already noted, became epileptic upon severe post-partum hemorrhage, at the age of 30, and her nocturnal attacks always preceded the most violent paroxysms of furious mania, lasting two or three days. She took to drinking promiscuously after becoming epileptic; her brother and sister were irredeemable drunkards, and another brother and sister had died phthisical. Her head, of very small dimensions, and extremely misshapen, presented a very conspicuous bulging of the left temporo-parietal region.

We have previously remarked that 37 of our patients—15 males and 22 females—were illegitimate children, without knowledge whatever of their parents. All had been, on several occasions, imprisoned at the workhouse in Blackwell's Island, for misdemeanours, disorderly conduct, and as drunken vagabonds. Most of the females were common prostitutes, and, one male, aged 19, an insane epileptic, committed murder, and had been transferred from the Penitentiary to the Asylum. The proportion of illegitimate children to the total of alcoholic epileptic was, therefore, 6·46 per cent., it being respectively 4·88 per cent. among males, and almost double, 8·30 per cent., among females. This result is not very far from the occurrence of illegitimacy in epilepsy generally,

for we have met with 38 out of 700 ordinary epileptics, or 5·42 per cent. who were illegitimate children. It is true, however, that, under such circumstances, the difference between the sexes diminishes considerably, for we find 17 out of 379 males, or 4·48 per cent., as against 21 out of 321 females, or 5·42 per cent.

I am indebted to my learned friend Dr. A. Motet, Physician to the Maison d' Education Correctionnelle (Petite Roquette) at Paris, for the following interesting information concerning epilepsy, parental alcoholism, and illegitimacy among the criminal children. There have passed though the Petite Roquette, during the five years from 1874 to '78, 1,763 boys, of whom 164, or 9·30 per cent., were illegitimate children. During ten years of careful inquiry into the subject, Dr. Motet has only met with seven epileptics and four insane among the boys sent to the Petite Roquette. It has been impossible to obtain any family history concerning these juvenile offenders; most of them sprung from the lowest classes. Several of these boys, arrested as vagabonds and for having run away from their homes, have declared that they had been compelled to do it, because their drunken fathers had beaten and ill-treated them. Another great number again of depraved and cruel boys, owing their corruption to instinctive rather than to intellectual perversion, have likewise stated that their fathers, and, in some cases, their mothers also, were habitual drunkards. But there have been no means to verify such assertions, parents not caring, in the majority of instances, about visiting their criminal children. All the epileptic boys were affected since infancy. None were detained longer than two months at the Petite Roquette previous to his transfer to some of the agricultural colonies. Only one of them died in a series of cumulative fits, during his arrest while awaiting trial; having all the time protested that he was innocent of the theft for which he had been indicted, and earnestly begging to see his feelingless mother, who, deaf to the information about the grave condition and desire of her son, did not come near him.

There are still other considerations to be made in reference to the two kinds of patients tainted with hereditary predisposition, which we have been examining. In the 97 epileptics, offspring of parents who had been themselves victims of intemperance alone, or accompanied with epilepsy or insanity, the evolution of epilepsy took place, apparently, as the result of excessive drinking attended with acute or chronic alco-

holism. Yet, looking at the pathogeny of these cases in its proper light, we discover at once that, notwithstanding the manifest existing influence that the tendency to drinking has had in inducing epilepsy, both conditions are actually allied manifestations originated from one single inherited neurotic predisposition, and successively reacting on each other. The craving for drink appeared in these instances as forerunner of the convulsive seizures; but, beyond this fact, there was in reality no clinical or cadaveric distinction between such cases and those of the second kind, in which, the order of phenomena being reversed, the fits initiated a state attended with the same craving for drink and other symptoms observed in the former instance. In both, consequently, there is a tare of insanity that is quite obvious, whilst a close inquiry into the etiological antecedents of this extensive class of patients, has convinced us, that neurotic heredity contributes to a larger extent than vice itself and misery to the widespread of drinking. It is needless to add, that by heredity we do not exclusively understand the direct transmission of the intemperate habits from ancestors to descendants, but also the tendency to drinking as one of the metamorphoses that often accompanies the inheritance of mental and nervous diseases, without necessary existence of alcoholism in the parental stock. Confining ourselves to the patients under consideration, and having previously alluded to 16 with intemperate grandparents among the 42 corresponding to the second class in those from the first division, we will now refer to the remainder, composed of 17 males and nine females, who descended from parents affected with epilepsy or insanity, but of strict sober habits, and with no evidence of intemperance in any of their ancestors or blood relations. These epileptics belonged to the middle and upper classes, and their family history is as follows:—

	Males.	Females.	Total.
Father insane . . .	5	1	6
Mother insane . . .	2	5	7
Grandparents insane . .	3	1	4
Father epileptic . . .	4	0	4
Mother epileptic . . .	1	2	3
Grandparents epileptic . .	2	0	2
Total . .	17	9	26

The tendency to drinking was in all these patients suddenly displayed, without any other evidence of insanity, prior to the

explosion of epilepsy at the age of puberty, excepting in two females, not married, in whom the passion for drink, soon followed by fits, burst forth at the climacteric period. Another female, epileptic and dipsomaniac since the age of 19, belongs to a family of seven children—five males and two females. Her mother, subject to nocturnal fits since the age of 13, died after a series of seizures, having long been bedridden, with contractions of the limbs and paralytic dementia. Four brothers and one sister of this patient are married: the brothers have all begotten sound though still young children, but the sister has two daughters—one of them epileptic; and there is no antecedent of insanity or epilepsy in her husband's family. We have no doubt that in these foregoing instances, the tendency to drink that immediately preceded the epileptic paroxysms, was the result of the neurotic inheritance. We might still cite similar examples of this singular change in which, instead of epilepsy, insanity, hysteria, neuralgia, or paralysis, was the inherited affection. On adducing such proofs of this important phenomenon we do not forget that Anstie* regarded it as one of the most momentous and weighty factors in the majority of hopeless cases of alcoholic excess among the higher classes. Savage,† in his interesting researches on the Relation of Mental Disease to Inheritance, has also particularly pointed out drinking as the result of nervous disease in one or other parent. But such hereditary influence has been overlooked in the etiology of alcoholism among the lower classes, its agency operating then to a greater extent than we might suppose. Clarke has been led to the same belief from his experience with prisoners, and cannot help thinking that at the extreme lower end the amount of hereditary nervous disease is much greater than is usually supposed.

It would be difficult to explain the constitutional circumstances for the development of this morbid appetite, which, judging from our own experience, is displayed to a greater extent among females than among males, but not always, as generally supposed, allied to a state of weakness and depression. This powerful instinct breaks suddenly out like that of masturbation, and we have seen it fully developed at the age of thirteen, in a girl with epileptic insanity, who secretly

* "Alcoholism," in Reynolds' "System of Medicine." London, 1877. Vol. ii., p. 58.

† "Guy's Hosp. Reports, 1877," vol. xxii., 3rd s., p. 68.

gave herself up to drink Cologne water, and other liquid perfumes, to quench the irresistible desire for alcoholics.

The second division of cases comprises, as already set down, 126 epileptics in whom the malady, acknowledging a mixed etiology, was the out-growth from alcoholic excess together with other agencies. We need not dilate on the increased energy acquired by such an assemblage of causes in the development of epilepsy, and although collectively they bring about the same result, yet, looked at singly, the combination of syphilis, or traumatic head injuries, with drinking, modifies the evolution of epilepsy in a manner worthy of particular remark. Syphilis appears in 39 males and 28 females, or 67, *i.e.*, 11·71 per cent. of the total cases, it having been further associated with head injuries, thus giving triple origin to the fits, in 4 males and 1 female. In 23 of this class of patients, 14 males and 9 females, the intemperate habits, though excessive, had not induced any physical or mental derangement prior to the syphilitic infection, and in 7 females the epileptic fits burst forth during the secondary stage of the constitutional accidents. Five males and three females had been at times inebriated after drinking more heavily than usual, but none of these 23 patients had ever manifested any symptoms of delirium tremens.

The fits, in 3 females, showed from the beginning a nocturnal character, and, with most of the other cases, though at first diurnal, they subsequently occurred both by day and night. They were in 30 males and 19 females, followed by paralysis, confined to the right limbs with aphasia in 6 males and 3 females; and in 2 males and 1 female only involving the arms, the remainder being instances of left hemiplegia. One female had transient aphasia, without paralysis, after her fits. Paralysis of the third or sixth nerve existed in 9 males and 4 females, complicated, except in 2 males, with optic neuritis.

In many of this kind of patients the paroxysms had a tendency to recur in a cumulative manner, with deep stupor and symptoms of cerebral congestion; or again, in a series of abortive fits, preceded by a severe one, and usually bursting out or increasing during the night, attended with boisterous and restless mania. Not uncommonly the attack, then single, initiated a depressed sullen condition, with uncontrollable impulse to automatic dangerous acts, prompted by hallucinations of sight or hearing of a terrifying character.

The distressing nature of these sensorial phenomena appears more conspicuously in these mixed cases than in those of simple syphilitic epilepsy, as also the stupor that usually alternates with fleeting flashes of unclouded intelligence, and coherence, soon replaced by the primitive confusion of delusional ideas overwhelmed with terror. This condition may lead to paralytic dementia, which was displayed by eight males and one female, besides affected with retraction of the limbs. The most distinctive sign in this form of epilepsy is the common existence of paralysis associated with the just noticed stupor and sensorial disorders. There is no doubt that paralysis ordinarily betrays a complicated etiology of alcoholic epilepsy, which may, in simple cases, be followed by paresis in greater or less degree, but without complete inability to move the limbs. Moreover, the concurrence of such mental and paralytic symptoms at no time happens in ordinary Jacksonian epilepsy, nor in hystero-epilepsy. Not only are vertigo and *petit-mal* never allied to hystero-epileptic attacks, but these are also free from the pernicious influence of the epileptic neurosis on the intellectual faculties, which fact draws a broad distinction between them, the Jacksonian attacks, and genuine epilepsy.

There are, indeed, instances of epileptic hemiplegia, with rapid dementia supervening simultaneously with a return of muscular power in the upper limb as the lower continues paralysed, with persisting pain in the head. Such cases, however, are always free from the delusional trouble and sudden impulsive paroxysms characteristic of epileptic insanity, and they are besides of short continuance. Their speedy fatal issue, pointed out by Trousseau, has been also remarked by Dr. Jackson, and we have equally observed it, with the opportunity of making four autopsies, in which we met with the following cerebral conditions: softening from plugging of the Sylvian artery, a tumour (sarcoma) of the dura-mater originating softening, tubercular deposits, and the cicatrix of an old fracture of the parietal, with an extensive ischæmic yellow patch underneath. These different lesions were situated respectively on the right fronto-parietal convolutions in the first case, and, in the three others, over the same region of the left cerebral hemisphere.

We have noticed paralysis less frequently when, instead of syphilis, traumatic head injuries have been the agency joined to alcoholism for the production of epilepsy. In all

but two of the eleven cases in which paralytic symptoms exhibited such relation, their onset coincided with the supervention of the cranial injury, located in five males and two females over the left parietal region, in one male over the right parietal, and in one male and two females over the occipital. Four males and two females had right hemiplegia and aphasia, and the remainder left hemiplegia. Transient aphasia, without paralysis, lasting from a few hours to two or three days, or even much longer, followed the fits in three males and one female. Finally, a ship master, aged 37, received a blow on the head, and two months after was seized with epileptic vertigo and *grand mal.* He used to drink excessively, and the first seizure was induced by his having become intoxicated. A very short time after the irruption of the attacks, and as he was greatly distressed by vertiginous fits and paroxysms, in which there was mere loss of consciousness without convulsions, and with considerable psychic excitement, he began to lose the hair on his head, and subsequently on the face and other parts of his body, the alopecia being general four months after the outbreak of epilepsy. We have only found with two instances, reported by Gowers,* in which universal alopecia was associated with epilepsy. Both were males; in one the fits began a month after an injury to the head, and in both the fits occurred long after the alopecia was complete. We may further add that no syphilitic antecedents existed in our case. The maniacal attacks increased in severity, attended with œsophagical spasms, and the patient died from meningitic congestion, alopecia having, like his attacks, resisted treatment.

The most remarkable feature in the above traumatic patients was that their paroxysms, chiefly vertiginous or nocturnal, were attended with impulsive explosions of the most dangerous character. The combined influence of intemperance, traumatic injury to the head, and hereditariness are strikingly illustrated in two of the following instructive examples, the constitutional predisposition being doubtful in the third, which offers, however, no less medico-legal interest than the others.

A very intemperate carriage driver, whose maternal grandfather was insane, aud whose mother was phthisical, became affected with epileptic vertigo and violent mania from severe contusion to the head. There was no paralysis, nor any cicatrix at the site of injury over the

* "Medical Times and Gazette," Sept., 1878, p. 379.

postero-superior angle of the left parietal bone, but the scalp and bone underneath were very sensitive to pressure. We trephined the skull and removed a portion of the parietal, which was thick and hardened by inflammation. Thereupon the maniacal excitement gradually disappeared, and, entirely recovered from his insanity and fits; this patient left the hospital about four months after his admission. Having, however, resumed his former occupation and drinking habits, he died five months later, with peri-encephalitis. This epileptic came near killing one of his attendants, who was kindly dressing his wounds a few days after the operation. The attack broke out suddenly, while he was apparently calm, without the attendant having spoken a word to him, and just as he began to loosen the bandage around the head. After the impulsive fit of furor, the patient acknowledged that he was aware of doing wrong, but that it was beyond his power to avoid such an act, to which he yielded to relieve his nerves.

A printer, aged 25, intemperate without habitually getting drunk, enjoyed good health till July, 1864. His father was intemperate, his mother phthisical, and one of his brothers also epileptic. He received, at the date just mentioned, a blow from a cog-wheel of a printing press upon the right parietal bone, which only caused a linear wound of the scalp. The accident rendered him insensible for about ten minutes, but did not prevent his resuming his work. He subsequently suffered from slight frequent headache, which was aggravated by drink, until a fit occurred one morning, four months after the blow, and was preceded by more than usual potations the night before. He had a second seizure, during the night, three months later, and afterwards continued subject to nocturnal fits, which gradually increased in frequency, until they recurred every two weeks, at the time of his admission into the hospital, October 1869. This patient exhibited the most irritable temper. For two nights before the 30th March, 1870, he was discovered by the watchman going slyly to tumble a helpless paralytic out of bed, "for the sake of fun." Probably he had then had a fit, as further betrayed on the morning of the above day, when he burst into a furious paroxysm upon being quietly addressed by a harmless companion, whom he fiercely assaulted and severely wounded. He regained self control upon this violent impulsive explosion, and continued his work of setting the table for the other patients' breakfast. He accounted for the savage assault on his companion by saying: "That he could not help being provoked by his remark."

A sailor of intemperate habits, aged 31, and whose father was paralysed, became epileptic after an injury to the skull by falling from the top of a mast. He was also troubled with polyuria. The fits displayed usually a nocturnal character, returning many times in succession and followed the next day by a stupid condition, which changed after some hours into a wild talkative and incoherent state. One morning, as he rose from breakfast, and after several fits the night

before, on being spoken to by another patient he rushed at him furiously, and, seizing a knife near, would have stabbed him but for the prompt interference of the attendants. This epileptic, of a reserved, silent disposition, was subject to sudden impulsive outbursts, when he would attack any person near him. He felt very much harassed by dreadful hallucinations of hearing, which he concealed, and which caused his retirement from the other patients. He had, also, been arrested several times for drunkenness and disorderly conduct.

The third division is altogether composed of cases which not infrequently swell the number of those where the mental or nervous disorder is primarily ascribed to the morbid tendency to drink that is its consequence. We have previously referred to 86 patients from this division, tainted with hereditary predisposition, and we will now briefly allude to the remaining 103—45 males and 58 females—in whom epilepsy was presumed to have originated from the following causes :—

	Males.	Females.	Total.
Fright	2	3	5
Mental anxiety	7	5	12
Grief	0	4	4
Disappointment	0	3	3
Injury to the head	18	9	27
Severe punishment	1	0	1
Insolation	5	2	7
Venereal excess	3	0	3
Onanism	2	0	2
Establishment of menstruation	0	6	6
Menstrual derangement	0	4	4
Protracted lactation	0	2	2
Climacteric change	0	10	10
Unknown	6	8	14

Head injuries and the climacteric change stand in the first rank in the foregoing table. The neurotic derangements of all kinds with irresistible cravings for alcoholics, brought about in many women by the climacteric change, are too well known. Not so, however, with the intemperate instincts developed, as we have pointed out, among the premonitory symptoms of the convulsive seizures in cases of traumatic injuries to the head.* Thus, in 27 out of 63 cases of this nature, intemperance, entirely unnatural to the patient, was fairly clear as one of the moral changes which foreboded the spasmodic fits. The

* "Archives Générales de Médecine." Paris, Nov. and Dec., 1878.

importance of this fact could not be exaggerated, for it becomes, mainly among the lower classes, an active determining cause hitherto greatly overlooked from want of inquiry into the antecedents of individuals, who often bear manifest signs of the cranial injury originating the intemperate and other evil instincts symptomatic of their epileptic malady.

The ætiological considerations into which we have entered with so much detail, indicate that intemperance has acted alone as a cause of alcoholic epilepsy in 30·80 per cent. of the cases, in which this latter distinctly broke out as its immediate consequence, whereas heredity and the accidental agencies already described have most efficiently co-operated with the alcoholic excess in the much larger number of remaining cases. Unnecessary to remark, that this reckoning does not include the third division of patients in whom the drinking tendency was first the effect and then the cause of a transformation, if we may so say, of the disease into alcoholic epilepsy.

On making this discrimination, of obvious necessity to estimate the direct primitive influence of alcoholism in developing the kind of epilepsy here considered, we do not recede from the position we have taken in regarding all cases as clinically alike. They all present the same peculiar delusions and psychical symptoms, the same sudden instinctive explosions as incidents, the same rise of temperature, soft, rapid, dicrotous pulse, and dyspeptic derangement, along with their frequent attacks, and, in one word, they all require the same management. And, such being the fact, the point we chiefly wish to make manifest is, that in the majority of cases a deep cerebral disturbance derived either from hereditary influences, or from accidental encephalic lesions of various sorts, can be found at the root of the disease. As for the rest, whether in the habitual drunkard who becomes seized with fits, or in the epileptic who, from extrinsic conditions, sometimes the effect of his own malady, takes to drinking, the essential manifestations do not vary, whichever may be the manner in which alcoholism becomes the original factor of that form of the convulsive neurosis called alcoholic epilepsy. Lasègue* says: "Every patient who, after an epileptic attack provoked by drink, continues epileptic, has been epileptic previously, only the inquiry has been insufficiently or badly conducted." This is quite true, but not in every

* De l'epilepsie par Malformation du Crâne, p. 4, Rep. from Annales Méd. Psych. 5c. s. Tome xviii. Paris, 1877.

instance, and, for the reasons which have been here exposed, we would think it more accurate to state, that such person has been previously an epileptic, or belongs to the class of *cérébraux,* availing ourselves of this happy expression, used by Lasègue, to designate the individuals with a vicious or defective brain organization, either originally related to congenital influences, or to accidental lesions that upset in a latent manner the normal cerebral functioning.

We have described in 1862* thehistological changes undergone by the brain in chronic alcoholism, and the dry tough aspect, and resistance to putrefaction of the cerebral tissue, together with the fatty degeneration of the neuroglia and of the cortical cells and blood-vessels, which have been subsequently noticed also by Wilks, Voisin, and other writers. Identical alterations occur in alcoholic epilepsy, and, succinctly stated, they principally consist in the above fatty changes diffused through the cerebral cortex and medulla oblongata, and sometimes accompanied with amyloid corpuscles abundantly developed in the nervous centres. The same fatty metamorphosis, with great amount of pigmentary deposits in the cells, appears simultaneously in the sympathetic, these anatomical changes being not exclusively confined to the nervous system, for they likewise extend to the thoracic and abdominal viscera. Not seldom, when syphilis and alcoholism originate the spasmodic malady, there is a relative increase of size in circumscribed regions of the cerebral hemispheres, or of their whole mass, caused by a hypertrophy of connective elements with a considerable but less uniform hyperplasia than in simple syphilitic epilepsy. Moreover, we usually meet in alcoholic epilepsy with extensive neo-membranes in the dura-mater, which we have seen once lining it over the entire surface of the hemispheres. In the majority of cases the meninges are primarily involved and the brain circulation deranged, occasioning local infarctus and ischæmic patches from atheromatous degeneration with plugging of the arteries.

The cerebral sinus and veins participate in no less degree in the retrograde morbid process, becoming thereby thickened, impervious and irregularly distended. Generally, we have found the longitudinal sinus mainly affected in such a way. In one female epileptic the straight sinus, thickened and firm, was completely obliterated by a thrombus extending into the

*"American Medical Times," May 10, 1862.

inferior longitudinal sinus and venæ Galeni, while in another female the right vena Galeni, occluded by the thickening of its walls, had determined a circulatory impediment with considerable dilatation of the veins in the choroid plexus. In our "Clinical Researches on Epilepsy" we have minutely detailed this latter and other curious examples, with illustrations of the lesions displayed by the brain and meninges in alcoholic epilepsy, for which reason we shall no longer dilate here upon the subject.

The special ætiology of alcoholic epilepsy does not give rise to any characteristic signs in its convulsive paroxysms, which are distinguishable in no particular way and manifest the same generic features and mode of explosion of nearly all falling fits. But the vertiginous and maniacal seizures, on the contrary, display, as we shall endeavour to show presently, a wilder, more stupid, and more dangerous form than usual, which, though not altogether exclusive to this kind of epilepsy, may yet warrant a strong presumption of its existence. Legrand du Saulle* writes: "Alcoholic epilepsy exhibits itself either by vertigo with sudden impulsive outbursts, or by convulsive fits and furor, and never, at least as I have observed it, induces incomplete seizures. Generally its progress is rather marked by single or a small number of attacks, that cease of themselves, without treatment, merely by the effect of sobriety, though ready to re-appear at every renewed alcoholic excess." As a rule, certainly, incomplete attacks are uncommon with simple alcoholic epilepsy, but when syphilis operates in relationship with intemperance, their occurrence, as previously asserted, is not infrequent. Then, again, abortive fits not seldom appear throughout the ultimate stages of epilepsy, when the malady reaches that well-known condition of paralytic dementia, into which many patients rapidly fall after the sudden explosion of the first convulsive seizure, attended with boisterous mania, delusional phenomena of a terrifying nature, and wild impulsive violences. We need only observe that, as manifested by Lasègue in his classical description of sub-acute alcoholism, this is never quite free from frequent semi-attacks.

Nor could it in reality be said that the fits are generally single, or in small number in alcoholic epilepsy. In connection with this matter our own experience is, that the fits are more likely to occur several in succession, or rather in

* "Etude Médico Légale sur les Epileptiques," Paris, 1877, p. 126.

a cumulative manner, when they break out with delirium tremens, or in the midst of sub-acute alcoholism, and, above all, when the intemperate excess superinduces an epileptic condition in every respect similar to general paralysis. On the contrary, single spasmodic seizures, alternating with the vertiginous, and along with insanity, are commonly the outcome of inveterate drinking without habitual inebriety, or of intemperance rooted in hereditary predisposition. But the former are no more frequent than the latter conditions, which could not, therefore, be interpreted as indicating the principal kind of paroxysms in alcoholic epilepsy.

The vertiginous attacks present, as we have advanced, peculiar features. They always manifest some visual trouble, such as the reeling or circular turning and false perception of objects around the patient, with a feeling of faintness, usually attended with fearful distress in the precordial region. The patient thus seized may even fall, without convulsions, entirely lost for a few seconds. In some instances we have seen the precordial distress causing real paroxysms of angina pectoris. At this stage the pupils, ordinarily very enlarged, display successive contractions and dilatations, at short irregular intervals, and which become more conspicuous as the patient makes efforts to arise from his stupor, or is seized by any violent impulse. And, what most strikes one immediately after these phenomena, is the patient's stupor and bewilderment, and his prompt return to himself, very often with a clear recollection of the reckless conduct to which he has been driven by his dreadful feelings and hallucinations. There is, indeed, something singular in the cold perverseness and feelingless nature of such misdeeds, that may be even planned with deliberation, while the delusional ideas keep the ascendancy during the automatic state caused by the vertiginous fits. These attacks, as pointed out by Morel, and as we have noticed on repeated occasions, persist with equal severity after the individual has for long time refrained from drinking. Perhaps their most prominent accompaniment and distinctive sign is the sensorial morbid phenomena which always exist in relation to sight, and very generally also to hearing. They are of the most terrifying and distressing nature, either as every sort of hideous and fantastic animals, or as voices and sounds that haunt and torment the patient incessantly. The following is an interesting illustration of the dangerous irritability coupled with such sensorial affections :—

A male, who was a hard drinker, became subject to fits of *grand mal*, every five or six weeks. He manifested, for a day or two before, the most extraordinary ill-temper and sensitiveness, with a sad expression of countenance, and would assault or insult the bystanders without any provocation. These propensities and periods of unnatural excitement were displayed in relation with his drinking bouts, before but never after the fits; and as these broke out he always saw, with his left eye, a hideous black and red human figure, which slowly magnified as it approached him. His head perspired profusely after the attacks, and no perceptible difference had been detected with the ophthalmoscope between the right and left optic nerve. This patient, during one of these premonitory stages, assaulted his attendant with a chair, and gave him a blow on the head, which left him senseless, because the attendant asked him how he was feeling. Then he ran to his sister in a frantic condition, told her he had killed the attendant, and dropped in a fit. This epileptic is perfectly rational at other times, when he can render a circumstantial account of his distressing feelings. During the temporary disorder of action preceding the fits, his eyes and cheeks become flushed, the pupils abnormally dilated, there is a perceptible rise of temperature of the skin with sudden jerkings of the limbs, and, on account of his excitement, he has to be kept in seclusion.

Changes in the optic disc have been observed principally in alcoholic epilepsy, complicated with syphilis or traumatic head injury. The fundus has not infrequently exhibited a normal aspect in cases of sub-acute alcoholism, even when there existed marked amblyopia, or loss of vision for certain colours, which generally were green or red, and this visual trouble has not unusually been conspicuous prior to the other morbid phenomena. The ophthalmoscopic changes have not always appeared equal in both eyes: being at the earliest stages, congestion, or œdema around the disc, and at a later period white atrophy of the optic nerve, which we have often arrested by hypodermic injections of strychnia around the eye. Curiously enough, optic neuritis, with complete blindness, has not prevented the occurrence of vivid hallucinations of sight. The pupils, besides the spasmodic movements already noted in relation with the fits, have often appeared almost reduced to a point, in inveterate topers who live upon whisky, habitually imbibing large quantities of it without experiencing its intoxicating effects, although plainly exhibiting the other derangements of chronic alcoholism. In these instances, the conjunctiva commonly has a dead pearly colour, and the face shows also a peculiar waxy pallor.

Suicidal tendencies are comparatively less frequent in

ordinary epilepsy than when alcoholism enters into its ætiology, and when they also become often associated with homicidal impulses. Legrand du Saulle* looks at this association as a differential characteristic of alcoholic epilepsy ; but we believe these views rather exaggerated, since homicidal and suicidal impulses have by no means been rarely displayed by several of our own ordinary epileptics, while they appear conspicuously in the case of the student at Angoulême, in that reported by Marandon de Montyel, and others free from alcoholic complications, cited by Legrand du Saulle in the medico-legal work previously mentioned. We fully concur, however, with his remarks on the difficulties surrounding the appreciation of these cases, and the consequent necessity of always proceeding to the medical examination of the prisoner within twenty-four hours after commission of the crime to avoid mistakes in regard to his true mental condition, which one is naturally inclined to judge with greater suspicion from the very fact of the suicidal attempt.

Suicidal tendencies were remarked in 31 males and 22 females, of the patients here analysed, the following being a painful example, in which they accompanied the vertiginous attacks—

We were consulted in 1874, by a merchant, 36 years old, who, after a heavy loss in business, took to drinking promiscuously rum and gin, without the quieting effects sought thereby, but, on the contrary, becoming sleepless at night and more depressed, until he had a nocturnal fit, in February, 1873. He remained very stupid and somnolent the morning after this attack, having suffered for some time previously to it of daily spells of fainting, which he tried to oppose, as his brother stated, by more drinking. He kept on subject, every two or three weeks, to nocturnal fits, besides the above vertiginous seizures which distressed him very much. They caused a momentary faintness and whirling in the head, always initiated by horrible visions of strange animals, and of ominous words traced before his eyes, otherwise blind to all surrounding objects. Once the fit over, he would continue stupified, in a sort of ecstatic condition, from which he would soon come out, sullenly looking, with unclouded mind, and brooding over a desire to end his life. We advised to have him placed under treatment and close watching at some private institution, but his family disliked it, and was not done. The correctness of our prevision was soon confirmed, for, about a month after our consultation, he shot himself while under the influence of a vertiginous attack.

* *Op. cit.*, p. 129.

The maniacal excitement and furor consecutive to the convulsive attacks are analogous to those of delirium tremens, and it would, therefore, be superfluous to discuss them. There is, however, a mental state full of interest, related as much to the spasmodic as to the vertiginous attacks. This insanity displays the peculiar unconsciousness and all the singular conditions that we associate with psychical or mental attacks in ordinary epilepsy; and it either precedes convulsive fits, ending in maniacal delirium tremens, or may be the sequel of spasmodic seizures, then generally nocturnal, and without complication of delirium tremens. Finally, the mental attack may set out together with the vertiginous, but generally terminating by a maniacal or convulsive paroxysm, with more or less characters of delirium tremens. This kind of fits ordinarily occur in individuals who drink excessively without generally getting completely inebriated, or who fall into a state of sub-acute alcoholism, with marked elevation of temperature and roving of the mind, that last several days before arriving at the complete delirium tremens, which, in the former case, may also suddenly explode, with a convulsive paroxysm upon promiscuously drinking beyond the usual habit. However, the convulsive fits, under these circumstances, exhibit a greater tendency to break out singly, favoured by restlessness and insomnia during the night. Such epileptics ordinarily suffer from headache, nausea with morning vomiting of thick mucus, dyspeptic troubles, and wakefulness, accompanied with quivering of the tongue, unsteadiness of the hands, and numbness, often with sudden jerkings of the limbs. These phenomena show increased intensity in the morning, and lull by the stimulus of fresh drinking. The automatic unconscious manifestations that may originate throughout this stage continue for several hours or days, and, besides the occasional sudden jerking of the limbs and shivering or convulsive trembling, the patient exhibits a quivering of the lips and eyelids, with irregular contraction and dilatation of the pupils (the epileptic pupil), which, in the intervals, keep on very much dilated, although we have not rarely seen them contracted to a point, the patient's stupor seeming then most profound.

The pulse is soft, rapid, and dicrotous. In the majority of cases there is a marked rise of temperature with more or less profuse sweating; the urine becomes scanty, increased in gravity, and in rare instances albuminous; while the penis remains, during the attack, extremely retracted, and the

testicles drawn up. Seldom have we noted the menstrual flow arrested by the attacks.

A long, profound sleep establishes the transition from the above state to sanity. This sleep is the natural termination of mental epilepsy, and could not be related to the narcotic influence of alcohol, for it equally exists, in every respect, when the paroxysms supervene after the individual has entirely ceased drinking for some time. After these mental attacks the epileptic exhibits complete oblivion of what he has done automatically during them. This symptom distinguishes this state from the very analogous but shorter one accompanying the vertiginous attacks, in which the patient seldom loses consciousness completely, and, therefore, retains a more or less clear recollection of his morbid sensorial feelings and acts of violence connected therewith. Let us finally remark, that although epilepsy may occur in acute alcoholism entirely irrespective of the motory derangement, it never takes place, however, without being preceded by the characteristic sensorial morbid phenomena we have already pointed out. Chronic alcoholism, on the contrary, may run its course for a long while without any premonitory sensorial disturbance to the sudden irruption of the spasmodic fits, or merely giving rise to the mental attacks just described, and generally having a violent maniacal or convulsive termination, as in the case of Whalley, which we analysed in a preceding article.

We have noticed the worst forms of epilepsy among those who used no other intoxicating liquor than whisky. In several of these cases the fit exploded while the patient was completely intoxicated, or as he awoke from his drunkenness. Sometimes the convulsive seizures have occurred in repeated succession, with deep coma between them, and often having a fatal termination. The maniacal paroxysms connected with the disease under such circumstances have been of the most violent and turbulent character, requiring seclusion of the patient. Many had rapidly become demented, and were in a true state of mental paresis. Several showed a very deficient activity in their capillary circulation, and had atonic ulcers in the legs, or large ecchymotic patches over the nates and lower limbs. Others, again, had swollen ears.

When drinking was related to heredity, the vertiginous attacks prevailed among the manifestations of the epileptic malady. These were, indeed, the most abject and dangerous class of patients. They seemed comparatively free from

delirium tremens, though frequently becoming drunk, and mainly having nocturnal fits. Driven to instinctive acts of depravity, they were entirely destitute of all feeling and moral sense, indifferently yielding to their impulses without the least dread of consequences. One of the most remarkable features with these patients was the perversion of their sexual instincts and beastly lewdness. Many were sodomists; one of them masturbated himself constantly without the least regard to those surrounding him. After his fits he would fall into a violent satyriasis, and one of the fiercest of these attacks broke out while he was, after prolonged use of large doses of bromide of potassium, in a condition of complete bromism, which we induced, expecting thereby to avert his symptoms. A female, subject to vertiginous fits and nocturnal attacks, offspring of an intemperate father, had been in the habit of secretly practising, during the night, the filthiest acts on her daughter, four years old. When surprised at it, and removed from her child, she became furious. This woman was very weak-minded; treatment hardly improved her condition, and in a very short time she became paretic.

These observations agree with those of Taquet and Henry Clarke. The former states that "sexual desires show themselves early in children of drunkards, and are associated with an absence of moral sense."* And Clarke remarks "that the percentage of convictions for bastardy is three times as great among the epileptics as it is among the non-epileptics;" it being further stated, that epilepsy owed its origin to the hereditary alcoholism which existed in all these prisoners.†

As a matter of fact, epilepsy, whatever its kind, is almost always incurable. This circumstance, coupled with our baffled attempts to eradicate intemperance both as a moral evil and as a disease, will easily account for the negative results met with in the treatment of alcoholic epilepsy. This may seem, perhaps, an unwarrantable statement, although it is what we actually achieve as much with private as with hospital patients, for after a more or less prolonged remission in the physical and mental manifestations of alcoholism, the individual remains morally unchanged, and returns to drinking as soon as he regains his liberty.

* "On Hereditary Alcoholism." "London Med. Record," 1878, p. 8.
† *Loc. cit.*, p. 519.

We know that the largest proportion of dangerous lunatics, and the most difficult to deal with, belong to the class of the alcoholic insane, mainly composed of instinctive lunatics and epileptics. Short-sighted benevolence may regard as an unjust punishment to keep them under custody after they recover from their paroxysms; but taught, as we are, by daily experience of the inevitable tendency of these latter to recur, the safety of society requires that such chronic patients should be prevented from doing injury to others and to themselves. Cases are cited of dipsomaniacs and alcoholic epileptics rendered to all appearances healthy and morally reformed by treatment. Their number, however, is so insignificant compared with the immense majority in which recurrence takes place as soon as they are under no systematic discipline, that nobody would set them forth as representing the real issue of any curative plan.

It is not rare to see mental deterioration progressing in a slow but steady manner, notwithstanding the abeyance of the fits by hospital regimen and confinement. Chambers, tried for homicide in Brooklyn in 1871, affords a fair illustration of this phenomenon. His mother was insane, and he was born after her admission at the Cork Lunatic Asylum. He was an habitual drinker, had been severely wounded at the forehead, and laboured under the delusion that he saw balls of fire before his eyes, and people, who watched and followed him, making faces and spitting at him. From the facts in evidence and the examination we made of Chambers the day before his trial, we expressed the opinion, in court, that he was subject to epileptic insanity. The Court, satisfied of it, ordered that he should be sent to the Utica Asylum, and after fourteen months he was transferred thence to the Asylum for Insane Criminals at Auburn. At the former place he looked morose and reticent, with pearly appearance of the eye, puffy lips, dull expression, and intense lividity of the hands and feet, but had no manifest attack of epilepsy. We saw him, two years after the murder, at the Auburn Asylum; he then exhibited a strong demented look, and the late Dr. J. W. Wilkie, superintendent of the asylum, informed us that he had been subject to nervous attacks, attended with excitement and his former delusions; but it had not been possible to ascertain if he had nocturnal fits.

One of the most remarkable instances of the suspension of alcoholic epilepsy by abstinence is that of William Comstock, who, in

1858, murdered his father and mother at Hamilton, Maddison County, New York. He had become subject to fits upon the excessive drinking of whisky. One morning, during one of his attacks, he killed his two aged parents, and was found soundly asleep on a sofa by the corpses of his two victims. Both showed a ghastly opening of the chest, and their hearts, roasted and partly devoured, were found by the stove in the middle of the room. He was tried, and sentenced to be confined for life in the prison at Auburn. The fits, from his incarceration, ceased altogether. By request of one of the Inspectors of State Prisons we examined Comstock in the autumn of 1873, it being then intended to recommend him for pardon to the Governor of the State on account of his good behaviour and submission. At our examination we did not discover any sign of epilepsy or insanity; there was no tremor or paralysis, nor trouble of vision, and Comstock only complained of occasional headache. He owned to have been very intemperate, drinking large quantities of whisky, which superinduced epileptic attacks, chiefly occurring at night. He remembered that before the murder of his parents he was harassed by messages he received through a wire traversing the window of the room, and telling him to kill them; but he had no knowledge whatever of how he accomplished it, nor of having roasted or eaten off their hearts. He seemed deeply affected at the recollection of the event, and said that if he would ever regain his liberty he should go to live with his sister, and would never drink any spirits. He was not aware of the Inspector's intention, nor did we acquaint him with it. We reported that the danger of a relapse was altogether dependent on Comstock's power to break off the habits of abstinence into which he had been forced by his imprisonment; and we believe that he was pardoned.

In conclusion, we could not praise any special remedies for alcoholic epilepsy, abstinence and the ordinary treatment serving to arrest the fits in most cases where syphilis, traumatic head injuries, or any other special complication does not require the use of specific means. We cited one instance of traumatic injury to the skull in which we trephined the patient, but although the fits ceased after the operation, a return to the primitive intemperate habits brought about fatal peri-encephalitis. We have sufficiently demonstrated here that degeneracy and cerebral traumatism, in its broadest sense, are in the majority of cases the essential elements of alcoholic epilepsy. This fact would account not only for its difficult cure, but also why it should be such a dangerous variety of the spasmodic neurosis.

The Philosophy of Nonsense. By B. F. C. Costelloe, B.Sc. and M.A. Glasgow, B.A. Oxon.

To treat of Nonsense in any connection with the abnormal developments of the human mind may seem to some popular philosophers a solecism; but it is not. The connection is very real, and even, if one examines it, essential. The absurd in farce, or in dreams, or in insanity consists simply in the eccentricity of our association of ideas. It may be stated very simply, from a psychological point of view, as follows:—

Throughout the whole of our conscious mental life, and probably throughout all or most of our unconscious existence also, there is seething in our brains a world of infinite suggestion. Anything may suggest almost anything else. Chance "contiguities in place or time" arising out of past experiences, odd bits of partial resemblance, or what is in truth the same thing, quaint and far-fetched contrasts, are *primâ facie* as likely to be the tracks in which our suggestions or associations run as any of the saner or more rational connections of causation or logical relationship. But the sane man, in his waking life, controls this infinite play of suggestion. There is some inhibitory power of selective attention—or whatever else we choose to call it—by which he sets aside the useless eccentricities of the "brain currents," and reinforces, accentuates, selects, or, as we say, *attends to*, those associations only that will fit in with his rational life and subserve the purposes of his intellectual or moral activities. This selected residue supplies the mental furniture of the ordinary common-sense man. To allow the mind, either by a freak of choice or by a necessity of organisation, to run in tracks that are not in harmony with this sane and rational series of ideas is to be eccentric. To be, through organic defects or lesions, incapable of making or maintaining the ordinary selection, either in whole or in part, is to be monomaniac or mad.

But, at the same time, there are many stages short of these. Common-sense is common-place. The distinctly ordinary tracks of suggestion have, after all, a limited range. There are those to whom the more unusual relations of ideas appeal with special force, just because they are unusual; and such men become our geniuses, our poets, our wits. They form, among our masses of good,

ordinary, sensible folk, that notable but luckless class of "original" men to whom the world owes the suggestion of its new ideas, and to whom it never altogether pardons their aberrations from the beaten way. And it is in this sense that "great wits" are "near allied to madness." For the unusual is as necessary a factor in the originality of all genius as it is in insanity or eccentricity. The cardinal difference, of course, remains. The genius is still rational, sane, healthy. He has, probably in a peculiar and subtle perfection, the normal faculty of controlling and selecting, and he guides the currents of his thoughts, whereas the other, having "lost his balance" through the morbid influence of some form of mental disease, no longer controls his ideas, but is controlled by them. He is at the mercy of the odd associations that have come to assume a morbidly vivid importance in his brain, and the rational suggestions of things have ceased to have as much cogency to him as some insane track of ideas and fancies.

Besides the originality of genius and art, however, there is a less momentous phase of the same thing, which in an unpretending way plays a large part in our lives. Every joke or pun, all the wit and humour of the world, is nothing but the bringing out of the odd eccentric suggestions among our ideas. Ordinary people pass them by; but to some they appeal with a peculiar force, and these are our "wits." Why the perception of some such quaintness should cause the agitation of the diaphragm, which we call laughter, is one of the unsolved mysteries of physiology; but the fact is not an unimportant one for the social life of the race. Many more of us would go mad if we had not the saving gift of laughter now and then.

Among those to whom odd connections are especially important we have to include all our children. This seems a singular fact, but it has an explanation. To the child all the world is new. The distinction between the commonplace and the unusual has not yet developed. Everything may be related, for aught we know, to everything else. His faculty of wonderment is continually exercised, and he is always ready for new marvels. "Philosophy begins in wonder," some one said; and it is at least true of our childhood. It is for this reason that "nonsense" plays such a curious part in our education of little people. We tell them strange stories, fairy tales, nursery rhymes—all kinds of things that are unmeaning—merely to catch their interest

and amuse them. Now, there is no doubt this seems in certain ways open to objection. Children must be amused, no doubt. For that end, their singularly vivid *dramatic* faculty will naturally be appealed to by tales and mythical histories of all kinds; and if there were any chance that "nonsense" would ever be abolished from the nursery, it would be an evil seriously to be deplored. But it does not follow that our nonsense should not still carry a meaning. To talk nonsense merely to avoid saying anything is a waste of time; and in fact, as we have said, all such quaint connections of ideas have some sort of basis after all. You cannot talk absolute *nonsense* if you try. Perhaps it would be true to say that not even a madman could; for in all that we call nonsense there must be something which is a nexus between the ideas, and that, however useless for practical purposes, forms the connection between them, the motive and point of the joke, and the copula of our fantastic logic.

If, then, all nonsense must have some glimmering of an underlying idea, it is worth while to see that the suggestion it carries will not lead the child's fancy astray. To be always didactic is a fatal educational mistake, for the free play of suggestion is essential to the healthy development of a child's mind. It is greedy for new links and eager to follow every fresh track. To tie it down to rigid formulas of common-sense and commonplace before its time is a cruel anachronism. But there is nonsense and nonsense. "Punch and Judy," as has been often observed, is an immoral play. The point of it, amid all the wild absurdity, is the triumph of audacious villany. This, as Plato said of the nursery-tales in his day, is a bad sort of nurture to bring up our children on. So, again, there are any number of popular nursery-tales that emphasise a very questionable moral. "Jack and the Bean Stalk" is a case in point. The boy is first cheated into taking the beans for his mother's cow, and then, when the magic bean stalk affords him a way into the giant's home, he begins a reckless course of successful theft. In general, of course, anything is fair against giants, and anything is permitted, again, to the beautiful princesses and other fortunate and not very well-behaved characters of whom the story-books are full. Even when there are virtues emphasised it is the virtues of a savage—bravery, and cunning, and fidelity. There is little protest against lying, or sensuality, or cruelty. But we are not now concerned to

discuss the moral question, though it is plain that "nonsense" which enshrines misleading moral ideas may have a very real ill-effect upon the rapidly-developing minds of a nursery. Perhaps it is unavoidable. The children's tales we still use are fragments of one of the oldest literatures in the world, and naturally do not look at things from our point of view; and to expurgate and euphemerise these inimitable histories would be a foolish and a useless endeavour. It is more to our purpose to point out that every one of them, however senseless it may seem at first sight, has still in it some latent thread and connection. It may be that the meaning is far to seek—that it can only be got at by the comparative philologist or the antiquarian, and has been wholly forgotten by the nurses and mothers, who repeat the same old words from generation to generation; but it *is* there all the same.

Beside these world-old fables and fragments, there has arisen in quite recent years an artificial nonsense—literature for the nursery—which, from a psychological point of view, is even more interesting. Not content with the ordinary routine of fairy tales, many ingenious writers, of whom "Lewis Carroll" is easily the first, have set themselves to write books of subtle nonsense for the amusement and bewilderment of the little people, and the attempt, with the aid of the skilful illustrative art now so happily in vogue, has succeeded wonderfully. It will be worth while to close this rambling essay on the philosophy of things nonsensical by analysing the drift and inner meaning of this new sort of literature.

Let us take for example either "Alice in Wonderland" or "Through the Looking Glass"—a pair of books which is already an established factor in the baby's universe. What is its end, and how does it achieve it?

Its end is partly to amuse and interest children, by puzzling them—to catch their attention and awaken their imaginations by a mystifying trick of talking nonsense so that it shall read like sense; and the means by which it achieves its end consist simply in a reduction to practice, with the aid of all the author's keen and subtle sympathy for child-nature, of the philosophy of nonsense in general. These books rely on three sorts of effects: first of all on the effect of surprise—*το ἀπροσδοκητον* as the Greek rhetors called it long enough ago; next, on the oddity of carrying out an impossible hypothesis to its rigid logical results; and,

finally, on the underlying strain of gentle satire in which the author lightly touches the serious thoughts of the real world, and parodies them for those who will hear about them by-and-bye. The first of these three elements of interest is common, of course, to all such tales. The childish mind that looks through "the dreaming eyes of wonder" is not easily roused by startling things; for, as has been said, all the world is astonishing to it already. Therefore, to fix its attention and awaken any special interest you must make your marvels tolerably strong. But mere impossibilities will not make a good children's book; and the great merit of these little tales is that they clothe impossibility in a most bewitching logic of its own. The whole plot of "Through the Looking Glass," for example, turns on the quibble that in the world which you see when you look into a glass everything goes to the reverse end. Perhaps the quaintest instance of it, if an example may be pardoned here, is the White Queen's explanation of the effects of living backwards—"The things she remembers best are the things that happened the week after next."

It is this second principle of perverse logic, and the third of covert travesty, which make a book of this kind amusing to all people, of whatever age, who have a sense of humour. The beautiful "abstraction" of the grin from the face of the Cheshire Cat, the Hatter's Tea-party, at which cups were laid all round, and the three guests "moved on" when they wanted anything clean; the marvellous Croquet Party, at which the mallets were flamingoes and the balls porcupines—these and many other similar scenes in Lewis Carroll's books are instances of the fun that can be got by reasoning rigidly from absurd premises, as indeed, the madman is constantly doing. If further illustration of the third kind of nonsense association may be given, it will be found in one of the oddest features of these books, namely, their trick of quaint and sudden travesties of well-known philosophic formulæ. Epicurus said παντα ῥεῖ—"All things are a flux." This is parodied in the eccentric shop where Alice finds that everything she wants has gone, before she can reach it, a shelf higher up. Or, again, the idealist supposes that the world and all that is therein may have no existence except in the thought of a universal mind. Accordingly, Alice is warned, when she finds the White King asleep, that she is only a "thing in his dream," and that if he were to wake "she would go out bang! like a candle."

We might pursue this topic to any length, but enough has been said for this place. It only remains to notice that with a just psychological instinct the author casts these *jeux d'esprit* in the form of dreams; for it is in dreams that all the original oddity of our associations comes within our view. We said that chance contiguities or resemblances were *primâ facie* as likely to be the tracks along which our associations run, as any saner connection. That this is entirely true, provided we leave out of account the induced facility which habit gives to particular chains of connection among the brain-tracks, is clear enough when we consider the ways of dreaming. The inhibitory power of selection is in abeyance, or is very weak. As a result, the associations run riot. Anything calls up anything else. Even those that should be most habitual, and therefore most apt to recur at such a time, have far less marked preponderance than one expects. Chaos is the rule.

In a dream our mind is so far consciously active that the play of suggestion goes on among our mazes of remembered experiences, and that a limited amount of stimulus even from the external organs of sense is borne in upon the brain. Anything that happened to us in the past *may* be awakened by the wild play of dream associations. What will follow that it is impossible to tell. Yet there is always some nexus—some underlying logic; and if we can examine a very vivid dream we sometimes find the clue. Especially if we are near waking, our habits of logical connection lead us to argue aright from the most absurd hypothesis. But the results, of course, are never absurd to us in dreamland, because we are not *comparing* them with any standard of reality. We are passive to the play of ideas. The inhibitory action, the power of attention and selection, only begins in waking. Along with it arises the recurring sense of the distinction between those links of association and suggestion which have and those which have not a relation to the real world—to that series of thoughts or things which is amid this chaos the one and only cosmos, the ordered universe wherein each point is in its definite relations to all the rest. This distinction is the distinction between the real and unreal, between truth and fancy, between sense and nonsense. So long as we were in dreamland our ideas were in the empire of misrule, for among infinite possible combinations those which have a real meaning must be an insignificant minority. When we step out

into the world again order is the first necessity of our waking life. We put back in an instant the whole irrelevant crowd of suggestions, and at once begin again the laborious and constant task of selecting and using for our needs those only that have a meaning. We hold the reins of thought, we check it from swerving either to the right hand or to the left; and so it travels forward in a fruitful fashion, and leads us on, with a career that is growing always swifter, over the infinite fields of knowledge.

Chemical Restraint and Alcohol. By F. Pritchard Davies, M.D., Superintendent of Kent County Asylum, Barming Heath, near Maidstone.

From the earliest historic period insanity seems to have been regarded as a disease that required restraint. The teaching of Conolly showed the fallacy of this view as regards mechanical restraint, and now—at all events in this country—medical psychologists are unanimous in condemning the practice, and the tendency is to give an ever increasing freedom to the mentally afflicted. Notwithstanding this, however, it cannot be denied that although the inmates of our asylums are no longer chained to walls, tied up in strong garments, or otherwise made harmless by mechanical means, a vast deal of what has very appropriately been termed "chemical restraint" goes on, and goes on, I believe, to the great injury of those it is supposed to benefit.

It is very easy to consider ourselves more humane than our ancestors and to laugh at the mistakes made by the physicians who have preceded us in the treatment of mental disease; but I think it not improbable, that the practice which is so general now, will at no distant date be scouted with equal derision to that we now heap upon the chains and cords of a bygone period. A change has already commenced, and is spreading fast. Chemical is following mechanical restraint, and will, I trust, soon become as obsolete a line of practice, only remembered as a matter of history or as something to be avoided.

There is very little difference in the reasoning which made our ancestors keep their patients quiet by means of ropes, chains, and cunningly-devised garments and the modern practitioner's administration of powerful drugs for the same purpose. Advance of knowledge made us see the folly of the

one, and I believe the same march of intellect will teach us that the other is not one particle better.

We have in this asylum over 1,200 patients, and among them are to be found cases of every variety of insanity, but all are treated upon what may be called the restorative or rational system, and "chemical restraint" has long since ceased to be practised here. I did not make this change suddenly; it has been a gradual transition. I used to give large doses of morphia, chloral, &c., then less, and now none. It is nearly fifteen months since I finally gave up the use of all "quietening" drugs, and the result is so good that I do not think it at all probable I shall again tolerate their administration.

I have a growing belief that much of the excitement sought to be controlled by drugs, is due to the administration of alcoholic beverages.

I wish it to be distinctly understood that I am not a total abstainer myself, and that I am by no means an advocate for the universal spread of teetotalism; but when I observe the very large number of patients who are brought here mainly through the influence of drink—when I see the morbid excitement that follows but too surely a very moderate indulgence in beer, wine, or spirits, by the vast majority of those who are under my charge—I feel it to be my imperative duty to stop alcohol in every form as an article of their ordinary diet, and to give it to the feeble and the sick only as a medicine.

We used to give beer in this asylum rather freely, but not more so than is usual elsewhere. This beer was not stronger than that ordinarily used in asylums, but I was convinced it acted injuriously in two ways—viz., by keeping up the taste for stimulants in those disposed to take them to excess, and by morbidly exciting the diseased brain it was my object to quieten. As with the "soothing" drugs, so with this—the change was made by first reducing the quantity given; then, finding the result good, we stopped it altogether, and it is now more than a year since any was issued as an article of ordinary diet. All who knew our wards when beer was given to the patients, are pleasingly surprised at the comparative calm now, and I unhesitatingly say that it is my belief, this absence of excitement is mainly due to the withdrawal of alcoholic stimulants.

We have only given water as a substitute for the beer. I thought our dietary sufficient without any addition; but to

test the accuracy of this opinion I have had each patient carefully weighed every month, and as no general diminution in weight has been observed, but rather the contrary, I am satisfied as to the soundness of my judgment.

Since we have stopped the issue of beer, my attention has been more forcibly drawn to the pernicious influence of the public-houses which abound on every side in the neighbourhood of this asylum. Although every care is taken to prevent patients having money, they do get possession of it; and as none who are able to walk are restricted to the airing courts, and large parties are out for exercise every fine day, it is very difficult, if not almost impossible, to prevent patients buying intoxicants. The only way to stop this evil is to make it a punishable offence for a licensed victualler to supply alcoholic beverages to a known lunatic; and I trust a law to this effect may be enacted at no distant day.

To any one unfamiliar with asylum life, an account of the trouble the abandonment of "sleeping draughts" and "quietening medicine" entailed upon the medical staff of this asylum will seem absurd, but it is a fact that the opposition to the change was immense and almost insuperable. Lunatics and asylum attendants cling with great pertinacity to old traditions, and the administration of sedatives is of the oldest. We have many patients here who have been in the habit of being placed under "chemical restraint" every night, others twice or three times a day, some oftener, while the regular attendant or nurse regards its administration as the only right thing, and is apt to consider the patient neglected if it is not prescribed. Attendants have another reason—and, perhaps, a more powerful one—for clinging to "chemical restraint." So long as the patient is quiet, they have less trouble; and their minds are not sufficiently cultivated to enable them to soar above the freedom of the hour.

In the face of protests from patients, that they "can not" and "never did sleep" without a "strong draught," and emphatic assurances from old and tried attendants, that so-and-so was "much worse," "never rested, nor let the other patients rest," &c., "since the medicine was stopped," it was clear something had to be done. I was convinced from my own observations they were mistaken, but saw it was hopeless to make them think so. I therefore had to appear to give way in order to have my views fairly tested. Accordingly, I prescribed very weak infusion of quassia or diluted peppermint water, giving strict injunctions as to the care to be

taken in their administration. The result was as I expected: the attendants were delighted, the patients were "soothed," and "slept well," or were "much quieter," just as under the old sedative; and to this day, this mild deception is kept up in some cases, and all, save the medical officers, believe the most potent drugs are being administered.

It seems to be generally granted that it is good for the patients in an asylum to be quiet. The original idea upon which this belief is founded is, no doubt, correct, but it is perverted in its application.

Insanity is associated in the minds of most people with noise, restlessness, violence, and insomnia. The absence of these manifestations is by many held—and to a certain extent very properly—to betoken improvement in the patient, or at least careful management of them.

The Commissioners in Lunacy, in their reports, seldom omit to notice the presence or absence of excitement among the patients in the asylums they visit, and, as it is generally regarded as an evidence of skilful treatment to have the wards quiet, any and every means have been adopted to make them so.

If this desired result were obtained by means of a strait waistcoat and a gag, or by hitting the patient on the head, public opinion, if not the law, would soon put an end to the practice. But is it more humane to compel the restless and noisy patient to be quiet, by simply crushing them under the stupifying action of drugs?

Some time ago I read an account of a reputed cure for wet, dirty, and destructive lunatics, and it consisted in the exquisitely simple plan of administering a ponderous dose of hyoscyamine. Would any physician now-a-days advocate the garotte for these cases? I think not. Yet why? If one is admissible, why not the other? My lamented friend, the late Dr. Alexander Fleming, seriously advocated garotting patients who were about to undergo minor operations, regarding that process, when skilfully performed, as being less dangerous than chloroform. I am certain it is less dangerous than hyoscyamine when given in the toxic doses which have been advocated. Let me commend it to the notice of the advocates for "chemical restraint" as at least a justifiable alternative.

It would be instructive to obtain from every asylum a return of the quantity of the sedative drugs used during the year, but this cannot be done; yet much benefit might

follow if, at their periodical visitations, the Commissioners in Lunacy were to enquire into the number of patients then taking chloral, morphia, or any other "soothing" medicine, and mentioning the result in their report, at the same time as they describe the state of the patients as regards excitement.

I do not think it would be found that those asylums where "chemical restraint" is most in vogue were the quietest, but rather the contrary; and the marked improvement in the condition of the patients here since its abolition gives support to my belief.

Not only, then, can patients be kept at least as quiet by other means than drugs, but is it not a fact that the prolonged administration of the so-called sedatives has a prejudicial effect upon the well-being of the patients? I think it is. Feeling that a new impetus was given to this line of practice by the introduction of the hydrate of chloral, I regard its discovery as anything but an unmixed blessing. It was thought to be so safe, and to leave no unpleasant after effects, that it has been give alone, and in combination with almost every known sedative, until it is now the veritable sheet-anchor of a large number of medical men who are called upon to treat nervous excitement and insomnia. It thus appears to me to have thrown back the rational treatment of insanity for several years, as its undoubted action in subduing excitement, even in its most aggravated form, if given in large enough doses, has led many to regard it almost as specific, and to be blind to its many dangers.

My experience leads me to believe that few things can be worse than this "chemical restraint." In acute cases, its tendency is to prolong the duration of the disease, and in chronic, to remove what chance there may remain of a restoration to health; in fact, I regard every period of quiet produced by chemical agency, as but another blow to the already enfeebled organism, and as inevitably leading to its ultimate destruction.

It is not my intention to dwell upon particulars, and I do not think any good would be obtained at present by giving instances of individual cases. I have only tried to mark out the broad lines of what I regard as a bad practice, and what I have convinced myself, after a patient trial, is better left alone.

Hypnosis Redivivus. By D. Hack Tuke, F.R.C.P.

Heureux ceux qui se contentent de nier et croient que tout est dit quand ils *ont affirmé que c'est impossible.*—C. Richet.

The renewed interest felt at the present time in hypnotism, or Braidism, induces me to return to a consideration of the subject to which I drew the attention of the readers of this Journal in 1866, in an article on "Artificial Insanity."

I do not measure the importance of hypnotism by its promise of success as a remedial agent, although in the hands of Mr. Braid remarkable benefit was derived from its employment in various forms of disease. But I think that there is more certainty of gain to Psychology and Cerebral Physiology, than to therapeutics, from pursuing in a scientific spirit the investigation of hypnotic phenomena. I should, however, be glad to see a more extended trial of the practice of hypnotism than is at present to be found in this country. At any rate, it is surely too late in the day for any one to avoid making experiments in hypnotic treatment from the fear of injury to his professional position. A medical practitioner, now dead, once assured me that, although he had frequently witnessed decided relief obtained by its use, he desisted from employing it because of the prejudice which, at that time, was excited in the minds of many against so occult an art. A weak man, it may be said, but, as my friend observed, he had to look after his bread and butter.

When the now celebrated, but then suspiciously-regarded Mr. Braid, offered to read a paper on Hypnotism before the Medical Section of the British Association at Manchester, prejudice prevailed, and his offer was declined.* But, after an interval of many years, we have witnessed the British Medical Association invite a foreign Professor to deliver an address on the subject at the Annual Meeting of 1880. Prejudice has at last disappeared, or, at least, if not entirely so, sufficiently to allow of a calm discussion of its merits. This is satisfactory, but it is hardly creditable to us that it should be necessary to ask Professor

* "I intimated my intention to the Secretaries, and (June 22, 1842) sent the paper I proposed reading for the consideration of the Committee, intimating also by letter my intention to produce before them as many of the patients as possible . . . The Committee of the Medical Section, however, were pleased to decline entertaining the subject."—Braid.

Preyer to inform an English medical audience what their countryman had done, what he had written, and what was the meaning of Hypnotism or Neuro-hypnology. The pity was that it should be necessary, but, being necessary, one could only feel obliged to the Professor of Jena for enlightening us, and for insisting that, once again in the history of science, a prophet had not obtained his meed of honour in his own country. The whirligig of time has, however, in its revolutions, brought justice to Braid. His true position, the truth and importance of the phenomena which he so graphically described, and the caution which he exercised in avoiding sources of fallacy are now more clearly recognised, and will eventually be admitted by all candid minds.

Again, at the Salpêtrière, M. Charcot has performed numerous experiments in hypnotism, and with various appliances has induced the same psychical and physical states as those which Mr. Braid brought about so long ago.

Professor Preyer, after making a number of experiments on men and boys, found that Mr. Braid's descriptions were completely borne out, although as regards the influence on disease, he has not, so far, realised his success.

In the early part of this year also, Professor Heidenhain, of Breslau, had his attention directed to hypnotism, and studied its phenomena in a thoroughly scientific spirit. The result has been the publication of a little book which discusses the subject, and seeks to discover that which offers so intensely interesting a problem—the cerebral change which occurs when the hypnotic state is induced. His conclusions deserve the greatest consideration, and may be thus summarised:—

The cause of the phenomena of hypnotism lies in the inhibition of the activity of the ganglion-cells of the cerebral cortex—this inhibition being brought about by gentle prolonged stimulation of the sensory nerves of the face, or of the auditory or optic nerve.

This action he compares to that which is observed in the heart under certain circumstances. Thus, its ganglion-cells, which excite the activity of its motor nerves, so as to cause its rhythmic beat, may be more or less paralysed by the vagus or inhibitory nerve of the heart.

In the same way that the cardiac branches of the vagus by stimulation inhibit the motor nerve, so, it is supposed, the sensory nerves of the face or the eye, acted upon by hypnotic manipulation, inhibit the activity of the cells of the grey

matter of the hemispheres, and cause the so-called "Nervous Sleep."

Another analogous nerve-action instanced by Professor Heidenhain is the stimulation of the sensory nerve of the larynx, which causes relaxation of the muscles of respiration, and cessation of breathing; the sensory nerve inhibiting the activity of those cells of the medulla which preside over the respiratory muscles.

One more example—and that in the lower animals—is the observation of Lewisson that an india-rubber band fastened under the lower jaw of a frog, takes away from it the power of voluntary movement—the pressure on a sensory nerve inhibiting the ganglion-cells subservient to the will.

These examples appear to support the conclusions at which Professor Heidenhain has arrived, though they ought not to be too hastily adopted.

One naturally turns to the analogy, and yet the contrast of ordinary sleep.

At the discussion on Professor Preyer's paper, at Cambridge, little, if any, advance was made in determining the physiological condition in sleep on the one hand, and hypnotism on the other. The first theory which presents itself as likely is, that in the former state the change in the supply of blood to the brain through the freed action of vaso-motor nerves and the consequent suspension of the mental functions is uniform throughout the encephalon, while in the latter it is partial and circumscribed. Exhaustion is recognised as the cause of sleep, and whatever may be the means adopted to induce hypnotism, the most frequent factor is exhaustion of a particular mental faculty, or cerebral area. The psycho-motor centre, exhausted by the strain on the muscles of the eye-ball, or, in the absence of this effort, the cerebral exhaustion caused by intense concentration of the attention on a subject may, according to this view, allow the unopposed action of the vaso-motor nerves in a certain vascular area, and the loss of associated psychical function, accompanied by proportionately increased activity of other hemispherical or ganglionic centres. What part the optic nerves play when staring at an object is the method adopted, is uncertain, but they must be supposed to have a share in the result. That this is not necessary, however, is shown by the fact that the eyelids may be closed and the subject be directed to squint convergently, and yet the hypnotic sleep follows.

Dr. Carpenter supports the vaso-motor theory and the

lessened supply of blood.—"The mesmeric sleep corresponds precisely in character with what is known in medicine as hysteric coma, the insensibility being as profound, while it lasts, as in the coma of narcotic poisoning or pressure on the brain; but coming on and passing off with such suddenness as to show that it is dependent upon some transient condition of the sensorium, which, with our present knowledge, we can pretty certainly assign to a reduction in the supply of blood caused by a sort of spasmodic contraction of the blood-vessels." ("Mesmerism and Spiritualism," 1877).

While ordinary consciousness is suspended, motility may be, and usually is, unimpaired, and one or more of the sensory centres may react acutely to external stimuli. This, of course, is true of natural somnambulism or sleep-walking.

And in ordinary sleep we witness the initial stage of somnambulism, when a dream ends in an act excited by something outside the sleeper which suggested it. Take a very simple illustration. A married gentleman, in usual health, dreamed one night that he was returning to his house with a caterpillar which he had secured during a walk. On ascending the stairs, accompanied by a dog, he placed the caterpillar upon one of the steps, when the dog attempted to disturb it. He at once stepped between them to secure the former, and used some force to push away the dog. He awoke from the encounter to find that he was pushing away, not the dog's but his wife's leg, and to hear her exclaim, "How savage!"

Here we have a dream leading to the wish to repel a creation of the imagination. This tendency arose altogether from, or was greatly increased by, the presence of a material obstacle, which in a short time excites powerful reflex action. If a child had been in the father's bed, and been the cause of this muscular excitement, the result might have been serious, and proved a case of homicidal somnambulism. This condition was not epileptic; the occurrence is clearly explicable in the way mentioned.

We will now see what reasons are advanced by Professor Heidenhain against the above, the vascular, theory of the *modus operandi* of hypnotism—one which he himself held in the first instance.

First, he points out that hypnotised persons, instead of becoming pale, become very red in the face.

Secondly, an examination of the retinal vessels has failed to indicate their contraction.

Thirdly (and this is regarded by Professor Heidenhain as

an *experimentum crucis*), when his brother inhaled amyl, and consequently had his cerebral vessels dilated, hypnotism succeeded, not only as well as, but even better than when he was not under its influence. "Hence," says Heidenhain, "it is impossible that contraction of the cerebral arteries is the cause of the hypnosis." Perhaps the congestion of the face hardly proves that there are no areas of brain in which the supply of blood is lessened, nor is the face always flushed in hypnotism. It may also be observed that the change in facial vascularity, when it does occur, is of importance in indicating that the process employed in inducing hypnotism has affected the vaso-motors in someway or other.

Secondly, the examination of the retina was confessedly difficult and hurried, but, granting that the vessels were dilated, it does not follow that we have, in this state, an index to the degree of hyperæmia of the entire brain. For, who will affirm, for example, that the acknowledged congestion of the cortex in general paralysis is reflected uniformly in a vascular condition of the retina?

Thirdly, as regards the successful induction of hypnotism, when the cerebral arteries were dilated by amyl, might not certain parts of the brain be so acted upon as to neutralize the influence of the amyl, and, if so, and there were other regions receiving a greater supply of blood, is it surprising that the phenomena of hypnotism were more strikingly developed than usual? How easily we may be mistaken in inferring the real condition of the whole from a part of the circulatory system is afforded by the two apparently irreconcilable explanations of the pain of migraine, the one attributing it to anæmia, and the other to congestion. The discrepancy is explained by Dr. Lauder Brunton, who shows that both statements are correct but incomplete, the reason being "that their authors have only observed the arteries during a part of their course, instead of tracing them backwards to the large trunks from which they sprang, and onwards to their smaller ramifications. . . . A constant vascular condition existed during the headache, notwithstanding the apparent differences in the state of the temporal artery. This constant vascular condition consisted in dilatation of the artery at its proximal, and spasmodic contraction at its distal, extremity."*

* "On Headache, Neuralgia, and other Nervous Diseases, connected with the Teeth," 1880, p 7.

These sources of fallacy are only mentioned by way of caution; and no doubt there is much evidence of general excitement of the circulation. Thus, long before Haidenhain wrote, an increased circulatory activity during hypnotism had been demonstrated in the observations of Pau de Saint Martin, who, according to Duval, constantly observed in hypnotism a slight rise in the temperature in the axilla. Besides which the pulse always confirmed the indications of the temperature, while the sphygmographic tracings given by Pau de Saint Martin prove that during the sleep of the patient the arterial dilatation increased, along with abundant perspiration of the hands, axilla, and face, the pulse becoming more frequent, while the respiration was more hurried.*

Apart from the question of the changes in circulation, it appears reasonable to conclude, seeing that the will is in abeyance in hypnotism, that the action of the centre or centres in the cortical substance of the brain with which it is in functional relation, is suspended. Dr. Ferrier is disposed to regard the frontal lobes as exercising an inhibitory influence in normal mental life, and it may therefore be that this region is mainly dormant in Nervous Sleep. Be this, however, as it may, I cannot conceive it possible that the whole cortical substance is in the same condition of suspended action. We have evidence of ideation in various forms, although it does not act spontaneously. How can it be said that the higher centres are totally suspended when the memory of past events is intensified? Thus, a patient under M. Lasègue, in the Necker Hospital, who was hypnotised, related the smallest details of her childhood, which she did not remember when awake. The power of the subject to direct his thoughts has been taken away, but I believe that he is thinking as we think when we dream, and that the acts he performs are the outer manifestations of these thoughts, and not merely reflex motor acts, which have no concern with the hemispheres. That is to say they are ideo-motor, and illustrate the doctrine of the reflex function of the cortex, and not solely of the basal ganglia. When the frog is decapitated, automatic action is in the same way intensified, but with this

* *Art. Hypnotism*, in the "Nouveau Dict. de Médecine et de Chirurgie Pratiques," Vol. viii. Paris, 1874, p. 139. The observations of Pau de Saint Martin are from his Thesis, "Etude Clinique d'un Cas de Catalepsie Compliquée Traitée par l'Hypnotisme." Strasbourg, 1869, No. 216.

difference in the somnambule—there are not only reflex actions but there are reflex ideas. Ideas do not ever arise spontaneously in the hypnote, but, in order to exist, must always be excited from without. This is, in truth, the essential and striking characteristic of hypnotism. It is as if all that directing, controlling, originating, and regulating power, which we attribute to the *ego* were annihilated, and a power *ab extra* substituted. All impressions from within are excluded, the communication with the central authority is cut off, and the only track left open for the transmission of messages is from the outer world through the senses; and they, or some of them, are proportionately exalted. The loss of general sensibility which so often occurs, probably intensifies the susceptibility of the other senses.

Looking, as we do, to the mental act, and not to the physical strain of muscles as the most important element in the production of the phenomena, we should, in attempting to explain their *rationale*, begin with the direction of the attention by the will, carried to such a degree as to end in exhaustion and temporary paralysis of volition. Sensory excitement, through the fixed gaze of the eyes may, as already said, assist, and may act by inhibiting, reflexly, the hemispheres, or rather a limited region of them. But sensory excitement cannot operate in those cases in which merely expecting to go into the hypnotic sleep is followed by this result.

Assuming then, the temporary paralysis of so much of the higher brain-centres as involves loss of volition, the liberation of automatic action of other centres naturally follows. This conclusion, however, does not disprove the opinion that there is an accompanying change in the relative hyperæmia of different regions of the brain. The judgment formed on this point must be determined by other facts.

Whether the function of a region of the brain can be arrested without any change following in the supply of blood to it, is a question which, it would seem, is difficult to decide with certainty, great as the probability is that the amount of blood would be lessened. And yet one can conceive an alteration in the relative position of nerve-cells, or a change in the molecules which would be only mechanical or dynamic. Maury finds in somnambulism an "exaltation de certaines fibres, au detriment de l'action des autres," and in hypnotism an "affaiblissement de la force nerveuse"—expressions which, however wanting in scientific precision, strive to catch the same idea.

Some of Ferrier's observations, though not made in reference to hypnotism, are so much to the point that I will cite them here :—"The inhibitory centres are not equally developed or educated in all, nor are they equally developed in the same individual in respect to particular tendencies to action. But this faculty of inhibition appears to me to be a fundamental element in the attentive concentration of consciousness and control of ideation." After referring to reflex ideas, he observes :—"We have the power of concentrating attention on one idea or class of ideas, and their immediate associates, to the exclusion of all others, a power differently developed in different individuals. We can thus modify and control the current of ideation, and we can also, to a certain extent, voluntarily call up and retain in consciousness particular ideas and particular associations of ideas."

It is confessed that the question on what physiological basis this psychological faculty rests is an extremely difficult one, and scarcely capable of experimental determination; but regarding the elements of attention as a combination of the activity of the motor and of the inhibitory motor centres, Ferrier regards both the voluntary excitation of ideas and the concentration of consciousness, by which the current of ideation is controlled, as essentially dependent on these centres. "During the time we are engaged in attentive ideation we suppress actual movements, but keep up in a state of greater or less tension the centres of the movement or movements with which the various sensory factors of ideation cohere. By checking the tendency to outward diffusion in actual motion we thereby increase the internal diffusion and concentrate consciousness; for the degree of consciousness is inversely proportional to the amount of external diffusion in action. In the deepest attention every movement which would diminish internal diffusion is likewise inhibited. . . . In proportion to the development of the faculty of attention are the intellectual and reflective powers manifested. This is in accordance with the anatomical development of the frontal lobes of the brain, and we have various experimental and pathological data for localising in these centres of inhibition the physiological substrata of this psychological faculty." ("The Functions of the Brain," 1876.)

There is one feature of artificial somnambulism which tends to throw light on its nature. It is greatly dependent upon habit—this it has in common with most, if not all,

neuroses. The more frequently a person is hypnotised, the more readily does he pass into that state. This might seem to favour the idea that primarily the hypnotic state is not dependent upon greater or less hyperæmia, and that the abnormal change is in the nerve cells themselves. Nervous habits of various kinds present parallel characters, and are not usually referred to changes in the circulation. It may also be remembered, as an analogous fact to the influence of habit in inducing hypnotism, that the habit of spontaneous somnambulism can sometimes be broken in a remarkable manner.

Jussieu's explanation of the cause of the sleep he witnessed in his day as magnetic—that it was due to animal warmth (in the operator)—receives confirmation in recent researches to this extent, that Heidenhain found that the passes of a warm hand over the surface of the face took effect when those of a cold hand failed. It must be remembered that this action of the hand on the fifth nerve may be explained on Braid's theory, apart from any idea of an emanation proceeding from the fingers, the facial sensory taking the place of the optic or oculo-motor nerves; indeed, it is possible that the success of an experiment Baillif tried in 1859, in the Necker Hospital, of sending a patient already naturally asleep into the sleep of hypnotism may be explained by the action on the skin in the same way.* We part company with Braid, certainly, if one of the possible ways in which the sleep, according to some observers who have, even recently, written, may be induced, is through electrical currents passing from the operator's fingers to the subject, just as much as in the theory of magnetic influence.

In making experiments upon hypnotised fowls, we have generally been struck with the influence of fear when the experiment has succeeded; the bird, like many other animals, simulating a quiet, passive condition, but instantly escaping when it supposes it is no longer watched.

A fine cock was caught, and carried in the usual way, with its head downwards, to a table, and being laid on its breast and held by its legs, the head was gently pressed on the table, while a chalk line was drawn from its beak forward

* In passing, the circumstance may be mentioned that at M. Lasègue's suggestion M. Baillif hypnotised a patient in the hospital, and then administered chloroform to see whether it destroyed the condition which had been induced. It was found that when the effects of the anæsthetic had passed away the patient was still hypnotised, and required rousing in the usual way.

several inches. After the lapse of one minute the body fell over to the side, but the head remained in much the same position. On my extending a wing, it returned to the side; the legs were not held any longer, but the bird remained passive in one position. The eyelids never closed, and frequently winked; the pupils slightly contracted when an object was brought near to the eye, but the eye did not follow it. Pinching the skin in sensitive parts elicited no sign of pain; after a while its legs trembled. Shortly after, being left to itself, got up. I then tried the experiment without the chalk line, by simply placing its beak in the same position as before. Precisely the same results followed. Afterwards the cock was laid on its back. I endeavoured to arrest its attention by holding the chalk at a little distance from its eye; same effects followed as in the previous experiments—a passive state, disregard of pinching, but the eyes wide open, and the pupils sensitive to light. I then tried to make it stand up, but in vain, and it remained for some time of its own accord on the table. It was a considerable period before it was effectually roused.

The next experiment was on a hen, but entirely failed—nothing I could do induced the hen to allow its beak to remain on the table.

With the third hen the same experiment also failed, but with a fourth considerable effect was produced, though not so decidedly as with the cock.

Thinking that carrying the fowls' heads downwards might predispose to passivity, I tried the experiment of holding them in this position for some time without any effect.

More recently I made a number of experiments of the same kind, assisted by my son, W. S. Tuke, but some careful notes which he took at the time have unfortunately been mislaid. The mode of proceeding was varied in many ways, a strong light being thrown on the eye in some instances. The general result was not so satisfactory as we could have wished, the element of *fear* almost hopelessly complicating the experiments; for I cannot agree with Preyer that his tests altogether eliminate this difficulty.

Before leaving the hypnotism of fowls, I will quote the curious statement of Father Kircher, interesting from having been written in 1646, and described in his *Ars magna lucis et umbræ*, published in Rome, under the head of "Experimentum Mirabile. De Imaginatione Gallinæ." He says—"Place a hen, bound by its legs, anywhere on the floor; at first feeling

itself bound, it will strive to free itself from the fastenings imposed upon it in all ways—by shaking its wings, and by the motion of its whole body—but at length, this attempt being vain, composing itself to quiet, as if despairing of escape, it rests at the disposal of the victor. While the hen thus remains at rest, draw a straight line with chalk, or with any other colour you like which will represent the appearance of a cord; then shall you release it from its bonds. For a long time the hen, although thus free, is in nowise prepared to fly, although you may incite it to do so. For this there is no other reason than the powerful imagination of the animal which looks upon the line itself, drawn upon the floor, as the fastenings themselves by which it is bound. I have often exhibited this simple experiment, not without the surprise of the bystanders. I do not doubt that the same holds good of other animals—but concerning these the more curious readers may inquire."

Other animals have, as is well known, been tried by Czermak, Preyer, &c.

I subjoin a few experiments on frogs. I was fortunate in having the help of Dr. Echeverria and Dr. Banks :—

Frog No. 1. Experiment 1.—Previously lively. Was held, head upwards, by the thumb placed on the abdomen and the fingers on the back, for five minutes. It was then placed on its back. No effect.

Experiment 2.—An india-rubber band was then placed around the jaw, as described by Lewisson. No effect, unless elastic was placed so far back as to constrict the throat.

Experiment 3.—A thread was then tied quickly round the foot, as described by one experimenter. No result.

Frog No. 2.—All experiments failed at first.

Frog No. 3. Experiment 1.—After being held in the same way as No. 1 for about five minutes it was laid on its back. It remained for some time without breathing, but the heart still beating. Lower limbs were extended, but not rigid; no reflex movements in lower limbs, but easily produced in upper extremities.

Experiment 2.—Same frog, having rested a quarter of an hour, was held in the same way for three minutes, during which the movements of the limbs became slower and slower. No reflex in lower limbs, but it was always excited in upper limbs; the latter causing frog to turn over, the lower extremities remaining perfectly passive. Frog could be lifted by forceps holding the skin of back, without moving,

but retaining exactly its position. The sound of a tuning-fork and rapping on the table had no effect in inducing movements. It could be blown along, being only slightly roused by this process. When put into cold water it made some attempts to swim, but finally became motionless and apparently lifeless, with limbs extended. Frog was then taken out of water, and after awhile became lively; but when placed with body squatting vertically and arms raised, it remained in this comic attitude for two minutes, during which it stopped breathing for twenty seconds. Eyes open.

Frog No. 1.—This frog, strong and lively, which had proved refractory in the first experiment, was now laid on its back, and gentle pressure was made with forceps on the lower jaw, so imitating Lewisson's experiment with the elastic band, a method much more easily accomplished than the other. It remained motionless five minutes, with the limbs flexed on the trunk. In this attitude of the body it was rolled rapidly over in a lateral direction, and retained the same position.

Frog No. 2, without pressure on jaw, was rolled rapidly over in the same way, and drew up its limbs in a completely flexed position, and remained quite motionless on its back for a considerable time.

In the foregoing experiments the eyes were rarely closed, sometimes half open, at others widely so.

Many causes may conspire to produce these effects, and it would be a hasty conclusion that Braidism caused or explains the condition induced. There might be fear (the cataplexy of Preyer) and the instinctive tendency many animals exhibit, when in danger, to avoid attention by simulating death, although alive to what is passing around them, and, therefore, not insensible. There might also, when the frog was held between the fingers and thumb, be pressure on the vessels, and more or less on the heart itself. Whatever the explanation, a singular condition is certainly induced, and on several occasions, when congratulating ourselves on having induced the hypnotic condition, we came to the conclusion that it was its last sleep. The next day all the frogs were lively.

Certainly one of the most striking effects of hypnotism often observed is the exaggerated reflex irritability induced by passing the hand over the muscle. I remember a gentleman witnessing for the first time the intense rigidity of the muscles in a boy, which allowed of his being placed in a

horizontal position, only supported by his head and heels on chairs, while a heavy man sat on the abdomen. It was maintained by this gentleman that the feat was accomplished by strong wires secreted in the boy's clothes, and he was only convinced of the genuineness of the phenomenon by having him stripped.

Professor Verneuil, of Paris, once made experiments on himself, and induced a state which, without being precisely the "magnetic sleep," since consciousness of the outer world remained, presented the greatest analogies to the cataleptic state, for the arm, extended horizontally, could be retained in this position 12 or 15 minutes with scarcely any fatigue (Jaccoud).

An apology might seem necessary for recording so elementary a fact of hypnotism, or of others equally commonplace about to be mentioned; but no such apology seems called for, when we find the learned Professor of Physiology at Breslau stating that when he first had his attention directed to these phenomena, within the last twelve months, he regarded them as simply nonsense.

There are many facts elicited in hypnotism which, when first witnessed, suggest another explanation than Braid's, namely, that of a magnetic force, but which when investigated are clearly referable to that loss of spontaneity and that mental slavery to the expressed or implied will of the operator, of which we have already spoken. Thus, a gentleman whom I saw subjected in private to hypnotic manipulations observed to me, after the experiment, that he had felt distinctly attracted to and repelled from the operator, and could only describe it as a gentle power drawing or repelling the body. When the operator stroked down his arm and finally fixed the end of his hand on his, he felt obliged to follow him wherever he went. The true explanation of the attraction was well shown by what the gentleman further stated, that had he looked another way he believed it would have enabled him to break off from the operator, though with some effort; but the latter took good care to impress on the subject that he must keep his eyes fixed. One experiment explicable in the same way was to make him believe that he could not speak, which succeeded. He told me he felt an influence just sufficiently strong to make it pleasanter to let his jaws remain shut than to try to open them. The same gentleman was readily made to stutter against his will. Eye-gazing was the means employed in this case, and he described the

operator's eyes as becoming luminous like a ball of fire, then annulated with fire, and then changing colours. He, however, admitted there was no influence from this beyond the steadying of his gaze so as to completely concentrate his attention.

The theory of Braid suffices to explain what occurred on another occasion, when I saw six persons, more or less known to me, thrown into the hypnotic state out of twelve operated upon. Three had been similarly influenced before. The usual experiments were performed by first making one hand revolve round the other involuntarily, stamping with the feet, nodding the head, jumping, and excessive laughter. Two young men, who only consented to be experimented upon in the interests of science, were very shortly impelled to follow the operator for a long distance, jumping the whole of the way with their hands to their sides, and their feet close together. One of these, also, was obliged to sit down in a chair, and his attention was solely fixed for several minutes on a supposed star of great brightness. When the operator said to him, "Look, the star is falling," at the same time pointing with the hand and appearing to follow its direction till it was out of sight, his expression of absorbed attention amounting to ecstasy could not fail to interest alike the physiognomist and the artist. But in a moment his features were changed, by simply addressing to him the words—"Why, you are Detective . . . . ?" His answer was, "Yes." He was then informed of a murder that had been committed, and that he was going in search of the murderer. When the operator exclaimed, "There he is!" pointing to a friend of mine, he immediately seized him, and acted with a desperate determination, like a man possessed with one idea. He felt in his pockets, apparently for handcuffs, but these failing, he used his pocket handkerchief to secure the hands of his prisoner; nay, more, he carefully searched him, and took his watch, knife, and pencil, which he was easily led to believe were stolen property, and on opening the watch thought he read the name of the murderer, in consequence of its having been suggested to him. My friend then escaped, but immediately the subject chased and caught him. A struggle ensued, during which he was quickly aroused, and was astonished at the position in which he found himself. He had a dim idea of having struggled, but had not the slightest recollection of the scene that had been enacted. When shown the watch, &c., and told that he had taken them, he

was incredulous. Those who have read Professor Heidenhain's book will remember that he in some instances was able to cause the subject to recall part of the scene, just as one often remembers a dream in the course of the day from the occurrence of some circumstance associated with it.

Not less striking on the same occasion was the way in which an equally reliable subject had his attention directed, when hypnotised, to an imaginary woman ill-using a baby, and making it cry. Asked if he did not hear it, the operator pointing meanwhile to the supposed object approaching nearer and nearer, till his fingers pointed to an antimacassar by his side, and saying, "Why, look; here is the baby close by you," the subject took it up, and nursed it as carefully as possible, trying meanwhile to stop its cries. Told to feed it, he did so, first tasting the ideal food before giving any to the baby. Awaking at this moment, and asked what he had got on his knee, he replied "an antimacassar," but he had not the faintest idea how it had got there. When assured that he had taken it up for a baby, had nursed and fed it, he looked bewildered and dumbfounded. Here, again, there appeared to be complete amnesia.

In the case of a young woman, who readily passed into a state of complete susceptibility to the suggestions made to her, I examined the pupils before the experiment, and found them normal, and the pulse 88. When hypnotised, the pupils were more dilated and very insensible to light; the eyeballs were directed a little upwards, but they did not converge. The pulse rose to 100. She was pale both before and during the experiment. The contrast in the expression of the eye was marked, being bright when awake and dim when hypnotised. In Heidenhain's subjects the face was red, the pupils sensible to light. When in this state she walked around the drawing-room like an ordinary sleep-walker, but she was easily aroused by blowing on the face and being ordered to awake.

A stout, florid girl, of eighteen, in the same room, after gazing at a disc in her hand for some minutes, was completely at the mercy of any delusion which a gentleman, who was trying the experiment for almost the first time, suggested to her. There was no difficulty in making her forget her own name and believe that she had another; in inducing her to fancy her head was covered with bees, and that the room was on fire. The accompanying facial expressions were in the highest degree striking.

I have scarcely spoken of the distinction between cases of hypnotism in which there is and those in which there is not consciousness, but nothing, surely, can be more remarkable than the illustration thus afforded that consciousness in relation to the outer world is one thing and consciousness in relation to the inner world another; and that it is indifferent whether the former is present or not. It neither confers the power to act or to not act reflexly in response to commands or suggestions, and we may thus witness a man consciously performing a hundred acts he strives not to perform, and saying a hundred things he does not wish to say—a valuable practical exhibition of certain forms of uncontrollable insanity, including obsession. That there can be a consciousness in relation to the inner or ideal world is proved by those cases in which the subject remembers, when re-hypnotised, what he did and said when he was in the previous sleep. Probably this occurs in dreams without our being able to test it. In dreamland we very likely remember in the vision of to-night what we dreamt the night before, and lead two distinct lives without suspecting it.

Automatism is an essential factor of hypnotism; outer-world consciousness, and, therefore, memory, are accidents. The hypnotised cannot conceal their ideas, for these instantly express themselves in motion.

One of the most striking phenomena described by Heidenhain is *unilateral* hypnotism.

His brother was so influenced by stroking the *left* forehead and temple that after a short time immobility of the *right* arm and leg was induced. Again, with slow, repeated stroking over the skin of the left temple, a paralytic state of the extremities and facial muscles was produced. In laughing, the right cheek remained perfectly immovable, just as in paralysis of the facial nerve. The immovable parts were cataleptic, and could be moulded like wax. Further, there was ataxic aphasia, the subject in this condition not being able to pronounce or repeat words, as the co-ordinated movements of articulation could not be carried out.

On changing the manipulation to the *right* side the same phenomena appeared in the *left* side, except that there was no longer aphasia.

Manipulating *both* temporal regions caused the cataleptic condition of the limbs of each side; but the speech and facial muscles remained unaffected.

Unilateral hypnosis, caused by stroking one temporal

region in a direction from before backwards, is generally removed by the same manipulation in the opposite direction.

Measurement of the volume of the cataleptic arm showed that the amount of blood, by reason of vascular contraction, sunk enormously, while it rose simultaneously in the other arm.

It must be borne in mind that in all these experiments there was no loss of consciousness. Mr. Braid performed some of his most remarkable cures in the paradoxical condition of sleepless hypnotism.

It should be observed that these experiments did not prove to be uniform in different persons. Professor Berger accounts for it by supposing that manipulation of the *forehead* produces crossed catalepsy, while that of the *temple* produces same-sided catalepsy.

Heidenhain considers that the inability to speak depends on the fact that in the endeavour to articulate, the laryngeal muscles are spasmodically contracted. The hypnote can open his mouth and move his tongue.

In this connection, a case occurring in the service of Charcot, and reported in the "Progrès Medical," deserves mention, and great importance is attached to it, for it is considered as a "*nouveau fait à l'appui de la localisation de Broca.*"

It must be premised that, apart from any localised manipulations like those just described, there are two very different stages of hypnotism—one in which there is, and another—the cataleptic—in which there is not the power of speech. Now, it is found that it is possible to induce in the same person, at the same time, these two states; one of the hemispheres being only hypnotised, the other being cataleptic. The subject is first hypnotised in the ordinary manner; then one of the eyes is opened, the other being shut. The side of the brain corresponding—that is to say, opposite to the closed eye—is in one phase of hypnotism, that opposite to the open eye is in another phase, the cataleptic. One side of the body then presents the characters of lethargic sleep; the other those of catalepsy. Thus in the same person are seen hemi-lethargy, or relaxation of the muscles, and hemi-catalepsy.

It appears that Professor Lépine, of Lyons, was the first, in 1878, in Charcot's service, to make the following experiment, often since repeated:—

The subject being hypnotised, his eyes shut, and being in

the stage in which, on command, he will speak, write, and make gestures, the operator opens the left eye, and the right cerebral hemisphere is rendered cataleptic. Nothing is changed as to the power of speaking, writing, and gestures.

Then the left eye is closed, and the right is opened. The left hemisphere has become cataleptic, and *all communication with the outer world has ceased.* The subject replies no longer to questions. It is in vain to try to get him to write. No gestures can be excited; the face is a blank.

The same result is attained by another experiment. When hypnotised, the subject is ordered to count, and while he is counting 1, 2, 3, &c., automatically, the operator opens the left eye; but no effect is produced. The right eyelid being raised, he stops counting, and when it is closed he resumes his numeration.

Equally remarkable are the facts recorded by Heidenhain in regard to sensory changes. Sometimes the power to distinguish hot from cold by the cataleptic arm was rendered very difficult. Again, in unilateral hypnotism the accommodation spasm of the eye was found to occur only on the cataleptic side.

Professor Heidenhain reports a remarkable disturbance of the perception of colours in some hypnotised persons. His brother became completely blind in the eye of the cataleptic side. He adds that the exact investigation of Professor Cohn, carried out with the aid of modern appliances, left no room for doubt.

"The condition of the eye corresponds to that represented in Stilling's new "Atlas," table iv. *b.*, l. I. 2.

"All colours appear grey in different degrees of brightness, from a dirty grey to a clear silver grey.

"As the result of manifold variation in the experiments, the following observations must be added to those of Cohn:

"Whilst objective colours produce no specific sensations, subjective sensations of colour arise when the hypnotised eye is moderately pressed and the pressure suddenly diminished.

"If the hypnotised eye be kept closed or covered with a dark curtain for some time, and then suddenly exposed, whilst at the same instant a coloured disc be held before the eye, then the latter appears for the first moment coloured, but not with the actual but with the contrast colour (therefore, *e.g.*, green when it is red); but directly after it appears grey, just as it does when the eye has not been allowed to rest.

"If one eye be treated with atropine whilst the effect of

the latter is making its appearance, the phenomena of colour blindness are changed. Yellow or blue passes from grey through the complimentary colour to the true colour, while red and green appear only as different shades of grey."

Among other conclusions drawn is this—that atropine has a direct action upon the elements concerned in the production of colour, and frees them from the change in their activity produced by hypnotism.

Professor Cohn found that a person naturally completely colour-blind, distinguished, when in the condition of unilateral hypnosis, colours which in her normal state were for her totally indistinguishable.

Returning from these extended and novel experiments to Mr. Braid, it may be said in conclusion that his principal merit consisted in demonstrating—

First—that the mesmeric sleep or coma, the muscular rigidity and catalepsy, the anæsthesia, analgesia, the hallucinations and delusions arising in the course of this abnormal sleep, are real phenomena and not feigned.

Second—that these phenomena can be induced under conditions which do not require the presence of any magnetic fluid to account for them; or, indeed, of any material influence or force passing from the operator to the person operated upon.

Third—that, on the contrary, they are the result of individual action, the concentration of the attention upon one object to the exclusion of others, assisted by straining the ocular muscles upwards and inwards.

Fourth—that suggestion plays a remarkable part in the current, of thoughts or ideas excited in the mind of the subject, either through the muscles or through words.

Fifth—that remarkably rapid changes can be induced in the circulation and innervation of the part, and by these means a mode of treatment be adopted, not magnetic, but depending upon recognised physiological principles.

Mr. Braid's son, Dr. Braid, of Burgess Hill, writing to me fifteen years ago, observed that his father's views "never changed respecting the causes of the phenomena being exoteric, although he considered hypnotism as identical with mesmerism, with this difference—that he discovered the real cause of the phenomena called mesmerism to be due to the mental concentration, &c., of the affected person himself, and not to any fluid or influence passing from the operator to the patient."

I may add that Dr. Braid himself was with him during the whole of his early experiments, and is fully persuaded of the truth and value of his father's views and practice. Up to the time of his death he was adding to the store of his experience by many valuable and interesting discoveries. His belief in the curative powers of hypnotism was undiminished, and his son proceeds to say that "on the study table lay a half finished article with the pen by its side, which he was destined never again to use. He awoke the following morning, dressed, and went to get his letters, and then complained of not feeling well. On returning to bed, and beginning to drink a hot cup of tea, he remarked that it was cold; when assured that it was very hot, he said, 'Then my sensation is imperfect.' He then turned on his side to take a little rest, but only sighed deeply, and then breathed his last."

Thus, as Dr. Braid remarks, ended the life of one of the most devoted members of a laborious profession, whose aim in life had been to pursue practice with the purest motives, the relief of suffering and the advancement of medical science.

The history of Hypnotism, or by whatever name we choose to describe the group of phenomena understood thereby, has been fitful and erratic. Paroxysms of interest rather than steady, calm investigation have marked its course. There was the era of Mesmer towards the close of the last century (1772), and the celebrated Report of the French Academy. In the midst of incredulity, Cuvier believed in the power, under certain conditions, of one person or animal exercising a magnetic influence over another. Jussieu gave in his adhesion to the genuineness of facts which the majority denied. Then, years later, was the second Report of the Academy under Husson, which made a long stride in the admission of the phenomena in dispute. In England, the arrival of a French magnetist in London and the conversion of Elliotson, marked an era which was disfigured by too hasty theorising and confusion of scientific thought on the one side, and profound ignorance on the other, ending in chaotic results. In Manchester, thanks to the excitement caused by a peripatetic lecturer, Mr. Braid, in 1841, made the series of experiments which largely led to a recognition of the truth and value of the so-called mesmeric phenomena; Sir John Forbes, Laycock, Noble, and Carpenter utilising instead of stupidly ignoring them. In 1843 also Dr. Collyer and Mr. Sutherland exhibited the so-called electro-biological experiments. In 1849, Mr. Dods, a clergyman, gave a lecture on electro-biology before the Senate of the United States.

In Edinburgh, in 1851, in consequence of the *furore* caused by the

public demonstrations of Dr. Darling and Mr. Lewis, hypnotism came to the fore, and Professor Bennett wisely accepted the facts, but endeavoured to explain them scientifically. Professor Gregory published his "Letters on Animal Magnetism." It is due to M. Piorry to add that in 1859, in a communication to the Academy of Sciences, he claimed priority for the observation of the facts known under the name of Hypnotism. "As early as 1816," he says, "I have established in the 'Journal de la Vienne' that the so-called magnetic passes act when they cause sleep by modifying the visual organs and their nerves. About 1828 I published a memoir upon ophthalmic migraine, in which I have shown that reading or the act of forcing the attention on luminous bodies during digestion, or when hunger is excessive, determines a series of nervous phenomena such as the appearance of a semi-circle of luminous and coloured light, bluish, unequal, varying in intensity, enlarging little by little at the same time that it pales for some minutes, and finally severe pains of the head and insupportable sickness are experienced. In 1828 and 1833 I gave lectures propounding a rational theory of the preceding phenomena, and of the allied symptoms of epilepsy and hysteria."

In Paris, in 1859, much interest was excited by the renewed attempt to perform operations under hypnotism. Broca made a communication to the Société de Chirurgie on hypnotic anæsthesia in connection with the attempts made in the service of Follin, arising out of the experiments of Azam, of Bourdeaux. Velpean communicated them to the Institute. A very painful operation was performed without pain.

Professor Weinhold has published an essay on Hypnotism, and Paul Börner's papers on the subject will be found translated into French in the "Journal de Médicine de Chirurgie et de Pharmacologie de Bruxelles," July, Aug. and Oct., 1880, under the title of "Du Magnetisme Animal et de l'Hypnotisme."

CLINICAL NOTES AND CASES.

Cases contributed by G. Mackenzie Bacon, M.A., M.D., Medical Supt., Cambs. Asylum.

1. *Trephining of the Skull in the case of a Lunatic nineteen months after the receipt of a Blow on the Head. Complete Recovery.*

This case has several points of interest, alike for the surgeon and the asylum physician, and may be worthy of record. It is not often that trephining is had resort to except in cases of serious external injury, and then generally at the time of the accident. In the present instance, the mental symptoms

dated from the time the patient received a blow on the head, and they disappeared quickly after the operation—nineteen months later. Although it would be absurd to say that the cure of the patient could be due to nothing but the operation, I think it is a fair and reasonable inference that the trephining was the means of restoring the man to health. Subjoined are the principal facts in the history of the case:—

Samuel S., æt. 38, was admitted into the Cambridgeshire Asylum on Jan. 2nd, 1880. He was a widower, with several children, and had led a steady life, and was a joiner by trade. He had enjoyed good health mostly, but was of nervous temperament, and rather delicately made. While at work, and in his usual health, about August, 1878, a hammer fell, from a height of about six feet, on his head. He was not unsensed, nor did any serious symptoms show themselves at the time of the accident; but ever afterwards he felt the effects of the blow. At first, it was as if he had "a cold in his head." In January, 1879, he was ill in bed for many weeks. After this, when he tried to work, he was soon obliged to leave off, was attacked by giddiness, by thrills up his back, and by tingling and numbness in his legs. He tried again to work in August, 1879, one year after the injury; but had no idea of what he had to do, and could not fix his mind on anything.

In October, 1879, he came to Addenbrooke's Hospital, Cambridge, complaining of "scrunching" noises in the ears and dragging pains in the vertex, without rest at night; aching pains in both arms and along the insides of the legs; and cold feet. He was admitted into the medical ward; and it was then observed that, of all the symptoms, the most constant and distinct was the "scrunching" feeling in the vertex; and often he placed his fingers over the stellate and adherent cicatrix which marked the hammer-blow. During the last week in 1879, his symptoms were aggravated; he grew irritable and morose, and talked of suicide. The pupil of the left eye was larger, and he had very little sleep.

On January 1st, 1880, he made a most determined attempt at suicide by throwing himself over from the staircase at the top of the hospital. His life was saved by the courage of a probationer, Miss Stockburn; but he succeeded in jumping from a lower staircase, and fell fifteen feet, damaging his left ankle. On the following day, he was sent to Fulbourn Lunatic Asylum, under the care of Dr. Bacon. The same symptoms continued which have been before described, including the pain in the head in the region of the scar.

On admission he was bruised about the legs, his left ankle was swollen and painful, and he was unable to walk. He complained of nervousness, and inability to check sudden impulses, and frequently contradicted accounts he had previously given of himself as untrue. He was very restless and could not sleep. He had a dose of chloral at night. By the end of January he was able to get up and stand,

but persisted that his ankle was dislocated. A note was made that "there was a slight depression of skull on left parietal bone." At the end of another month he was in better health and more cheerful, but nervous and "unable to control his thoughts or actions." If he wrote a letter or saw his children, he said directly afterwards he had forgotten half he wanted to say or write, and was fretful and unsettled, always complaining of his head, of pain and coldness at the side of the scar, and of the "scrunching" noises in the ears and jaws.

After some consideration, I suggested the operation of trephining, as the symptoms had been so long referred to one spot, and there was historical evidence of the origin of the mischief. Mr. G. E. Wherry, one of the surgeons of the Hospital at Cambridge, whom I consulted on the case, having expressed his opinion that an operation was not only justifiable, but afforded hope of success, I decided, with the consent of the relatives of the patient, to attempt an exploratory operation; and accordingly, on March 12th, Mr. Wherry removed with the trephine a piece of parietal bone at the seat of injury, and found the dura mater beneath of a deep purple colour, but apparently healthy; it bulged, with pulsations, into the wound. The portion of skull removed was three-quarters of an inch in diameter, and had not been fractured. Bleeding vessels were tied with fine hemp thread. Silver wire sutures and carbolised cotton-wool dressings were applied. Ether was given during the operation. The wound healed rapidly and well. On March 30th it was recorded in the case-book that S. S. "had decidedly improved, and is less nervous and fanciful." On April 12th, only a month after the operation, he was "more lively and cheerful, and went to work in the carpenter's shop." I urged him to this as a remedial measure, to divert his thoughts from himself and stimulate him to hope and fresh exertions. He steadily improved, and on June 28th, 1880, was discharged on trial for a month. He went back to his old employers, and after another month was reported to be well and fit to be at large. He is still at work and in his usual health.

Mr. Wherry has recorded his opinion that, "The operation was undertaken with the hope of removing some source of irritation to the brain which might be found in the skull or dura mater beneath the scar. The history of the case, and the symptoms, although they were more general than local, pointed to the lesion as the cause of his lunacy; and, although no source of irritation was discovered, the patient recovered rapidly both his bodily and mental powers after the operation

of trephining. The reason for this relief to the brain is not easy to explain."

The only remark I wish to add is, that I think the improvement dated so definitely from the operation, that I cannot but hold that the latter was greatly concerned in the cure. It has been objected that lunatics are such exceptional creatures to treat, that the ordinary rules of surgery hardly apply; but, in this instance, the patient was not a demented man, with blunted sensibilities, but one whose nervous system was rather highly strung, and whose senses were morbidly acute. Such a person would be more likely to suffer from an operation of some severity than be indifferent to it, and I cannot but regard the steady and direct improvement as a proof that the operation relieved some local pressure, though we may be unable to point out exactly how it happened. The only other light in which it could be regarded as a curative measure, would be as a method of counter-irritation, but this could hardly be maintained in the absence of suppuration, inflammation, or any but reparative processes. I think the same reasoning may apply to the objection that the operation was superfluous. It must be borne in mind that the mental symptoms dated from the injury, and were unrelieved, and even intensified in the course of time, and culminated in a determined attempt at suicide. Without wishing to press the point unduly, I think it may fairly be presumed that the patient owes much to the trephining.

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2. *Case of Acute Dementia in a Young Woman—Death from Phthisis two years later, without Mental Recovery.*

Cases of acute dementia having always something of the hysterical element in them apparently, one is apt to think the patients are almost bound to get well in time; but the opposite often occurs, as in the following instance, and this is worth remembering. This must be my excuse for recording a case recently under my care:—

Mary Ann C., single, æt. 23, was admitted into the Cambs. Asylum in May, 1878. The history given was that the attack was of a fortnight's duration, and that there was no hereditary predisposition. The father of the patient was, I found, a very bad and immoral man, who had treated his children harshly and unjustly. The patient was a delicate-looking girl, of feeble frame, and had been forced to do

menial work unsuited to her strength or position, and the domestic life must have been unhappy. The certificate upon which the patient was admitted stated that she "went to the Rectory a few nights previously, at 10 p.m., in a state of nudity. It was raining fast. She rang the bell. The servant, seeing her perfectly naked, said—'You cannot see master in your condition.' She has delusions she is the Virgin Mary, &c."

On admission she was much excited, throwing herself about and unable to control her actions. After a cold douche she changed and became very quiet, lying in bed with quivering eyelids and rigid limbs, in a quasi-hysterical condition. She had a sort of hectic flush on the cheeks, suggesting at the time the idea of phthisis. She was thin and delicate, and fed with difficulty. A month later the report was that she had refused all food, and had been fed for some days by Dr. Bacon with a nasal tube. "Though lying in a quasi-hysterical state all day, she attacked the night nurse in a sudden and unprovoked manner, and was only overcome by the help of another nurse. She says nothing, resists feeding, and is of unclean habits." After a week's feeding by the tube she began to eat of her own accord, and talked a little. A month afterwards she was feeding well, got up daily and talked, but was listless and quiet. The hands were purplish and cold, even in summer. In September, 1878, she had to be fed with a spoon, never spoke, and had to be moved about and prompted to every action, but was in better bodily plight. In December she was reported as "having to be dressed and moved about, taking no food voluntarily, but not worse in health."

In August, 1879, she was noted to have improved of late, to have fed herself and shown increasing intelligence, but would not speak. In December she was reported better: had been employed in the laundry for three months in folding linen. She would not speak, nor keep to her work very long at a time, and had odd antics, but was in better bodily condition. In May, 1880, she had got thinner, and did not seem so well; would not speak, nor take much food. She was then fed with an œsophageal tube, as she would take nothing. "She has no cough, but a phthisical look." The passing of the tube was discontinued after 10 or 12 days. When visited by her mother she refused to speak to her, in spite of the distress exhibited by the latter. She got gradually worse, and died in September, after showing evident symptoms of gangrene of the lung. Her mental

state did not show any improvement, nor did she brighten up at all before her death.

No post-mortem was allowed. The varying phases of this case render it of some unusual interest.

Accidental Scald, followed by Death on the Fourth Day. Ulcer of the Duodenum. By W. C. Hills, M.D., Medical Superintendent of the Norfolk County Asylum.

I am induced to record this case by a sense of the uncertainty that surrounds, at present, the pathology of this subject. Individual experiences differ so widely as to duodenal ulcers, that I cannot but feel that the mere record of a passing case may be of value to others in generalizing on the subject.

The following case occurred this year, during my absence on the Continent, at Thorpe Asylum, but my deputy, Mr. Seymour, paid every attention to the patient, and I quote his report in relating the facts.

E. G., æt. 18, a female patient, was admitted in Jan., 1876, suffering from epileptic dementia. The previous history was to this effect: At the age of five she was severely burnt about the back, neck and arms, but she made a good and unexpected recovery. Shortly after she was seized with epilepsy, and the result was, in the course of years, weakness of mind, loss of memory, and general deterioration of mind and health.

In 1880 she was dirty, demented, and useless. On June 2nd she required bathing for purposes of cleanliness, and, by the inadvertence of a nurse, who had been in charge for some years, and was deservedly trusted, the hot water was turned on first, and, before the mistake could be corrected, the patient was scalded about the nates, thighs and feet.

The scalding did not appear severe at first, but there was vesication, aud the case may be considered, I think, as that of a burn of the *fourth* degree, according to Dupuytren's classification. Collapse soon followed. The bath was given at 8 a.m.; at 6 p.m. re-action had set in, the patient was restless and feverish, and had, at 11 p.m., a pulse of 120 and a temperature of 104. The wounds were dressed with "Carron-oil."

Next day she was restless, interfered with the dressings, and had *vomiting.*

June 4th. The wounds looked healthy, except on the right foot. She was still sick, though the vomiting was for a time delayed. Next day she was weaker, she became collapsed in the afternoon, and died at 7 p.m.

At the *post-mortem* examination there was found a perforating ulcer of the duodenum, about the size of a shilling, on the posterior surface of the bowel, and about two inches from the pylorus. The edges of the ulcer were somewhat thick and pulpy, and adhered by plastic lymph to the head of the pancreas. The surrounding peritoneum was injected. The stomach was empty and slightly injected. The lungs were somewhat congested. No hæmorrhage had occurred from the bowels.

We thus have the case of a patient in fair bodily health, scalded more or less severely, but not extensively, and dying 83 hours afterwards with a peculiar pathological condition, and with no special symptoms except vomiting.

Ulceration of the duodenum after burns or scalds has been noted for many years past, and, in 1842, Mr. Curling related several cases in the "Medico-Chirurgical Transactions" (Vol. xxv.) Since then the subject has received considerable attention, but writers differ as to the frequency of the occurrence of these ulcers. Thus, Bransby Cooper, in his "Lectures" (1851), wrote of duodenal ulcer "as one of the very frequent sequels of extensive burns."

Miller, in his "Surgery" (1864), does not allude to it at all.

Dr. Wilks wrote, in 1856, in "Guy's Hospital Reports," 3rd Series, Vol. ii., as follows:—

> During the year 1855 and first half of 1856, there have been (at Guy's) 37 fatal cases of burns and scalds. Of these, 12 were fatal within a few hours, 5 before the second and 6 before the third day. The subjects of these had never recovered from the shock of the accident, and therefore no *p.m.* was performed, as it was considered such would have been altogether fruitless. The remaining 14 cases died after longer intervals, and of these only 2 were not examined. In the other 12 cases the duodenum and intestinal canal were *healthy. It is clear that the subject is still open for much more extended observation.*

Dr. Hilton Fagge, who, as Pathologist at Guy's Hospital, has a large field of observation, wrote in answer to an inquiry, thus—

> I have very little personal experience of the duodenal ulcer after scalds. I have seen one or two instances of it, but, I think, none for several years past; and I doubt whether I have ever myself met with a case in which any symptoms, whether of hæmorrhage or perforation had existed during life.

Erichsen, in his "Surgery," 7th edition, Vol. i., p. 256, says, on the subject of burns—

The abdominal organs were examined in 22 cases ; of these there was congestion of the mucous membrane, sometimes with evidence of peritonitis in 11 ; ulceration of the duodenum in 6 ; a healthy state in 5.

It is at the second stage (that of "reaction and inflammation") that the very remarkable and serious sequels, *perforating ulcer of the duodenum*, is especially apt to occur. . . . This ulceration may, by rapidly proceeding to perforation, expose the pancreas, open the branches of the hepatic artery, or, by making a communication with the serous cavity of the abdomen, produce peritonitis, and thus cause death. It usually comes on about the *tenth* day after the occurrence of the injury ; seldom earlier than this. The only exception with which I am acquainted was in the case of a child nine years of age, who died on the fourth day after the burn, and in whom an ulcer, of about the size of a shilling, with sharp, cut margins, was found in the duodenum, the intestinal mucuous membrane generally being inflamed. These affections seldom occasion any very marked symptoms to indicate the nature of the mischief, the patient suddenly sinking.

Mr. T. Holmes, in his "System of Surgery," Vol. ii. (1870), says, in the article on Burns—

After the fourth or fifth day death may be produced suddenly by an ulcer of the duodenum perforating an artery or the peritoneum. In some of these cases, ulcers of the duodenum have been found, and vomiting has preceded death ; but this hardly accounts for the rapidly fatal and unexpected seizure.

Intestinal ulceration is a sufficiently common phenomenon in every period of burns and scalds.

Of the 125 miscellaneous fatal cases, from which this account has been compiled, 16 presented ulceration in the duodenum, five of whom died during the first week (four days being the earliest period), five in the second week, and the other six after longer periods.

The appearance is that of a perfectly indolent ulcer ; it is usually seated just below the pylorus ; often there are two or three close together ; the edges of the ulcers are not raised or everted, &c., &c. . . But when the ulcer has penetrated more deeply, so as to threaten perforation of the gut, lymph may often be found effused on its peritoneal surface ; a natural barrier to the fatal progress of the disease.

From the facts then, that cicatrised ulcers are sometimes found in patients who have died of other complications, that the lesion does not of itself produce any symptoms of dangerous disturbance of the health, and that it is frequently discovered in cases where it would never have been suspected, I am inclined to think that it may be present in many of the cases which recover, and that its importance in practice has been exaggerated.

From the above quotations it would appear that opinions

differ among those who have the best opportunities of judging, and that these ulcers are certainly not common. In the case I have above recorded, the ulcer seems to have formed unusually early, and not to have been the *cause* of death, as the presence of effused lymph showed an effort at repair, and the adhesion partly formed to the pancreas prevented the escape of foreign matters into the abdominal cavity.

Speculation has long been rife as to the causation of these ulcers, and I do not presume to speak with any authority on the matter, but if I were to venture an opinion, it would be in this fashion. After a person is burnt or scalded, the effects of the shock are seen principally in one of three ways—either in some affection of the brain, the lungs, or the gastro-intestinal system, and according as one or other set of organs is affected, we get either cranial congestion, or bronchitis, or pneumonia, or vomiting and hæmorrhage. If the lungs are involved the other organs probably escape; and if the stomach is attacked, the head and the chest are not affected. If, in the revulsion that ensues after a severe scald, the stomach suffers, there is collapse, vomiting, and perhaps ulceration. The duodenum being as important a part as the stomach, and intimately concerned in the process of digestion, must be the most likely part of the intestine to suffer, and it seems to me that it is not merely from contiguity, but from similarity of function, that it is bound to suffer.

May it not be that the involving of the duodenum is a proof of the violence of the shock which the gastric system has received, and an evidence that the mischief has extended beyond the limits of the stomach, and that the duodenum, as next in importance to the stomach in the process of digestion, suffers accordingly? And may it not be that when the shock is so severe, the affection of the duodenum exhausts the vital energies, so that life becomes extinct before the rest of the small intestines can be implicated?

Notes of Cases in the Ceylon Lunatic Asylum. By J. W. Plaxton, M.R.C.P., Medical Superintendent.

In the happier times before the folly of exchanging England for Ceylon had overtaken me, General Paralysis had exercised its usual fascination.

Almost the first thing, therefore, to strike me after arrival was its entire absence in Ceylon Asylum.

Since then three cases have been admitted, which I am inclined to regard as of this nature. All died after but a short residence; two only came to the post-mortem room. One being a Mahommedan, a post-mortem was unattainable—Mahommedans being as unreasonable as Jews in the matter of post-mortem examination.

These cases at some length were—

1. Sappayab, æt. 40. A male. Tamil Cooley. Admitted June 14, 1879. He came to us from prison, where he had been confined for theft. No history was obtained; he was dropped at the door, as it were, foundling fashion.

His condition on admission was one of simple dull dementia; a feeling of well being pervaded him, but no delusions were present. His enunciation was thick. An ear showed traces of bygone slight othæmatoma. Mouth was asymmetrical. Gluttonous in eating.

Six weeks after admission further failure of motor power was noticed; his legs failed him, he walked with his knees half bent, and tripped and fell at the smallest obstacle. There was no one-sided weakness. His pupils were contracted. A fortnight after, I have a note that his tongue is unsteady, but that there is no quiver of it or of his lips. His face had lost all expression. After this he failed rapidly; his mind became an utter blank, and his muscles almost powerless.

He died October 31, 1879. Death was hastened by a diarrhœa. He was never noisy, violent, or excited; never had a congestive attack or convulsions.

Post-mortem Examination.—Dura mater somewhat adherent to skull cap. A thick recent blood clot covered right cerebral hemisphere. A thick gelatinoform new formation of the so-called arachnoid cyst covered both hemispheres. The whole of the inner surface of the dura mater was lined with a thin gelatinous film. Arachnoid was muddy and thickened; not very tough. It was adherent to many of the convolutions in front of the Fissure of Rolando, especially to the first frontal gyri and to the ascending gyri. Consistence of brain was good. Cortical substance thin. Vessels of the base normal to the eye. No foci of softening in the brain.

2. Don Salmon Aratchey, aged about 40 years. Male. Cingalese. Admitted August 4, 1879. No history obtained with him, but it was afterwards ascertained that he had been a hard drinker. He was admitted in a state of delirious excitement, and so continued to the end. He was restless and noisy, and day and night kept up a continuous current of indistinct words—usually a monotonous chant from the books of Buddha. His self-feeling was towards elation, but no predominant idea was ascertained. He was abominably filthy and destructive, and any approach to him caused him to uncover his genitals.

Questions seemed to awake no faculty of apprehension, he simply continued his chant. His words were slurred and usually unintelligible. His face was expressionless, *chap-fallen*, allowing the saliva to dribble down his chin. No mental change occurred, but his gait became more slovenly, and all his movements uncertain.

On October 18th he was attacked by pleurisy, and on October 23rd by dysentery, which proved intractable. He died, worn out, November 28, after a residence of four months.

Post-Mortem Examination, November 29, 1879.—Skull symmetrical. Bone dense. Dura mater adherent—inner surface covered by a thin pachymeningitic membrane, thin, and containing enmeshed blood. Middle fossa of base covered by the same membrane.

Pia mater thick, opaque, tough, adherent to the brain, almost universally rendering stripping impossible.

Brain exceedingly soft. Lateral ventricles large, and contained much fluid.

Grey matter of convolutions thin; no circumscribed softenings.

Other pathological changes were pleuritic effusion, right side. Cirrhosis of liver and kidneys. Ulcerations of the large intestines.

3. Sinne Lebbe Marikar, aged about 30. A Moorman petty trader. Admitted November 9, 1879.

In this case I was able to obtain a fairly good history (for Ceylon). The duration of his mental aberration before admission was probably about one year, and followed on great losses in his trading.

The onset was insidious, and marked by the development of ideas of wrong done him, and by fear of violence. He had hallucinations of sight too.

On admission he was excited, noisy, and restless. He had well-marked grandiose delusions, but the predominant emotion was towards depression. He complained and wept bitterly, because he had been defrauded of his money and property.

His tongue and all his muscles were tremulous. Pupils small, equal, and inactive. His excitement never ceased. In the course of his disease he had many strange sensory feelings in his nose, throat, &c.

I was never certain that the fibrillary quiver of G. P. was present in the lips and tongue. A quiver of the lips and face was almost always exhibited on my approach, but his tendency to weep always left me uncertain if the quiver were not due to restrained emotion, in part it certainly was.

February 22, 1880, at 5 a.m., he was found insensible on his mat, and shortly after had two convulsive seizures affecting both sides equally. The comatose condition, with only a slight interval of semi-consciousness, continued to his death on the following day. The coma was profound, but never absolute. It was unequal in the lateral halves of the body.

Died February 23, after a residence of nearly four months.

There was no post-mortem examination.

He is said to have been a smoker of Bang. Had marks of old bubos in the groins, and during his residence had some ulceration of his palate and tonsils, which may have been syphilitic. He would not permit full examination. Iodide of potassium was given, and he got well. No other trace of syphilis was exhibited.

These three cases possess in common one feature—failure of muscular power concurrent with failure of mind, and in the two which reached the post-mortem table adhesions of the pia mater to the cortex and pachymeningitis changes were common to both.

In life they differed, inasmuch as one (Suppayah) was marked by simple dementia and ultimately amentia, the others by continuous excitement.

Of these last, one remained respondent to the stimulus of external impressions (Sinne Lebbe), the other (Don Salmon) was not responsive.

Case 1 (Suppayah).—In the absence of a single tittle of history, it is not a little puzzling to assign this case to its proper place. Living, I had ventured the opinion that it was a case of pachymeningitis with hæmatoma.

The fact of pachymeningitis and hæmatoma was proved at death, but, superadded, were numerous adhesions of the pia mater to the cortex. On the other hand, the naked eye characters of the brain were not typical of General Paralysis.

Case 2 (Don Salmon Aratchey).—I think there can be no doubt of the correctness of assigning this case to General Paralysis. The brain was typical of the disease. Tough opaque membranes strongly adherent to the gyri of a brain, which, within its envelopes, seemed only to wait their rupture to flow out.

Case 3 (Sinne Lebbe Marikar).—No post-mortem examination was obtained, but the history of the case accords with the well-known course of General Paralysis. Overstrain, melancholic prodromata, grandiose conceptions, unbroken excitement with emotional weakness, and its termination in convulsions and coma, do not contradict.

I regret that I can say so little of the causation of the disease in these cases. In one there is absolutely nothing known; one was a drinker; the third was a smoker of Bang, had had suppurating bubos, and, from losses in his trading, had been deeply affected.

The microscopical characters of the brains of Suppayah

and Don Salmon agree in being studded, in countless numbers, by dots of miliary sclerosis, chiefly in the white substance and up to the third layers, and less frequently in the first layer. A drawing to Dr. J. W. McDowall's paper on "Diffused Cerebral Sclerosis," in January No. "Journal of Mental Science," 1880, would stand very well for these brains. A much greater number of diseased points would appear in my cases. He shows, too, the disease in the first and third layer of the cortex.

Cases contributed by Geo. H. Savage, M.D., Bethlem Hospital.

1. *Cases of Contagiousness of Delusions.*

Cases in which a delusion is caught by one patient from another are sufficiently rare to be worth recording.

One not uncommonly sees melancholy patients seizing upon an idea which is brought before them by some one near. They are in a state of simple melancholy, and are looking about for some explanation of their misery; and that a neighbour complains of having committed the unpardonable sin is enough to cause their melancholy to crystallise round the idea presented to them.

The cases here recorded differ from this entirely. It has already been noticed that as a rule the patient catching the idea is in an emotional, weak-minded state, and is generally of much weaker mental character than the one propagating it. In my experience these cases have been suffering from exaltation of one form or another, and in the majority of my cases religious ideas have been the ones transmitted.

The first case reported is from the Berry Wood Asylum, near Northampton, reported, by the permission of Dr. Green, by Mr. H. Wynter Blyth. Dr. Green writes:—"The cases of the two O.'s are decidedly curious, and, in my experience, unique. It is, unhappily, common enough for father and son to be insane, but for both to have the same delusions must be rare. Sometimes a wave of insanity, like the Dancing Mania or the Crusades, passes over a country and affects thousands of people, but that is a very different thing from the cases in question. The older O. is still here, and seems cheerful and comfortable, as he well may be with his delusions. The younger man has never been here since the day you saw him."

W. J., æt. 66; widower; blacksmith.—Admitted 14th June, 1880. Said to be first attack; duration not known. Cause stated to be brain softening. No history could be obtained.

The medical certificate says:—"Wandering about, incoherent speaking, saying that he has been crowned William the Conqueror; also that he is brother to Lord Southampton, and stating that his property has been claimed by others."

Physical condition good. He has apparently suffered from syphilis.

Mental condition on admission: "He is in a very loquacious humour, talking incessantly in a rambling and excited manner. Has delusions respecting his position in life and the property he possesses. Imagines he has no end of money and several mines in Staffordshire," &c.

June 18th, 1880.—Visited yesterday by his son. Now says his name is W. J.

June 19th.—Remains happy in his delusions.

June 22nd.—Likes being here, and thinks it a fine place.

July 10th.—Excitement much abated, and he is getting clearer mentally.

July 14th.—Delusions respecting property remain.

Sept. 1st.—No change in mental condition, and there are numerous delusions.

Sept. 16th.—His son called to-day and demanded his father, urgently solicitous to remove him. His son was somewhat excited, and appears to have exalted insane notions. He states that his father is entitled to two-thirds of England; that there is property now being settled by arbitration, and as that is his father's, he can do nothing without him; that it is in the hands of 52 trustees; that he is entitled to all the woods, all the mines, and all the minerals. He also talked much of the Lincoln's Inn lawyers—that they were at the top of the tree, &c.

Sept. 17th.—He imagines that he is possessor of enormous property. He says that he owns and is heir to all the mines in Staffordshire, the whole of Egypt, all the woods in the country, and talks vaguely and incoherently in an exalted way.

The wife of the younger man also agrees with her husband in saying that her father-in-law is possessed of all these riches.

She is described as a stupid-looking, ignorant young woman.

2. *Melancholia followed by Monomania of Exaltation.*

M. H., single, 29; maternal grandmother insane.—Admitted November, 1878. Neuralgia and sleeplessness given as causes of insanity. Ten weeks before admission was suicidal, and tried to get out of the window. Felt something urging her to suicide, and also

felt inclined to kill children. She felt she was doomed to everlasting punishment. She heard voices whispering bad words to her, and she saw evil spirits.

Complained of pains and noises in her head.

On admission she slept badly; took her food fairly well. Catamenia regular. She was a well-nourished, dark woman; solitary, but industrious.

She remained in much the same state till the summer of 1880, when she became more careful in her dress, and was very particular about her hair. She took notice of one of the doctors, and always rose to receive him.

She slowly became more confidential to him, and told him she recognised in him the Saviour, and she also knew she was to be his bride.

She was jealous of any other patient being attentive to him.

At present (Nov., 1880) she is well-behaved, solitary, and full of her delusion.

This case may be called the parent delusion, the offspring of which was the following:—

A. B., married, 36; no children.—The cause of her insanity was given as religious excitement, but we heard later that domestic unhappiness was the chief cause. She was admitted in July, 1880.

There was no history of insanity in the family.

She had been hysterical all her life. She had been insane ten weeks before admission.

On admission she fancied she saw Jesus in her room, and made signs to Him and spoke to Him. She seemed weak in mind, and did not know the day of the week. She refused food, and wanted to wander from home. She cried without cause. She wanted to drown herself. She thought she had lost her soul. She was fairly well nourished; pretty and interesting looking.

She was easily led to do anything other patients suggested, and would let them take her bonnet and shawl. She was markedly weak-minded and emotional.

She was in the same ward as the last patient, and at the end of October had taken up her ideas, so that she smiled lovingly on the doctor, and when asked who he was, said—"The Redeemer." She followed him about, and wanted to kiss him. She said he was her husband, and though she saw her real husband and received him kindly, she still held to her spiritual love.

In this case I hope, with improved health, she will get well.

We had two other cases who supported each other's delusions. One said she was Princess of Wales, and the other, who also claimed a title, said that the Princess of Wales

doubtless knew best who she was. Besides these, I have seen one case of a girl calling herself Jesus and the father saying he was the father of Jesus, and one in which both niece and uncle had delusions about persecution and poisoning.

3. *Marked Amelioration in a General Paralytic following a very severe Carbuncle.*

One is quite used to see attacks of mental disease shortened or relieved by acute bodily illnesses, such as fever, erysipelas, pneumonia and the like; and in some the mind seems to improve directly the body suffers. We have had, on the other hand, two cases of asthma in which the breathing was better when the patient was insane, and only became bad as the mind improved.

The whole question of the effect of intercurrent diseases on mental disease requires further study, and I contribute this case as one in which the progress of a disease at present considered incurable was arrested for a time. Such cases make one review the old blistering and seton treatment, and cause doubts to cross one's mind whether with heroic treatment also passed away valuable remedies for some dangerous diseases.

Q. M., married, 50. Admitted into Bethlem October, 1879. He was an accountant, and had worked very hard. He was strictly sober and well-behaved. He had no children, and there was no trace of insanity in his family.

The onset of his disease was sudden. He became excited six days before his admission, talked in a rambling, incoherent way. He had greatly exalted ideas: thought he belonged to the House of Lords, and could get hundreds of thousands of pounds. His exaltation was constantly changing in its subject. He was free in his gifts and promises. He constantly undressed himself.

The excitement became greater, and he had to be brought to Bethlem, as he was constantly leaving home.

On admission he at once entered on his grand plans: said he had a State secret, and that he was to be a second Lord Beaconsfield.

He was always talking and walking. Took his food badly; slept badly. His appearance was pale and worn; face flushed over malar bones. He was clean and tidy in dress. Noisy at night.

Weight a month after admission, 9st. 2lb.

Hyoscyamine was given to him in $\frac{1}{3}$ grain doses night and morning. It produced great prostration and more refusal of food.

His pupils, which on admission were not noticed to be irregular, were reported as such three weeks after admission, the left being

widely dilated. On remarking this, he said, "A rascally oculist said it was syphilis. Why, I never had it"

He became more quiet on the whole under the hyoscyamine. His speech became markedly thick and slow, and the tremor of the tongue and lips was excessive. He lost a few pounds in weight. In December he was beginning to gain flesh and strength, but his memory was weak.

He took three hours to write a short note, and then was dissatisfied, and hesitating about its going to its destination. An inquisition was held, and he was found to be of unsound mind.

By January 20th, when a large carbuncle formed on his neck, he was in a quiet, weak-minded state, with still ideas of grandeur.

The carbuncle became larger and deeper, and in the end extended from the ligamentum nuchæ to a level with the spinous process of the scapula, and from one scapula to the other.

There was no sugar in the urine.

Feb. 5th.—The carbuncle had left a large raw surface, which was rapidly granulating. Mental improvement was marked, and memory much better. He wrote letters fairly rapidly, and quite sensibly. Pupils as before.

He passed his urine involuntarily at times at night, or when asleep in a chair.

March 20th.—The neck had now healed, and about a week later he was sent to our convalescent establishment at Witley; and on May 3rd he went on leave of absence, and was discharged well enough for home on May 29th.

Since then I have seen him once, and though the irregularity of the pupils persists, and his speech is somewhat hesitating, and he has tremor of the eyes and tongue, yet he is so well that no one would now do more than suspect some cause of nervousness.

OCCASIONAL NOTES OF THE QUARTER.

Baker v. Baker and Others.

The case of Mordaunt v. Moncreiffe raised, our readers will remember, the very important question whether the insanity of the respondent in a divorce suit should preclude the petitioner from going on with his suit. The Judge of the Divorce Court and the majority of the Judges in the full Court of Probate and Divorce did not hesitate in arriving at an affirmative decision on the point. Against this ruling Sir Charles Mordaunt appealed to the House of Lords, which gave judgment in the opposite way, enabling him to prosecute successfully his suit for a divorce.

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One is quite used to see attacks of mental disease shortened or relieved by acute bodily illnesses, such as fever, erysipelas, pneumonia and the like; and in some the mind seems to improve directly the body suffers. We have had, on the other hand, two cases of asthma in which the breathing was better when the patient was insane, and only became bad as the mind improved.

The whole question of the effect of intercurrent diseases on mental disease requires further study, and I contribute this case as one in which the progress of a disease at present considered incurable was arrested for a time. Such cases make one review the old blistering and seton treatment, and cause doubts to cross one's mind whether with heroic treatment also passed away valuable remedies for some dangerous diseases.

Q. M., married, 50. Admitted into Bethlem October, 1879. He was an accountant, and had worked very hard. He was strictly sober and well-behaved. He had no children, and there was no trace of insanity in his family.

The onset of his disease was sudden. He became excited six days before his admission, talked in a rambling, incoherent way. He had greatly exalted ideas: thought he belonged to the House of Lords, and could get hundreds of thousands of pounds. His exaltation was constantly changing in its subject. He was free in his gifts and promises. He constantly undressed himself.

The excitement became greater, and he had to be brought to Bethlem, as he was constantly leaving home.

On admission he at once entered on his grand plans: said he had a State secret, and that he was to be a second Lord Beaconsfield.

He was always talking and walking. Took his food badly; slept badly. His appearance was pale and worn; face flushed over malar bones. He was clean and tidy in dress. Noisy at night.

Weight a month after admission, 9st. 2lb.

Hyoscyamine was given to him in $\frac{1}{3}$ grain doses night and morning. It produced great prostration and more refusal of food.

His pupils, which on admission were not noticed to be irregular, were reported as such three weeks after admission, the left being

widely dilated. On remarking this, he said, "A rascally oculist said it was syphilis. Why, I never had it"

He became more quiet on the whole under the hyoscyamine. His speech became markedly thick and slow, and the tremor of the tongue and lips was excessive. He lost a few pounds in weight. In December he was beginning to gain flesh and strength, but his memory was weak.

He took three hours to write a short note, and then was dissatisfied, and hesitating about its going to its destination. An inquisition was held, and he was found to be of unsound mind.

By January 20th, when a large carbuncle formed on his neck, he was in a quiet, weak-minded state, with still ideas of grandeur.

The carbuncle became larger and deeper, and in the end extended from the ligamentum nuchæ to a level with the spinous process of the scapula, and from one scapula to the other.

There was no sugar in the urine.

Feb. 5th.—The carbuncle had left a large raw surface, which was rapidly granulating. Mental improvement was marked, and memory much better. He wrote letters fairly rapidly, and quite sensibly. Pupils as before.

He passed his urine involuntarily at times at night, or when asleep in a chair.

March 20th.—The neck had now healed, and about a week later he was sent to our convalescent establishment at Witley; and on May 3rd he went on leave of absence, and was discharged well enough for home on May 29th.

Since then I have seen him once, and though the irregularity of the pupils persists, and his speech is somewhat hesitating, and he has tremor of the eyes and tongue, yet he is so well that no one would now do more than suspect some cause of nervousness.

OCCASIONAL NOTES OF THE QUARTER.

Baker v. Baker and Others.

The case of Mordaunt v. Moncreiffe raised, our readers will remember, the very important question whether the insanity of the respondent in a divorce suit should preclude the petitioner from going on with his suit. The Judge of the Divorce Court and the majority of the Judges in the full Court of Probate and Divorce did not hesitate in arriving at an affirmative decision on the point. Against this ruling Sir Charles Mordaunt appealed to the House of Lords, which gave judgment in the opposite way, enabling him to prosecute successfully his suit for a divorce.

The same question, under a different aspect, has been again at issue before the Divorce Court, and decided without any perplexity or uncertainty. In the last number of the Journal we gave the particulars of this case (Notes and News), but our space did not allow of comment. The suit was instituted by the committee of William Baker, a person of unsound mind, so found by inquisition, for dissolution of marriage with the respondent by reason of her adultery with the co-respondents. The respondent denied the adultery, and also demurred to the petition on the broad question whether it was competent for any one to institute, on behalf of a husband who was incapacitated by insanity from giving his assent to it, a suit for the dissolution of the lunatic's marriage. It was equally contended whether there was a distinction between the case of a lunatic being made a respondent in a suit of dissolution of marriage (Mordaunt v. Moncreiffe), and that of a committee of a lunatic bringing such a suit on the lunatic's behalf; whether, in other words, to the proposition that a lunatic may be sued in such an action, it was a corollary that a lunatic may sue.

The President of the Court, Sir James Hannen, delivered judgment, being of opinion that the decision of the House of Lords in Mordaunt v. Moncreiffe was, by necessary implication, binding upon him, and that, therefore, the insanity of a husband or wife was not a bar to a suit by the committee for the dissolution of the lunatic's marriage.

From this judgment the respondent appealed to the full Court of Probate and Divorce, and the appeal was dismissed, Lord Coleridge stating, with the concurrence of Sir R. J. Phillimore, that it was clear that the case fell within the principle laid down by the House of Lords in Mordaunt v. Moncreiffe, on which alone was based the decision given by the learned President; and, as that was the judgment of the highest authority, he was bound to follow it.

That a committee of a lunatic may, under certain circumstances of a different nature, institute a suit on his behalf for dissolution of marriage has been a point settled in various cases, the leading one being that of the Earl of Portsmouth by his Committee v. the Countess of Portsmouth, where marriage solemnised *de facto*, under circumstances of a clandestine character, inferring fraud and circumvention, was pronounced null and void. Undoubtedly the reason for prosecution is different when adultery is the cause set forth for dissolution of marriage, but this difference in no wise affects the right of the committee to bring such a suit on the lunatic's behalf, so long as an acknowledged illegal incident exists to invalidate the contract of marriage. These considerations, however, did not guide the Court in the case of Baker v. Baker, sufficient reason being implicitly found in the more recent decision in the House of Lords in Mordaunt v. Moncreiffe to decide the case, on first instance and appeal, against the respondent.

The same law obtains in France, although divorce in the sense of separation *a vinculo matrimonii* does not exist. Separation *a mensa et toro* may be pronounced in the case of adultery of the wife on the demand of the committee of the lunatic husband. As it is the duty of the committee or tutor to take charge of the person and interests of the latter, it is regarded as a sequence that he must protect him against his wife. The committee, then, in other countries besides England has the power to interfere in a parallel case to that of Baker —the separation *a toro* permitting of the disownment, should it be needful, of a child born to the wife so separated.

It seems, indeed, legitimate that, if a lunatic can be made a respondent in a divorce suit, his committee could also exert the right, if need be, of instituting such suit on his behalf; and therefore the principle laid down by the House of Lords in the Mordaunt case necessarily applies to that of Baker. However, there is no similarity between the essential circumstances respectively connected with both, nor in the manner in which they stand in reference to their common judgment, for in one it is not proven that injury might not have been done by the decision to the insane respondent, whereas the probability of this contingency in the case of the other respondent and co-respondents is very remote, if not impossible, since nothing prevented them answering for themselves and opposing the necessary evidence to the charges brought against them. The question is, whether the injury above referred to may not be avoided by the judicial weighing of the evidence against the lunatic, as it would be, for instance, very unjust upon a husband whose insane wife was guilty of unfaithfulness to force him to acknowledge as his own her adulterous offspring.

Sir James Hannen showed how a wife might be left in possession of property settled on her by her now lunatic husband, and how consequently she and her paramour might enjoy it without his participation, and how she might even exercise powers of appointment in his and her illegitimate children's favour. Thus titles and lands might be actually made to descend to them, and the husband, smitten by madness, be powerless to interpose. No one can deny that this would be an intolerable wrong—not, indeed, adding insult to injury, but injury to insult. The only possible circumstance that can be urged on the other side—that is to say, against a Chancery patient's committee acting on his behalf, is that it is just possible a lunatic husband might on his recovery bitterly complain that he had been deprived of his wife. The husband may say he would have forgiven his wife—nay, he may demur to the evidence brought against her; and thus the unfortunate committee may get no thanks for his pains—rather blows. These are clearly alternative difficulties, but the balance is clearly in favour of the conclusion arrived at—that a committee may act *in loco lunatici* in cases of alleged adultery as well as in others of a different kind.

An injury, it is said, may be done by women confessing crimes of which they are not guilty, and it is urged that we cannot foresee what a judge or a jury may consider sufficient grounds to justify the acceptance of a woman's self-accusation prompted really by delusions. How strongly these latter may carry the appearance of reality is no doubt exemplified by the well-known case which happened in London not many years ago, and in which a dentist became almost the victim of the memoranda kept by one of his female patients, noting the places and details of the illicit interviews that in her delusions she had imagined to have had with him, and which were produced as facts and circumstances in proof of her charges of adultery against him. Moreover, it is said that, once the law is enacted that the insanity of a husband or wife is no bar to his or her prosecution for divorce, what safety has the insane wife for not being accused by a wicked husband of having violated the marriage relations in order to cast her off and either marry another woman or relieve himself of her further maintenance and care? What remedy, it is asked, is left to the child unjustly stigmatised as illegitimate, if its mother, continuing in a state of insanity till her death, has no chance to demonstrate the true nature of the insane confession of an adultery which she had never committed?

But the real answer to all this is that, as in the Mordaunt case, so in others of a similar kind—and in such instances as Baker v. Baker—the verdict will depend upon the evidence of adultery quite independently of the accusations made by the party accused; in fact, the very contention of insanity which alone brings them into the category of cases of the particular description under discussion, renders self-accusation suspicious, if not altogether inadmissible. The danger lies in those cases in which insanity is not recognised and delusions are mistaken for real occurrences.

The right to institute such a suit as that of Baker v. Baker and Others admits now of no controversy, while there is every reason to suppose that the adverse judgment to the respondent was delivered upon evidence, which neither she nor the co-respondents were able to disprove.

Vaso-dilator Function of the Sympathetic.

Communications recently presented by MM. Dastre and Morat to the Academy of Sciences, and the Biological Society of Paris, establish a hitherto disputed function of the sympathetic, which obviously bears on medical psychology.

In 1858 Claude Bernard, after his experiments upon the nerves supplying the sub-maxillary gland, regarded the

vaso-dilator nerves, as derived from the cerebro-spinal system, the vaso-contractors being, as no one disputes, derived from the sympathetic. Dastre and Morat have now demonstrated, by numerous researches, that the sympathetic is really a mixed nerve, composed of constrictor and dilator nerves, producing the contraction and dilatation of the blood-vessels. These physiologists have discovered, on repeating Bernard's experiment on the cervical sympathetic, that while its irritation determines pallor with diminished circulation in certain parts, it at the same time causes in the adjoining parts redness from increased circulatory activity. These phenomena appear perfectly distinct in limited regions, not from paralysis upon nerve exhaustion, as recently held by Laffont, but, as the experiments show, upon the primitive and active influence of a set of nerves contained in the very trunk of the sympathetic, which, though hitherto regarded as an exclusively vasor-constrictor nerve, contain also vaso-dilator nerves.

It is already well known that the vaso-constrictor nerves terminate in the vascular walls, and are the motor nerves of organic life. As to the dilators, they exert a distant inhibitory influence upon the vaso-constrictor, for they never reach the muscular coats of any vessel, but stop themselves at more or less distance therefrom, in the sympathetic ganglia or in the group of cells distributed along its trunk or branches, wherefrom they exert the above inhibitory or paralysing influence. The action of the constrictor nerves, as demonstrated by Bernard, is continuous, and hence the dilators are constantly called into activity to regulate it, effecting such influence from the ganglia, which are thus the controlling centres of the system.

The dilator nerve, which gives the best idea of the general action on, and relation with, the constrictors, is the auriculo-dilator nerve. There are two kinds of vascular nerves in the ear: the first, the well-known vaso-constrictors, which originate from the upper part of the thoracic region of the spinal cord; thence ascend with the thoracic trunk of the sympathetic, passing through the first thoracic and the inferior cervical ganglia into the cervical branch of the sympathetic, and, after traversing the upper cervical ganglion, finally go to distribute themselves to the muscular walls of the auricular blood-vessels. Excitation upon any point of this long tract always determines vascular contraction, and nothing else. However, at the level of the first thoracic ganglion

the sympathetic trunk receives, among other communicating branches, a small, very slender loop, detached from the last root of the brachial plexus (eighth cervical nerve), which joins the sympathetic at the level of the first thoracic ganglion. Dastre and Morat have found that excitation of this loop is attended with remarkable dilatation of the auricular vessels. When the nerve is divided, and the peripheral section connected with the ganglion is again excited, the circulatory activity becomes intense. This obviously demonstrates that the loop contains the vaso-dilator nerves of the auricular vessels going to the ganglion. Had they proceeded to supply the blood-vessels themselves, they necessarily would have had to run along the cervical cord of the sympathetic, where their presence could have been detected by the excitation of the trunk, which, as already noticed, only brings forth vascular contraction, thus proving that this part of the sympathetic contains no other kind but vaso-constrictor nerves. The vaso-dilator nerves of the ear, then, do not travel beyond the first thoracic ganglion, and obviously exert their influence therefrom, for unless we excite the nerve above the ganglion there is no dilatation.

In other regions—as, for instance, at the genio-buccal—the dilator nerves terminate in less distant ganglia. They run for a certain length together with the vaso-constrictor along the cervical sympathetic; therefore, excitation of this latter induces simultaneously vascular dilatation in the mucous membrane of the mouth and lips, with marked auricular vaso-contraction. The dilator nerve of this region terminates near the spinal cord, at the first thoracic ganglion.

These conclusions having been contested by M. Laffont, Dastre and Morat have established, to the satisfaction of the Biological Society, and M. Laffont himself, that the vascular dilatation is an active, not a reflex phenomenon, effected by the sympathetic alone.

These researches then prove that the sympathetic possesses the functions of direct vascular *dilatation* as well as contraction—a true vaso-motor nerve, thus confirming the original doctrine of Bordeu and Bichat, who maintained that animal life is under the influence of the cerebro-spinal, and organic life under that of the sympathetic system.

PART II.—REVIEWS.

The Brain as an Organ of Mind. By H. C. Bastian, M.A., M.D., F.R.S. Vol. xxix. of the "International Scientific Series."

Matthew Arnold, in the pages of our most popular monthly, has been recently urging the need of civilising the middle classes. Still more important is it that *all* classes should be civilised, and few persons are aiding in this great cause more effectually than the energetic publishers of the "International Scientific Series" and the band of distinguished men to whom they have entrusted the work. There are both a Scylla and a Charybdis into which works of this kind—works which aim at a real popularisation of science—are apt to fall, and from which the series in question has, on the whole, very fairly escaped—the Scylla of stiffening into technical manuals, the Charybdis of mere fanciful and erratic gossip.

Everything which aims at elevating the mental status of mankind must be of interest to a journal of mental science, especially to one that particularly concerns itself with the application of scientific truths to human mental needs. To this Journal, therefore, all the volumes of the "I. S. S." cannot be without a deep interest, particularly with reference to the manner in which they fulfil their function of elevating the popular intellect; but this volume, xxix., which we have now before us, has a more special interest for us, inasmuch as it is an attempt on the part of one who has earned much distinction in this field, to expound what is known or presumed about the nature and functions of the brain. If we say that the book does not quite come up to our expectations, it is rather because our expectations of what is born through Dr. Bastian's pen are very high, than that the book is below the average standard of the series. We incline to think that the chief flaw in the work is a certain want of "integration" in its structure. The different sections are not joined together with that smoothness of fit which is so specially needful in a book of this kind. To the initiated this is not of so much importance, for he can connect disjointed portions with joints from his own knowledge; but we fear that the ordinary intelligent student

seeking for scientific culture will find some difficulty here and there in understanding what relation the different parts bear to one another. Dr. Bastian seems occasionally to have forgotten that we are not all so much at home in the subject as himself. This want of integration is exemplified in the chapters which deal with the anatomy of the nervous system in the lower animals. Our author goes into considerable detail on this point, but it is sometimes a little difficult to see the bearing of these details on the main question; indeed, one is sometimes tempted to ask for a little less detail and a little more interpretation, for the writer is one who is eminently qualified, both by knowledge and wisdom, to be something more than a topographer. Again, we have here and there encountered a vagueness in the reasoning, and even in the enunciation of his own views, to which we are not accustomed in Dr. Bastian. But the workmanship is unequal, for in other places the writing is lucid and thoroughly to the point, and we recognise that logical acumen, that bold and yet cautious imagination, and that penetrative intellectual vision which have so often distinguished Dr. Bastian on many an intellectual battlefield.

The general plan of the work is thoroughly worthy of praise. Starting from the very utmost roots of the psychological tree, we rise through trunk, and branch, and twig to the flower and fruit. By commencing to study phenomena in their simplest manifestations, the mind seizes the essential, the fundamental, conception, and as it rises to more and more complex groups of such phenomena, knowledge becomes gradually differentiated and more complex in harmony with the growing complexity of the phenomena. The student in this way learns to disentangle the essential from the adventitious, and to penetrate the meaning of things which, looked at by themselves, seemed in a hopeless muddle. He follows, in short, legitimate evolution; he proceeds from the simple to the complex, from the easy to the difficult. Looked at from another point of view, the general plan is equally admirable, for the writer endeavours to gather together the three great threads of the subject, and to twist them into a threefold cord. He gives a diagram to illustrate what these three threads are—Neurology, Objective Psychology, and Subjective Psychology—as they converge together to form the only satisfactory mental science. Though one worker is obliged to dwell more upon one aspect of the subject than

another, and must therefore, to a certain extent, specialise his work, the recognition of the truths is becoming, happily, general, that to look at only one side of the subject must lead to a one-sided psychology; that the psychologist of the future will recognise the facts of anatomy and physiology, the habits and actions of other animals, including his fellow men (and brother psychologists); while he will by no means ignore his own subjective states.

The first chapter points out how animals and plants come to differ from each other, and how the former, being for the most part active creatures, have developed special contractile organs called muscles; how the existence of such special organs and of peripheral impressions leading to their excitation has brought about the existence of special conducting tracks between them, and ultimately of structural paths called nerves. From such simple beginnings, such a simple means of bringing the organism into correspondence with its environment, Dr. Bastian starts his teaching, and tells us to look on the most complex nervous systems as elaborations of this elementary mechanism, interpolated between a sensitive surface and a contractile organ. The anatomy of nervous systems in general is then described at some length, and after a chapter on the "Use and Nature of Sense Organs," the nervous arrangements of the invertebrata are described in considerable detail, this description being terminated by a short summary of what such a comparative sketch should teach us with regard to the brain; the principal point being, perhaps, that the brain of invertebrates appears in connection with their special sense organs, and is essentially a group of sensory ganglia receiving impressions from such sense organs. A similar comparative account of the brain in the non-mammalian vertebrates follows. We observe that Dr. Bastian hazards no opinion as to the exact morphological nature of the cerebral lobes and cerebellum. Are they originally "sensory ganglia," homologous with the rest, or are they specialised outgrowths from the other more primitive ganglia? The chapter on "The Scope of Mind" we shall refer to more fully presently. After it comes a series of chapters on mental processes, introduced by an account of reflex action. We are not sure that it is safe to infer the "primarily unconscious" nature of that elementary "organisation of intelligence" which comes to constitute the reflex actions of lower creatures. True, these processes may be compara-

tively simple, and in ourselves they may be quite apart from our general consciousness, but does it, therefore, follow that in these lower creatures—at any rate while the reflexes in question are being organised—there should be no conscious accompaniment, though this may be of an extremely simple kind? While comparing sensation and perception, and showing how universally associated are the two processes, Dr. Bastian seems here and there to lose sight of the difference between them, for though both sensation and perception seem essential to consciousness, yet each is surely a different phase of that process. These chapters embody the chief modern conceptions as to the growth of the different mental powers, and due prominence is given to the doctrine of Inherited Acquisition, as reconciling all that is true in the Intuitive and Experiential Schools, as well as adding much that is new. The physical correlative of the association of feelings seems still an unsolved puzzle. Dr. Bastian has still to say that the connection between the different centres, which become physiologically associated, occurs in an "imperfectly understood manner." It is well to keep before us the fact that this formation of connections between centre and centre is really a very difficult one to realise, and that, though we know it must occur somehow, the explanation of how it occurs is still wanting. "Imperfectly understood manner" is, in fact, a very mild way of putting it. The relation between reflex, instinctive, and rational actions is described from the point of view of the evolution philosophy, and the general conclusion is drawn that as the nervous system of an animal becomes more developed, and thus its powers of receiving and arranging more and more varied impressions increase, the more do processes which are called rational intervene between impressions and resulting action. Interesting examples are given to show that the ant and other insects, with their inferior nervous systems, are less capable of adapting themselves to new conditions—*i.e.*, of behaving rationally—than are birds, with their more complex nervous systems. The anatomy of mammalian brains is fully described, and an account is given of the mental powers of brutes.

The human brain and its functions now come on for special consideration, beginning with the development of the nervous system in utero, and there is an interesting chapter on the size and weight of the brain; indeed, this is one of the most interesting chapters in the book. Dr. Bastian

points out clearly enough the kind of relationship we may expect to find between intelligence and size of brain, and the numerous conditions which make this relationship so complex. Besides keeping in view the influence of size of body on size of brain, it has always to be remembered that it is just those capabilities which are most distinctive of highly intellectual power which, being the most recently acquired, have the least definite structural bases, and, therefore, in a particular individual, are most apt to remain undeveloped through unfavourable influences—have, that is, the least inherent tendency to develop. Thus a person may show no marked signs of intellectual power, and yet his brain may be of more than average size owing to the presence of much imperfectly elaborated nerve matter—the potentiality of intellectual greatness which circumstances have not allowed to be perfected. The anatomy of the human brain, both internal and external, is pretty fully dealt with, the significance of convolutional complexity and variety being ably discussed, and illustrated by the consideration of various types of human brains. A chapter on the transition from brute to human intelligence is inserted between the two parts of the anatomical account. This chapter is scarcely so clear as could be desired, and consists largely of quotations. Doubtless, as Dr. Bastian indicates, the growth of articulate language with the power of thinking in symbols, and the development of the social sentiments, constitute the main acquisitions of human intelligence. The latter part of the book is occupied in giving such an account of the physiology of the brain as is yet possible, and in sketching the manner in which the higher cerebral processes are carried on—the processes which are most nearly related to the intellectual and emotional life. The kind and degree of localisation of function in the cerebrum is discussed with considerable clearness, though many of Dr. Bastian's views on the subject must remain doubtful for some time to come, and many of them will probably be much modified by the future growth of knowledge. That the cortex of the hemispheres is altogether receptive in function, while the supreme motor functions are performed especially by the cerebellum, is a doctrine which many will view with distrust, though Dr. Bastian, no doubt, succeeds in making it not absolutely in opposition to Ferrier's splendid results. Still, we must say that Ferrier's conclusions on this point seem to us more in harmony with facts than the doctrine here advocated. Dr.

Bastian, of course, admits the existence of localisation; indeed, he had already indicated the existence of localised "perceptive centres" in relation with the different sense organs before Ferrier had experimentally proved this relationship, though Bastian regards this localisation not as definitely limited to particular isolated areas, but as affecting particular "cell and fibre mechanisms" more or less mingled together. Why, however, this mingling should occur in the highest centres and not in the lower we do not clearly see.

We have thus gone through the book pretty systematically, and briefly noticed its peculiarities, but there are two or three points we should like to refer to in rather more detail.

In Chapter X., on "The Scope of Mind," there is an attempt to define what is meant by the term "Mind," and to modify very considerably the meaning commonly attached to it. After a protest against the term being used to express some independent entity instead of being applied to the sum of mental states, Dr. Bastian advances the opinion that it would be advantageous to enlarge very much the ordinary meaning of the word, and to make it include not only the conscious "results of nerve action," but also "the results of mere unconscious nerve action, which," he says, "constitute so many integral parts of our mental life." He does this on the grounds that no distinct line can be drawn between the actions accompanied by consciousness and the actions not so accompanied, because the former may gradually pass into the latter; that in our thinking processes many unconscious links are constantly interpolated; that the fundamental contrast maintained by most psychologists between the subjective and the objective does not really exist, but is rather due to our ignorance of the relation between consciousness and matter. "Thus, it would appear," says he, "that if we are, as so many philosophers tell us, to regard the sphere of Mind as co-extensive with the sphere of Consciousness, we should find 'Mind' reduced to a mere imperfect, disjointed, serial agglomeration of feelings and conscious states of various kinds, while the multitudes of initial or intermediate nerve actions (which serve to bind those other nerve actions, commonly associated with conscious correlatives, into a complex, continuous, and coherent series) would have no claim to be included under this category."

We cannot help thinking that the course recommended here would be very inconvenient, for the word "Mind" has

come for us to be so strongly associated with the notion of consciousness that to speak of mind without consciousness seems like a contradiction in terms. We fancy, moreover, that Dr. Bastian makes the difficulty he alludes to by refusing to recognise that contrast between subjective and objective which most psychologists agree in recognising. When we do this the difficulty vanishes, and we can regard all the nerve actions of animals as fundamentally like one another, and so avoid the inconsistent dislocations of similar things to which Dr. Bastian objects, while we reserve the term "Mind" for that other aspect of things which we know as our own subjective states. It is perfectly true that no fundamental distinction can be made between one *nerve action* and another; the simple reflex merges into the "rational" action, but that is quite a different thing from merging into a phase of consciousness, for the rational *action* is an affair of matter and motion. We can trace the physiological process without introducing a psychical element at all; but the phase of consciousness belongs to a different category of phenomena, which must be kept distinct from molecular nerve motions. If we choose to apply the term "Mind" to all that series of actions as *actions* which maintain the correspondence between organism and environment, we should, no doubt, be logical and consistent enough, for we should not be confusing the mental and physical aspects of the question together; but, as we have said, this course would be highly inconvenient, because the word "Mind" has already acquired such a powerful association with the conscious aspect that to apply it to the physical aspect—the molecular motions of nerve matter—could only cause confusion—such confusion, indeed, that we should soon be driven to do with the word "Mind" what Dr. Bastian has wisely urged us to do with that awkward word "Tubercle"—namely, expunge it altogether from our vocabulary.

Following out his view of Mind, Dr. Bastian regards the nervous centres, as a whole, as the *organ of mind,* though he excludes the phenomena of outgoing currents from the sphere of mind for reasons that are not very clear to us. We cannot say that we altogether like the term "organ of mind" as applied either to the hemispheres or in the wider sense, but it has now got such a hold in our language that probably we must continue to use it and make the best of it, trying not to be more illogical than we can help.

The meaning of the cortical convolutions is a point on which some very good observations are made, though the subject is still somewhat obscure. It seems, speaking generally, as though convolution had been a more convenient means of cramming more grey matter into the cranium than an enlargement of the cranium to a corresponding extent would have been; and it seems as though this method of increasing the cortical grey matter had come into action independently on several different occasions, since we find both convoluted and unconvoluted brains in each of various mammalian groups, two animals having the common character of convolution being by no means necessarily more closely related to one another than they are to certain other animals whose brains are scarcely convoluted. It would seem, then, that as the earlier mammals with simple brains branched out in various directions, similar causes had in several different cases produced a similar condition (similar in the mere fact of convolution) of the cerebral cortex, an interesting example of the general biological doctrine that superficial resemblance does not always imply affinity of race. Dr. Bastian brings out well the important fact that degree of convolution is in close relation with size of animal, a fact which, perhaps, agrees rather better with Ferrier's view of the kind of connection which exists between the cerebral cortex and the lower motor centres than with Dr. Bastian's own idea of this connection. Yet, on the other hand, as the latter points out, increased power of motion is sure to induce greater powers of sensory perception through enlarged intercourse with environment, while greater degree and complexity of movement involve more complex machinery for receiving and arranging those impressions—kinæsthetic Dr. Bastian calls them—to which movements give rise. It seems yet scarcely settled to what extent these surface foldings remain constant in their relationship to one another and surrounding parts—whether, that is, their exact arrangement is in a sense accidental, or whether they indicate real functional constancies; whether, for example, a certain convolution found to perform a certain function in one animal should always perform the same function in an allied animal, or whether this function might get shifted, as it were, on to a neighbouring fold in consequence of a slight difference in the folding. The exact degree of the correlation between folding and function is important, because the comparison of the foldings in different animals and individuals may be expected to give us some help in comparing their functions.

We have already referred to Dr. Bastian's views about the motor functions of the cerebral cortex—that these functions are not truly *motor* in the usual sense of the word, and that the activity of the supreme motor centres —cerebellum and corpora striata, has no conscious accompaniment. Upon these views is based his account of speech and its defects — that complicated and little comprehended subject which no one has yet succeeded in giving an altogether satisfactory account of. Dr. Bastian, of course, makes the principal speech centres sensory in nature, and gives to the "auditory word centre" the chief functions connected with language, while the visual and kinæsthetic "word centres" are of minor importance. The last he regards as corresponding with Broca's convolution, and as being a necessary part of the route for stimuli, both for articulation and writing. The subject, as a whole, is far too complicated to be discussed here, but we may just make an observation or two about it. In the first place, is there any such definite distinction between *motor* and *sensory* centres as is commonly supposed? We are inclined to think that too much is made of what is, no doubt, a convenient artificial distinction, but which corresponds to no real and impassable difference in nature; for, after all, every centre probably both receives and despatches impressions, and is in this sense both sensory and motor. Indeed, these centres, divided for convenience into two parts, are in reality a single mechanism for co-ordinating impressions and outgoing stimuli. A good deal of confusion seems to arise from this halving of a co-ordinating mechanism. Then, secondly, there seems no reason to assume, as Dr. Bastian does, any inherent improbability in the notion that what we may broadly call our consciousness of effort should be to some extent associated with the *motor* side of the higher cerebral functions. He seems to start from this assumption, and to make facts square with them. We see no inconsistency or improbability in Ferrier's theory of "motor ideas," though admitting, as every one must, that afferent impressions from moving parts have much importance in regulating movements; and hence in the mechanism of speech we should be quite prepared to attribute much more importance to articulatory centres than Dr. Bastian does, though we fancy that the subject is still too vague for very definite opinions.

Finally, we must still admit that quite apart from the inherent mystery of our being, apart from the ultimate impenetrability of this strange consciousness of ours, the

brain itself as a material organ, and its functions, in terms of molecular motion, are still an enigma, even to one who knows more about them than most people do.

The Emotions. By James McCosh, D.D., LL.D. London: Macmillan and Co., 1880.

The Scottish School of Psychology was once a great power. In the days when Locke's sensational philosophy had developed into the devout anti-materialism of Bishop Berkeley, and that again into the startling scepticism, very plainly atheistical, of Hume, men recoiled violently from the accepted line of thought, and felt that they must strike out something new. They said with a certain naïve intensity, that these destructive results were at variance with common sense. To that, as their criterion of truth, they made appeal: and to bring out its answer, they devoted their mental energies to introspection. They "looked into their own minds." Consciousness, and the things it revealed, were reflected on deeply—explained and enlarged with triumphant vigour. Reid and Stewart gave place to the more ingenious Hamilton. The school made converts in France, also shocked at revolutionary theories; and Jouffroi, Victor Cousin, and a host of minor lights, convinced themselves and their audiences, and sang the praises of Introspection and Common Sense.

This state of things, however, could not last for ever. In two directions philosophy advanced beyond them—towards the Idealism of Kant and Hegel in Germany, and towards the materialistic and physiological side in England and France. Against either of these schools they were without an answer, and therefore, in our own time, they have fallen into the background and will very soon be as extinct as the Schoolmen. They were without an answer to the physiological philosophers, because their view of the mind was founded on no basis whatever, except the mental phenomena as they appear "to the mind's eye;" and these may easily be illusory or misleading. The prominent facts as to nerve action and reaction, on the other hand, are seen to explain many things which before seemed dark, and for those accustomed to the hasty hypotheses of modern science it is not a great leap to the conclusion that they will, in the end, explain everything. The Idealists,

on the other hand, hold an unanswerable position against the Common-sense school, because they propose to go below their ground entirely, and to undermine it by the previous question—"before we consider mental phenomena, let us inquire what a phenomenon is, and what any fact and every fact implies." The whole of modern Idealism in Kant and Hegel is nothing more than an answer to this prior question: and this question the Introspective School is forced, by its very nature, to ignore.

Still, of course, although the Scottish School has ceased to be a power in the land of thought, it has not ceased to fulfil a function of its own. It was, as we have said, from the beginning essentially a *description* of the mental life as it appears to us. Descriptive tasks, therefore, fall especially within its sphere, and in such matters it has often done good work. There are, for example, important questions as to Free Will, as to Attention, as to the Feelings especially, on which introspection, properly conducted, is able to throw much light. If those who still follow the traditions of the school would confine themselves to these things, they might do much service to Psychology in these days when the physiologists threaten to run away with it altogether.

We are glad, therefore, to see a considerable book on the "Emotions," from the pen of Dr. McCosh. He prefaces it by the simple remark that he is "not satisfied with the account which has been given of the feelings and emotions in our books of mental science, and thence transferred into the common thought and literature of modern times." He is especially moved to rectify this, because "the vagueness of the ideas entertained on the subject favours the tendency on the part of the prevailing physiological psychology of the day to resolve all feeling and our very emotions into nervous action, and thus gain an important province of our actions to materialism.'

No doubt it is true that definite ideas as to the mutual definition and relations of these vague phases of mental experience, which we call feelings and emotions, are seldom to be found, either in common speech or in philosophic writings of any shade. Partly, no doubt, it is natural that it should be so. Feelings and Emotions are nothing if not vague. They are, in strictness, by their nature indescribable. They are blurred and undefined pictures, as contrasted with the clearly perceived data of the reasoning side of our nature. But for this very reason there is the more danger of confusion and

error in considering all problems into which they enter, as they do enter into the highest problems of life.

Another difficulty in the way of treatises about this subject is the inextricable fashion in which states of feeling are mixed up with nerve-action. The nerves of the sympathetic system get affected by one's stomach somehow, and one is quarrelsome, moody, hopeless. The Emotions are set in a wrong key altogether. One can reason oneself to tutor one's face and tongue into a more sensible condition, but the gloom —the feeling or tendency to feeling—persists in spite of everything. Our emotional nature is notoriously little under the control of Will, just because it is so absolutely bound up with purely physical states. There is always something a little animal about our Emotions, one is tempted to say; and yet the finest and noblest part of humanity seems to be revealed only in such emotional states as those of Love and Religion. These are some of the unsolved problems which await the time when *à priori* and *à posteriori* schools shall have settled some basis of common work—when Bain and Maudsley shall have been reconciled with Kant and Hegel.

When we opened this book, therefore, we hoped to find a substantial advance, or a contribution at least towards the settlement of these and all such questions. We are sorry to say we have been disappointed. The author tells us from the first that he ignores controversy. The result is, that he revels in platitude. In fact, he writes as if not a word had ever been written on the subject before he began. The result is a series of little conversational paragraphs, with little connection one to another, and out of which we seek in vain to disinter any important general view.

Dr. McCosh begins by a very crude analysis of Emotion into four elements. Why they should be four rather than three or five, does not appear; unless we are to gather it from a little allegory of four travellers in a coach, and how they behaved when a death was suddenly announced to them. "*First*," he says, "there is the affection, or what I prefer calling the motive principle or the appetence. These appetences may be original, such as the love of happiness; or they may be acquired, such as the love of money, or of dress. These moving powers are at the basis of all emotion. *Secondly*, there is an idea of something, of some object or occurrence, as fitted to gratify or disappoint a motive principle or appetence. When the friend and brother of the departed did not know of the occurrence, they were not moved. But as soon as

they realized the death, they were filled with sorrow. The idea is thus an essential element in all emotion. *Thirdly*, there is the conscious feeling. The soul is in a moved or excited state—hence the phrase emotion. Along with this there is an attraction or repulsion. *Fourthly*, there is an organic affection. The seat of it seems to be somewhere in the cerebrum, whence it influences the nervous centres, producing soothing or exciting and at times exasperating results. This differs widely in the case of different individuals. But it is to be observed that the organic affection is not the primary nor the main element in anything that deserves the name of Emotion, such as hope and fear, &c." And the author warns us that "Emotion is not what it has often been represented by physiologists, a mere nervous reaction from a bodily stimulus, like the kick a frog gives when it is pricked. It begins with a mental act, and throughout is essentially an operation of the mind."

Such are the main lines on which, so far as there are any, this book is written. To say they are disappointing, from a writer so well known as Dr. McCosh, is very gentle criticism. This sort of writing is a mere trifling with the subject; and the reader will be still more dissatisfied if he reads the rest of the book; as, for example, to take two cases out of many, the chapter on "Motives," and that on "Love." As will be seen from the few sentences we have transcribed, Dr. McCosh hopelessly misunderstands even the physiology of the question. The Scottish philosopher will seek in vain for any comparison of emotions to frog-kicking in the pages of the physiologists. Surely it is not too much to ask that an eminent writer of one school will read and understand the ordinary learning of the opposing systems before he proceeds to confute them. As we have complained of Dr. Maudsley for misappreciating the Idealists, so do we complain of Dr. McCosh for his ignorance of physiology. It is lamentable to think how much the world's progress towards the truth is delayed, because men will not read or will not understand any books but those that are on their side. Surely it is not so very difficult to "put yourself in his place."

To go through all the matter contained in this volume would be out of place here. There is a considerable chapter on "Æsthetics," but we fail to find in it anything original or striking. Mr. Grant Allen is discussed, but the chief criticism bestowed upon his work is the remark that every time he wrote the words "the nervous system," he ought to have

written "the mind" instead—an observation not wholly untrue, but scarcely adequate to the occasion. The book ends with an extremely jejune chapter on that infinitely suggestive and still unappropriated subject: "The Emotions and Motives of Masses of Men." We take leave of it with regret for a lost opportunity. It remains for some other more careful and less superficial than its author to redeem the credit of the Scottish School, and to render to psychology a service which, in this field at least, is open to it without dispute.

OXON.

Congrès International de Médécine Mentale. Comptes Rendus Sténographiques. Paris, 1880.

(*Continued*).

Dr. Auzouy applies the qualification of criminal lunatics to those recognised insane after their condemnation, or acquitted by cause of irresponsibility, or judged irresponsible by notorious insanity at the perpetration of the criminal act.

The right to confine criminal lunatics is evidently incontestable; but how long should be the term of their confinement, and who should decide on it? The physician-in-chief of the asylum is the only authorised person by the law of the 30th June, 1838, to discharge a recovered lunatic. Yet he incurs a great responsibility if he does it prematurely; and if he delays the discharge he risks substituting for the law his own arbitrary appreciation. We do not see the force of this dilemma. The authority given by law to a competent physician to discharge a lunatic when recovered, only requires that he should exert it to the best of his knowledge and ability. Perplexity naturally exists in the path of every man invested with any important authority, but it is solved by prevision, and cautious, mature judgment. The difficulty, as regarded by Dr. Auzouy, reduces itself to one of capacity, which nobody could for a moment question, in the physicians in charge of lunatic asylums in France.

Dr. Auzouy cites some telling observations to illustrate the evil proceeding from the discharge of criminal lunatics at their own request, by the Court of Assizes, or the magistrate who objected to their trial, pretending that they would have been either acquitted, or sentenced to a shorter term of imprisonment than that of their confinement in the asylum.

As to homicidal lunatics, there is not one whose discharge

is not asked by the patient himself, or by his family, or guardian, with an obstinacy that has to be constantly opposed. The epileptic Parmentier, who had murdered his wife and three children, frequently asked, at Mareville, for permission to go to meet them, having no recollection whatever of that terrible drama, and believing them yet alive. The epileptic Bégué, who, in October, 1872, at Tarbes, spliced his wife's skull by a blow with an axe, and afterwards assaulted his child, which survived the wounds, does not remember this murder, and frequently insists on going to live with his children, of whom the most loved is the one he almost killed. The epileptic Lescurat, who, in November, 1877, beheaded his nephew, four years old, with a large hedging bill, and who continues subject every month to fearful paroxysms, has no more pressing wish after his attacks than to ask urgently for his discharge. He does not recollect having beheaded his nephew.

The dread inspired by non-larvated epileptics causes their complaints of being unduly confined to be little noticed, whereas the contrary happens with other homicidal monomaniacs.

To remedy the existing difficulties, Dr. Auzouy suggests :—

The establishment of two or three regional criminal lunatic asylums, and, pending their erection, the addition of special quarters, like those at Gaillon, to two or three of the Houses of Correction scattered over the French territory.

To try criminal lunatics as ordinary criminals, and to pass sentence on their crime, but to confine them in one of the special asylums for a term at least equal to that of the imprisonment they would have suffered if responsible. At the expiry of the term, if the physician of the criminal lunatic asylum should doubt of the propriety of liberating the patient, his case should be submitted to a commission, presided over by the Procurator-General having jurisdiction over the locality of the asylum, and composed of four or five more physicians of asylums, appointed annually by the competent minister. This commission should meet every year in the regional asylums to examine reports, monthly records, certificates, &c., and to report on the merits of the demands made.

The magistrates should commit to the regional asylums the three classes of criminal lunatics admitted by Dr. Auzouy, and the homicidal lunatics from any other asylum where they should be under treatment.

Strict custody, material obstacles to evasion, and severe regulations should be employed in the regional criminal lunatic asylums.

Dr. Dagonet excludes from his consideration the criminals who become insane during their condemnation, and refers specially to lunatics rendered dangerous by their insanity. No invariable rule exists to avoid the recurrence of their evil acts. The facts are complicated, different from one another, and should be examined according to the special conditions of their production. It may be remarked that, from a standpoint essentially medical, there are classes of lunatics among whom we principally meet with criminal cases.

Epilepsy, for instance, is one of those dreadful maladies occasioning the most troublesome insane manifestations, and stamping the impulsive acts with a ferocious furor which makes the observer familiar with such patients say, "*that must be an epileptic.*" Some have even regarded these violent, blind impulsive acts perpetrated by individuals who never exhibited before true falling fits, as indicative of the so-called larvated epilepsy, the violent sudden impulse sufficing them for the diagnosis of epilepsy. But, as regards genuine epilepsy —that which could offer no doubt in its discrimination—the question is beset by the greatest difficulties, and, on this point also, it would not be easy to lay a uniform rule. Who could affirm that every epileptic with fits, preceded or followed by intellectual trouble, is necessarily dangerous, when experience does not fail to demonstrate the contrary? Nay more, to foretell the epileptics who shall become dangerous under the influence of their fits, is almost impossible in the majority of cases. I may further add, that clinical observation affords examples of individuals who have committed the most terrible criminal deeds, and who, nevertheless, have completely recovered from the epilepsy which led them to such acts. I shall cite, among others, the observation recorded in the "Gazette des Hôpitaux" by our honourable colleague Dr. Legrand du Saulle, of an epileptic lunatic who murdered, in one of his attacks of blind fury, a keeper at the asylum at Marseilles, and severely wounded another. This patient, being an Alsatian, was, on this account, transferred to the asylum at Stéphansfeld (Lower Rhine). He continued for nearly three months under the most intense maniacal insanity, of an unconscious form, and prone to impulsive acts. This lunatic, extremely dangerous, had to be kept during all that time isolated in a cell, and most of the time in the strait waistcoat. Notwithstanding the excessively grave nature of his insanity, notwithstanding the epilepsy that had attacked him a short time before, and the cause of which we were unable to learn exactly, we saw this patient recover entirely. He gradually regained self-consciousness, and, when returned to his mind, he only retained a dim recollection of

the insane manifestations which prompted the furious acts against the unfortunate keepers. He only remembered that the latter had not shown towards the patients entrusted to their care all the attention desirable. After observation sufficiently prolonged, he was sent back to his family, who had asked for his discharge, and with whom he has lived several years, since leaving the asylum, without occasioning any trouble.

It is, therefore, important with epilepsy as much as with other morbid states, to ascertain attentively the circumstances that developed the insanity and the stages run by the disease, in order to decide upon the course to be pursued. In anticipation of other remarks which we shall presently make, we may simply notice, that nothing is stated in the above case concerning the circumstances that developed the insanity. Dr. Dagonet further asserts, that the occurrence of dangerous acts in one lunatic does not prove that he will commit them a second time. In this respect he could mention several examples. Consequently, the physician could not affirm what he does not know; he should not go beyond giving to the authority the desired information upon attentive study of the case, and should leave the authority to decide on the liberation of the individual, and the precautions to be taken should new symptoms of insanity reappear.

The preceding remarks should be applied to individuals affected with alcoholism, and classed among those capable of committing the most dangerous acts. Should they be indefinitely detained at the asylum because once set at liberty they may return to their deplorable habits? But, what authority has a physician to retain in an asylum any person, on the pretext of a malady, for the only reason that he may be exposed to a relapse? Undoubtedly, there are facts beyond human prevision; the physician's responsibility, however, should not be engaged in trespassing limits traced by scientific experience.

Dr. Dagonet relates the case of one of his patients, who, during an attack of lypemania and stupor, killed his wife and three children, wounding also his youngest child. This happened in a hamlet of the Vosges Mountain, and on two or three occasions when Dr. Dagonet intended to discharge the recovered patient, the inhabitants of the hamlet armed themselves to chase him. This patient remained for twenty-three years at the Stéphansfeld Asylum, and was discharged therefrom after the annexation of Alsace to Prussia. He

then married a second time, and about twenty-five years after the first attack, he murdered, under the influence of an identical state of insanity, his wife and her new-born child. He afterwards committed suicide, stating in a letter found in his room, that he took this resolution in order not to yield to the horrible impulses that overwhelmed him. Examples of relapse after twenty-five years of evident cure are, Dr. Dagonet says, rare and exceptional, but he notices them that he may not overlook any element of the question.

The villagers who disapproved of Dr. Dagonet's proceeding, would surely think they were justified by the event.

Before concluding, Dr. Dagonet alludes to the different cases of unconscious mental activity, or of unconscious cerebration as we call it, and where the individual exhibits a singular transition from a conscious to an unconscious life.

> But (he further remarks) there are other no less extraordinary instances in which the will becomes in some way suspended, and all kind of resistance, so to speak, destroyed, while the individual appears under the thraldom of the most strange mental conflict, and dangerous impulses, that render him desperate from his inability to withstand them, though otherwise perfectly conscious thereof. The patient passively yields to this force that carries him away and pushes him; he is even seen combining his acts and reflecting on them, notwithstanding the horror they inspire in him; he knows what he does, and what he wishes not to do.

For all these reasons, it is not the gravity of the deed but the circumstances under which it was effected—the springs that moved the individual, whether terrors, fixed ideas, hallucinations, or the unnoticed blind impulses that at any moment may possess his mind—which should serve as a criterium to the physician in arriving at a proper decision. It should be noticed besides, that often the gravity of the criminal act has been induced by fortuitous circumstances altogether independent of the particular form of insanity.

To sum up: Dr. Dagonet thinks that the so-called criminal lunatics ought not to be, any more than other lunatics, subjected to constant confinement, merely because they have committed an act characterised as criminal. Their having been dangerous once does not necessarily imply that they should become so a second time. The question of possible relapse depends on different circumstances that ought to be the subject for a scientific discussion. On this account, no absolute

rule can be laid down, everything hangs on the particular fact itself.

The judicial authority should decide on every grave case in which society has incurred a considerable injury.

Criminal lunatics who continue to be dangerous at the asylum where they are placed, should be transferred to the special quarters (*service de sûreté*), where are treated convicts who become insane during their incarceration. To this end, a circumstantial report of the physician should be sufficient.

Dr. Lunier deals with the question of criminal lunatics in a practical manner. The legal distinction of criminal lunatics into two categories—namely: those who become insane after their imprisonment, and those who are recognized insane before, or at the time of their trial—is less real than might be thought. Dr. Lunier reckons that, at least, one quarter of the convicts found insane in the prisons, were so at the time of being condemned, the experts having either failed to convince the judge of their insanity, or not having been consulted about it.

There were in French prisons of all kinds, according to official data, 180 male and 90 female convicts who had become insane. Dr. Lunier believes their number to be much larger, if to the insane proper are added the imbeciles, the weak minded, the senile dements, &c. Those, however, whose state actually requires confinement in a special asylum, are really not numerous. The Administration of Prisons, finding an objection to the transfer of condemned lunatics to the asylums, has annexed to the Central House of Correction at Gaillon, a separate building specially devoted to male convicts who become insane, and has the project of making similar provision for female insane convicts. Dr. Lunier considers, with great reason, that this is an excellent system to be yet perfected; the Penitentiary Administration having thereby secured the means of not losing sight of those convict lunatics whose sentence has not expired, and of preventing their injurious association with the pauper and private lunatics in public asylums.

The law of 1838 makes no provision in regard to criminal lunatics recognised insane before or at the time of their trial. It is evident that if the Prefet should commit them officially to an asylum, there would be no occasion to raise the difficulties now discussed. In Paris there is no trouble with the majority of these cases, because when a criminal is found irresponsible upon an expert examination he is transferred

to the Prefecture de Police, where the physician, after a summary examination, declares that he is insane. The practice differs in provincial cities. Dr. Lunier asserts, that at least one-half of the lunatics committed to the Administration in some departments of the West, are purely and simply set at liberty. In other departments every one is, on the contrary, imprisoned. Under the existing system it is impossible to avoid this. The Prefets are not at liberty to commit to the asylums the lunatics they would wish to confine therein. They assuredly commit the very dangerous, but there are yet many intemperates and vagabonds among the acquitted who have been previously committed eight or ten times, and the General Council protest against their further confinement as a great burden to the department. The Prefets have, therefore, no choice but to refuse committing this kind of lunatics, and this refusal does not always apply to quiet or but little dangerous lunatics. Dr. Lunier knows of individuals indicted for murder who, after remaining two or three months in prison awaiting trial, have been liberated the day after the decision in order not to be tried upon the expert's report. These are rare instances, but to be strongly condemned, as Dr. Lunier justly remarks.

If criminal lunatics who escape trial were cared for at the expense of the State instead of the departments—which would be a very rational measure—Dr. Lunier thinks that the above evils could be readily averted. Some suggest the commitment by a magistrate of this kind of criminal lunatics, and Dr. Lunier considers it the best manner of solving the existing difficulty. To try and sentence these lunatics as if they were ordinary criminals would require a remodelling of the Penal Code. An addition to the law of 1838, authorising their commitment by a magistrate, as just indicated, would be a much simpler measure.

If a criminal lunatic gets cured, the physician, as provided by law, should send such declaration to the Prefet, stating therein the facts that caused his confinement. The physician is obliged to thus report without delay, but, according to the enactments of the law of 1838, in no manner forced to order the discharge of the patient.

Dr. Lunier thinks it very improper to commit criminal lunatics to public asylums, and prefers to place them in special asylums like those in England, Ireland, and Scotland. He advocated, years ago, confining convict lunatics also in these hospitals, but, from his observations and the results at

Gaillon, he considers it more convenient to leave them under the care of the Penitentiary Administration, and to improve that service by rendering it more general and by giving proper development to its extension.

As to the other two classes of criminal lunatics, they should be kept in distinct establishments under special custody, for two reasons:—Firstly, on account of the inconvenience of their association with other lunatics; and, secondly, because if once the commitment of criminal lunatics is transferred to the Judiciary, such establishments will become in some measure intermediate between the prison and the asylum.

Finally, the number of patients at the French asylums who require exceptional precautions amounts to about 150. Dr. Lunier looks upon their removal to special asylums as a great benefit to the public asylums.

The two supplementary meetings of the Congress, as already stated, were devoted to the discussion on the subject of criminal lunatics. Dr. Motet, Secretary to the Congress, read at the second meeting an interesting paper of M. Michel Möring, General Director of Public Assistance, on "Asylums for Criminal Lunatics" *(Asiles de Sûreté)*. The defects and insufficiency of the *Quartier de Sûreté* at Bicêtre are openly acknowledged in this paper, which contains a translation of that portion of Dr. Manning's report referring to the hospitals for criminal lunatics at Broadmoor, Fisherton House, Perth, and Auburn.

M. Möring arrives at the following conclusions:—

A complete separation of criminal lunatics from other lunatics is perfectly legitimate, and required to protect society and the other lunatics. The law of 1838 is sufficient without any addition to this separation. It is for the physicians and magistrates to apply it on their responsibility, and with the double and constant solicitude for the individual and society.

Criminals sentenced to more than one year's imprisonment, who become insane before expiry of their sentence, should be excluded from the special asylum, for, as judged by the State on establishing the Quartier at Gaillon, they are convicts who have not expiated their crimes. Excluding these cases, the asylum for criminal lunatics shall receive: those whose insanity preceded the crime, and who have been acquitted or ordered not to be tried on account of their insanity; criminals under indictment undergoing medical examination; dangerous lunatics, including those who have been condemned one or more times, as well as those who have not been condemned, but whose commitment has been justified by previous medical examina-

tion and by proof of their homicidal instincts and the perverseness of their habits. For this second class—*i.e.*, those not condemned—M. Möring suggests, in addition to the certificate and proposal of the physician at the asylum, a judicial interference and the certificate, on oath, of a medico-legal expert.

Females should be also confined in these special asylums, adding to the third class of dangerous lunatics the prostitutes, who are not included in any of the classifications adopted in foreign countries. These prostitutes are a fearful source not only of moral but also of physical contamination to the other inmates of the asylum, who are often driven to it unconsciously, or excited by their malady. This evil appears less conspicuously in provincial towns; in Paris, in the department of the Seine, the proportion of prostitutes is one to every thirty-five or forty women admitted into the asylum.

Why is the experience of England so different?

A lengthy and animated discussion followed the reading of M. Möring's paper. In one of his remarks Dr. Girard de Cailleux mentioned the case of one of his patients who, in a fit of maniacal excitement, murdered his father. Two years after his apparent recovery, the authority ordered his discharge from the asylum. Some time after, he was seized by a second maniacal attack, and murdered his mother. Recommitted to the asylum, he soon recovered again, and asked for his discharge, which Dr. Girard refused to grant. This man fell in love with one of the female servants at the asylum, and wanted to marry her. Both threatened to commit suicide if their wishes were not satisfied. During Dr. Girard's absence, his substitute asked the Prefet to discharge the patient. Thereupon, the Imperial Procurator interfered and liberated the patient, who got married, and has continued twenty years without displaying any other homicidal attack. More good luck than good management.

From the discussion in the two supplementary meetings, it was concluded and submitted at the third general meeting for the consideration of the Congress, but not to be discussed, that—

Every criminal regarded as lunatic, who is ordered not to be tried or acquitted, shall be necessarily submitted by the Administrative Authority to the examination of a Commission before being liberated. This Commission shall be composed—1st, of the physician of the asylum, or service, where the individual in question is; 2nd, of the Prefet or delegate of the department; 3rd, of the Procurator-General of the Jurisdiction, or his delegate. The Commission may call to their assistance any alienist they deem proper. Should the

Commission judge the individual to be not threatened by a relapse, his discharge shall be ordered ; in the contrary case, the discharge shall be delayed. But this delay should not be prolonged beyond a year without previous examination of the Commission. This measure should apply to any person committed by administrative order, upon a judicial decision after indictment, at any time that the discharge should be asked, and irrespective of the duration of the confinement. The measure refers also to the discharge of criminals who become insane in prison. Finally, special asylums or quarters should be devoted to the confinement of persons condemned or indicted, and who have been released or acquitted on the ground of insanity.

Dr. Hack Tuke's paper contains the description of Broadmoor Asylum, written by the request of the Société Médico-Psychologique for the information of the Congress.

An analysis of the interesting statistics of the Special Infirmary at Gaillon has already appeared in a preceding number of this Journal, for which reason we pass over Dr. Hurel's valuable paper.

The limits of this review do not allow us to enter into long comments on the different papers whose principal subjects we have endeavoured to point out.

We fully agree as to leaving entirely to the Supreme Authority, whichever it might be, the commitment of criminal lunatics and their discharge, the advantages of such wise measures having been already demonstrated by our laws in regard to criminal lunatics; but we do not seize the advantage, or necessity, of the complicated procedure in respect to the Commission that should examine the patient before his liberation. This Commission have to form their judgment wholly on information from the physician who has attended the lunatic. Why, then, should the asylum physician's report to the chief authority not be sufficient for the decision of this latter?

The majority of alienists would hesitate to accept the extreme optimist views held by Dr. Dagonet. The example he cites of a relapse after twenty-five years, and that of Dr. Girard de Cailleux, may be regarded as exceptional, but they nevertheless strongly uphold the necessity of not liberating homicidal lunatics. In doubt, it is always wiser and more prudent to abstain from acting. The confinement of such criminal lunatics after their apparent recovery may be a hardship, but is required for the safety of society as much as for the welfare of the individual. Dr. Dagonet argues that because a lunatic has been dangerous a first time we cannot

infer that he shall be so a second. But what greater probability is there in the supposition that such shall not be the issue? Is it the rule that remission in such cases means permanent cure?

As to epileptics, we hold, (and we think our readers will concur) that to the confidence in their inocuousness, and to such views as those expressed by Dr. Dagonet, are due the frequent catastrophes of which many of those charged with their care are victims. Rather than to admit that chances of peril are so improbable, we always, on the contrary, believe with Delasiauve, that "on passing by an epileptic, we elbow one who might be an assassin."

The management of dangerous lunatics would offer no perplexities if there was a certitude of the recurrence of their misdeeds. Then, again, there is a distinction to be drawn between the lunatic whose uncontrollable acts of violence are frequent, accompanied by maniacal excitement, and those who, their will being essentially affected, *exhibit no intellectual disorder to indicate the threatening danger of the outburst of fierce violence.* The former cases are scarcely embarrassing, whereas the hidden evolution of the latter renders very difficult their proper management. Moreover, it is a fact of observation, that these instinctive lunatics, like many epileptics and dipsomaniacs, recover very rapidly from their attacks by the confinement and regimen of the asylum, but as soon as they are set at liberty, their malady recurs with its former, if not greater, intensity. Consequently, arguments in support of their liberation lose their force, the rare exceptional instances of permanent cure out of the asylum notwithstanding.

We have not observed in any of the Continental lunatic asylums we have visited, any more than in the English or American, the evils in regard to the admission of insane prostitutes in public asylums, pointed out by M. Möring. The dissoluteness carried by such females into the French asylums acknowledges, in our opinion, no other cause than the French system of licensed prostitution that fosters their habitual *dévergondage*, as noted by M. Möring.

Finally, care is required that we do not too hastily act upon the idea, put forward in the papers here reviewed, of transferring all dangerous lunatics from ordinary asylums to those for criminal lunatics. Every lunatic may become dangerous and troublesome; yet firm but humane moral discipline, with exercise in the open air, are means that often succeed in exerting a soothing and quieting influence. The

management of criminal and dangerous lunatics is closely connected with the subject of mechanical restraint and coercion. We know how conscientiously French alienists adhere to these latter. The transfer of dangerous lunatics to a criminal lunatic asylum, or rather to a *Quartier de Sûreté*, may sometimes, indeed, place the patient where mechanical restraint and rigorous means can be better resorted to, as at Gaillon and the *Quartier de Sûreté* at Bicêtre, but may not be altogether the best for the patient.

(To be Continued.)

The Diagnosis of Diseases of the Spinal Cord. By W. R. Gowers, M.D., F.R.C.P. 1880.

This book is an enlarged and revised reprint of an address delivered to the Medical Society of Wolverhampton, October 9th, 1879, and embodies the results of modern investigations on the diseases of the spinal cord. To the researches, originated by Charcot, Vulpian, and others, we owe the accurate knowledge of the topographical anatomy and of the "system-lesions" that has dispelled the confusion and darkness in regard to the pathogeny of spinal affections. Dr. Gowers treats this important subject with unsurpassed ability, and his precise and clear descriptions bring forward facts of great clinical value. The pages devoted to the consideration of the superficial and deep reflexes are full of practical details, in addition to the author's investigations on the subject. Contraction of certain muscles, with a proportioned relaxation of their opponents, exists for every movement, dependent on the deep reflex processes, which in locomotor ataxy are almost always impaired. This fact alone may account for the inco-ordination in posterior sclerosis, without the assumption of disease of special co-ordinating fibres, which have been supposed to run vertically in the posterior columns. In ataxia, with the deep reflexes in excess, instead of being lost, it may be that they are impaired elsewhere than the region in which the knee reflex and the ankle clonus are developed.

The several lesions of the cord are distinguished by their onset into six classes: *sudden*, *acute*, *subacute*, *subchronic*, *chronic*, and *very chronic*. "A lesion of sudden occurrence, developing symptoms in the course of a few minutes, is always vascular; commonly hæmorrhage, perhaps sometimes

vascular obstruction. But a vascular lesion may occupy a somewhat longer time in development—a few hours or days. In acute and subacute inflammation the symptoms come on in the course of a few hours, a few days, or a week or two. Chronic inflammation occupies from a few weeks to a few months. Degeneration, in which there is no adequate evidence of any inflammatory process, occupies many months, or it may be years. The symptoms produced by growths or simple pressure (traumatic causes excluded) are never sudden or very acute, and rarely, if ever, very chronic, the time occupied by the development of the symptoms varying, according to the nature of the cause, from a fortnight to six months."

Our experience fully corroborates Dr. Gowers'—that "in the majority of cases of locomotor ataxy—*i.e.*, of primary posterior sclerosis—there is a history of syphilis." We no less think with him, that the current description of symptoms of anæmia of the cord, hyperæmia of the cord, and reflex paralysis are contributed by a vigorous scientific imagination.

Finally, we could not pass unnoticed Dr. Gowers' remarks in regard to the subject of the nomenclature of diseases of the spinal cord. "We must endeavour," he very properly says, "to substitute the idea of morbid processes for that of definite diseases. . . . We have only to combine the terms indicating the place and the lesion to have a system of terminology already partly in use, and which will altogether suffice for our present needs. Thus we may have a columnal or a cornual myelitis, hæmorrhage, sclerosis, degeneration, or growth."

A series of typical cases, as examples of diagnosis, closes the book, which is illustrated with very fine, well-executed plates. In one word, the contribution is certainly a most valuable and complete outline of the intricate subject of Diseases of the Spinal Cord.

A Treatise on the Theory and Practice of Medicine. By John Syer Bristowe. Third Edit., 1880. Smith, Elder & Co.

We congratulate Dr. Bristowe on the success which attends his treatise, as indicated by the appearance of a third edition. It is a work on which much conscientious labour has been bestowed. The chapter treating of Insanity is clear and

truthful, and well adapted for the general class of medical readers for whom it is intended, being neither too scant nor too full. Dr. Bristowe acknowledges the assistance he has received from Dr. Savage, both in the preparation of the article and in the clinical information obtained during visits to the wards of Bethlem Hospital, which, it is not too much to say is, at the present moment, the acknowledged School of Medical Psychology in this country.

We have scarcely a criticism to make, but there is just one we cannot omit. Dr. Bristowe says at p. 1099, "The reasoning powers are doubtless impaired in all cases of insanity." Yet we read at p. 1104, "It is a fact that the patient may never pass beyond the stage of affective insanity." Again, he admits Hypochondriasis as "a form of melancholia, in which there is mental depression without necessary delusion or impairment of the reasoning powers"—properly a *folie raisonnante mélancolique*. On cases also in which there has been a partial recovery after acute mania, in which, however, "the sensibilities are blunted," and the patient "has lost all the higher and holier impulses," &c., so that there is "a profound change" mentally, Dr. Bristowe remarks, "he retains his reasoning powers," and "he can perhaps reason as acutely as ever" (p. 1116). The passage cited from p. 1099 is doubtless an oversight, and we hope it will be omitted in subsequent editions as incorrect, and certainly inconsistent with the succeeding paragraphs quoted, which are true to nature.

H. T.

The Lunacy Blue-Books.

Thirty-fourth Report of the Commissioners in Lunacy.

The Commissioners in Lunacy here present us with a Report which, as usual, affords unmistakable evidence of a year's painstaking and successful work. It has, however, unfortunately still to chronicle a steady increase in the total number of persons of unsound mind brought under their supervision. And limited consolation only can be derived from the statement that this increase has been altogether confined to pauper patients—the number of private patients showing a considerable diminution—for as the accommodation for patients of the private class who can pay only low rates is very limited, many who would otherwise be main-

tained by their friends in institutions of their own choice are compelled to be placed in county and borough Asylums, where they are either paid for at low charges by their relatives, or maintained partly or altogether by the rates. During the past year this state of things has no doubt been intensified by the continued depression of trade, and by the superadded agricultural distress, which has reacted in so many directions.

According to the annual returns made to the Lunacy Office, the number of lunatics, idiots, and persons of unsound mind on the 1st January, 1880, was 71,191, as compared with 69,885 on the 1st January, 1879—an increase in the year of 1,306. This increase, however, is smaller by 41 than in the previous year, and less by 596 than in 1878. These patients were distributed as shewn in table on opposite page.

There are, in addition, 208 insane persons, so found by inquisition, residing with their Committees.

The statistics of the year show a decrease of 158 private patients, no decrease in this class having occurred since the year 1868; but, as we have pointed out, this probably does not indicate an actual diminution in the number of persons of the private class who have become insane, but lessened ability to pay, and a deficiency of accommodation for private patients of small means. According to the report before us, it has been *immediately* due to a diminished number of admissions, and an increased proportion of deaths. The decrease has been chiefly in the inmates of licensed houses, for, while in county and borough asylums there has been an increase of 8 in the number of these patients, and in establishments of all other classes a decrease of 162, no less than 127 of these latter have been in licensed houses.

Pauper lunatics have increased to a greater extent than in 1878, but their increase of 1,306 is below the average of the last 10 years, in which it was 1,510.

Year by year, since 1872, the decrease in the number of out-door pauper patients has been steadily going on. This year they are fewer by 250, and since 1872 by 1,456.

As the Commissioners remark, this has probably been, in great measure, due to alterations in the law, which have promoted the removal of patients to asylums, and partly to the growing disinclination of guardians to grant outdoor relief. There are, of course, numerous weighty arguments in favour of the policy of the Poor-law authorities in this direction,

Where Maintained on 1st January, 1880.	Private.			Pauper.			Total.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
In County and Borough Asylums	211	273	484	17,903	21,701	39,604	18,114	21,974	40,088
In Registered Hospitals	1,409	1,293	2,702	81	48	129	1,490	1,341	2,831
In Licensed Houses:									
Metropolitan	1,026	828	1,854	180	428	608	1,206	1,256	2,462
Provincial	745	809	1,554	247	286	533	992	1,095	2,087
In Naval and Military Hospitals and Royal India Asylum	309	19	328	...	...	...	309	19	328
In Criminal Lunatic Asylum, Broadmoor	180	50	230	188	65	253	368	115	483
In Workhouses:									
Ordinary Workhouses	...	...	...	5,126	6,865	11,991	5,126	6,865	11,991
Metropolitan District Asylums	...	...	...	2,080	2,393	4,473	2,080	2,393	4,473
Private Single Patients	186	282	468	...	...	...	186	282	468
Out-door Paupers	...	...	...	2,293	3,687	5,980	2,293	3,687	5,980
Total	4,066	3,554	7,620	28,098	35,473	63,571	32,164	39,027	71,191

but it may reasonably be doubted whether its operation, as affecting the class of persons who can be maintained as out-door pauper lunatics, is an altogether unmixed advantage.

The total admissions of the year were 14,867, of whom 1,576 were transfers. Deducting the latter, a diminution of 279 in the admissions of the year is shown in comparison with 1878.

Excluding the various idiot asylums, as not receiving curable cases, and eliminating the transfers, the total recoveries of the year 1879, as compared with the admissions, gave a percentage of 37·25 for the males, and 43·54 for the females; or 40·50 for both sexes. The deaths of the year, calculated upon the average numbers resident, and still excluding the idiot establishments, were in the ratio of 12·55 per cent. for the males, and 8·93 per cent. for the females, or 10·60 per cent. for both sexes.

These figures differ but slightly from the averages of the last 10 years.

The statistical tables which accompany the Commissioners' report, are of a very elaborate character, and are beginning to afford the basis for many important deductions.

They show that the percentage of paupers to population, which had been steadily decreasing from 1872 to 1878, began again to show a rise in that year, and has since, slowly but steadily increased, although it is still much below the average of preceding years. In 1860 it was 4·24; in 1878 it had fallen to 2·98; while in 1880 it had again risen to 3·31.

They also show that, whereas the proportion of pauper lunatics to paupers has exhibited a fluctuating increase for the last 20 years, and has risen from 3·68 per cent. in 1859 to 7·53 in 1880, the percentage of 1880 is the smallest of any year since 1875.

The proportion of insane to population, which last year was 27·77 in 10,000, or 1 in every 360, this year bears the proportion of 27·94 to 10,000, or nearly 1 in every 357.

The percentages of stated recoveries to admissions, excluding transfers, and of deaths to the average number resident, in the various classes of patients, during the last 10 years, have been as follows:—(See table on opposite page).

Of the total number of 13,101 patients admitted into the three classes of asylums during 1879, the attack of insanity was stated to be the first in 8,487 instances, a proportion per cent. to the total number admitted, of 64·8.

Table showing the percentages of Recoveries to Admissions, and of Deaths to the Average Number Resident.

	County and Borough Asylums.			Registered Hospitals, excluding Idiot Establishments.			Metropolitan Licensed Houses, excluding Idiot Establishments.			Provincial Licensed Houses, excluding Idiot Establishments.			Naval and Military Hospitals, and Royal India Asylum.			Criminal Asylum, Broadmoor.			Private Single Patients.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Recoveries	36·01	44·46	40·28	40·06	52·77	46·84	27·25	33·28	30·51	31·14	38·08	34·74	46·49	—	46·41	22·63	41·03	26·09	14·36	15·67	14·95
Deaths	12·96	8·59	10·59	10·37	6·24	8·12	12·82	9·38	11·01	10·70	7·15	8·81	9·25	·66	8·89	2·90	3·22	2·94	7·96	5·31	6·37

The percentages of the assigned causes of the insanity in the 13,101 patients thus admitted are stated to have been as follows :—

	M.	F.	T.
Moral :			
Domestic trouble (including loss of relatives and friends)	3·8	9·5	6·7
Adverse circumstances (including business anxiety and pecuniary reverses)	8·3	3.6	5·9
Mental anxiety and worry (not included under the above two heads) and overwork	6·7	5·7	6·2
Religious excitement	1·8	3	2·4
Love affairs (including seduction)	·9	2·6	1·7
Fright and nervous shock	·9	1·5	1·2
Physical :			
Intemperance, in drink	21·1	7·6	14·2
,, sexual	·9	·6	·7
Venereal disease	·8	·2	·5
Self-abuse (sexual)	2·1	·1	1·1
Over-exertion	·5	·4	·5
Sunstroke	2·4	·2	1·3
Accident or injury	5·2	1·3	3·2
Pregnancy	—	1·1	·6
Parturition, and the puerperal state	—	6·2	3·1
Lactation	—	2·1	1·1
Uterine and ovarian disorders	—	3·3	1·7
Puberty	·1	·4	·2
Change of life	—	3·4	1·7
Fevers	·9	·6	·8
Privation and starvation	1·2	2	1·6
Old age	3·3	4·5	3·9
Other bodily disorders	10·3	10·1	10·2

The number of patients in whom a suicidal propensity was stated to exist, admitted into asylums of all classes during the year, was 3,877, giving a percentage of 29·5 per cent. of the total admissions, while the deaths from suicide in those establishments have been only 11, which, of course, have to be spread over, not only the suicidal patients newly admitted, but the whole number of such patients previously under care.

This certainly speaks well for the care and precautions which are exercised by the officials, and it probably bears some close relation to the system of collecting this class of patients into a focus at night, and having them watched by special attendants, a plan of which the Commissioners have been zealous advocates.

The Commissioners give, upon the whole, a good report of the condition of the insane in Workhouses, but they draw

attention to the fact which cannot too strongly or too frequently be adverted to, that in various Unions practices prevail which are in error in opposite directions. They say—

It will be observed that, at the present time, there are a large number of each sex in Workhouses who are classed as of unsound mind, and who are consequently visited by us. There has been, on the whole, considerable improvement in the accommodation and treatment of the classed imbeciles, during the past 10 years, and we can, with pleasure, report that, in a large number of instances, the recommendations made by us have been favourably received by the guardians, and supported by the Local Government Board.

It should be borne in mind that chronic harmless lunatics, or imbeciles, are the only cases that ought to be detained in a Workhouse, and our efforts are always strongly directed against the reception and detention of acute cases. We have often found it necessary to order the removal of decidedly insane patients, who ought, in the first instance, to have had the benefit of asylum treatment; and, in some of the larger Workhouses, we frequently meet with inmates suffering from long-standing melancholia, where the history of the case gives the impression that early treatment might have resulted in cure. The Act of Parliament has clearly defined the duties of both medical officers and parish officials, and it is to be regretted that false ideas of economy, or other reasons, should be allowed to have weight, and a course be pursued which cannot fail of being prejudicial to the patient, and, ultimately, of increasing the number of the incurable insane dependent on the rates.

On the other hand, in many instances an inclination exists to send off to an asylum old chronic cases, because they are a little troublesome and difficult to manage. We thus find in our county asylums many old chronic patients who, under proper supervision, might be well cared for in Workhouses.

We must not be understood to be advocating the removal of all working patients, of a chronic type, from county and borough asylums, as this might lead to serious inconvenience.

Neither do we lose sight of the fact that the experience of medical superintendents of asylums shows, that where patients have been discharged to Workhouses, *where the conditions of proper supervision, cheerful rooms, suitable clothing, a liberal dietary, and the means of bodily exercise do not exist*, they have degenerated rapidly, and have been returned to the asylums as unmanageable.

Still, under suitable arrangements, a large number of the chronic imbecile class might be well cared for in the Workhouses, and room would thus be found in the county asylums for the treatment of recent cases, thus, to some extent, meeting the urgent want of asylum accommodation, which is at present so generally felt.

The Commissioners direct renewed attention to the im-

portant question of securing and retaining the services of suitable attendants, and have issued a circular to the proprietors of licensed houses in their immediate jurisdiction, with reference to the rates of wages and arrangements for the comfort of these persons. The subject is no less difficult than it is important. The qualities of the attendant react with enormous influence upon the patient, especially when of the higher class, and it is, therefore, of the greatest moment that suitable persons should be induced to enter upon, and continue in the service. It is greatly to be desired that some central sources of supply could be established, where they could be trained efficiently, and perhaps be provided with an official license, to be revoked or endorsed upon the commission of any serious offence. The black list, which is kept at the office of the Commissioners, might probably be more practically useful if it were known that a copy of it was sent to the superintendent of every asylum, say once in a few months, if such a course were practicable.

In conclusion, the Report, which affords such abundant evidence of the earnest and very able manner in which the Commissioners continue to discharge their important duties, gives the entries made by them on the occasions of their visits to the county and borough asylums and the lunatic hospitals, and from them we can but gather that, despite the unreasonable and unreasoning clamour which has recently prevailed with respect to the insane and their care, the best assurance is given that, although their treatment may be susceptible of improvement, there is no evidence, in the state of our asylums, of placid contentment with the things that are, but every indication of a progressive advance, which will bear favourable comparison with that which is proceeding in any other department of philanthropic effort.

Twenty-second Report of the General Board of Commissioners in Lunacy in Scotland, 1880.

The Report of the Commissioners for Scotland shows that though there has been an increase of registered insane during 1879, amounting to 27 private and 199 pauper patients, this addition is smaller than in any of the four years immediately preceding. The increase in numbers, it is again pointed out, does not necessarily imply a greater production of lunacy in the country, but is probably mainly due to such causes as

the increasing tendency among all classes to regard the milder forms of mental aberration as insanity, along with the change believed to have taken place in medical opinion as to the amount of unsoundness that constitutes certifiable lunacy; the great diminution in the old aversion to asylums; and the stimulus which these and other agencies have derived from the operation of the Parliamentary grant in aid of the cost of maintaining the pauper insane.

The report contains the usual series of elaborate statistical tables of insanity in Scotland. While we fully acknowledge the value of these returns, there can be no doubt that additional interest would be imparted to them if they conveyed, in a form similar to that published in the English reports of the last four years, information respecting such readily recognised diseases as general paralysis and epilepsy, and also regarding the profession or occupation, the age, etc., of the patients admitted into asylums. In making this remark, we do not forget that in a recent Scottish report there was an important contribution to the literature of general paralysis. This, however, is different from the tabular returns we refer to, the value of which increases by the contributions of each year.

Reference to the report of the sister kingdom suggests the thought that it would be an advantage if the statistical tables annually issued by the three Lunacy Boards were, as far as practicable, uniform in their plan. No doubt each division of the kingdom has its own peculiarities which would render complete uniformity impossible, but there might be a much greater approach to it than at present exists. Were this proposal carried out, we should be better able to compare the state of lunacy in the three divisions of the United Kingdom; and, if the conditions bearing on the causation of insanity were tabulated, some fresh light might be thrown on the question by deductions from the large numbers at the disposal of the Commissioners. A scheme of this kind could be most satisfactorily arranged at a conference of the Boards.

A very interesting table shows the percentage of recoveries on the admissions into asylums in quinquennial terms during the last twenty years. Contrasting 1860-4 with 1875-9, there appears an increase of 10 per cent. during the latter period. This is highly gratifying, and seems, at first sight, to reflect great credit on the system of management and treatment at present followed in Scottish Asylums.

But no such jubilation is permitted to the medical superintendents of these establishments by the Commissioners; for the report points out that this increased rate of recovery simply "indicates that the new class of cases included in the larger number of admissions during recent years contains a larger proportion of ephemeral and curable insanity than the class represented by the admissions of the earlier period; and the observation, so far as it is a basis for inference, supports the view indicated when dealing with the residence of the two classes of cases." With all deference, we remark that it does not appear quite so obvious as the terms of this paragraph imply, that a larger proportion of recoveries and a shorter residence in asylums necessarily indicate milder and more curable forms of insanity in the patients admitted, for it must be evident that the same result would follow greater success in treatment. Thus, let it be supposed that the cases of the two quinquenniads were *precisely* alike on admission, a more successful treatment of the one group than of the other would, of course, be evinced by a higher proportion of cures, and probably also by a shorter period of residence. We are not, however, inclined to dispute that milder forms of insanity have of late years been sent to asylums. This is probably true chiefly in respect of alcoholic cases; for instance, patients suffering from delirium tremens, who a few years ago would have been cared for otherwise, are now not infrequently certified as lunatics and committed to asylums. On the other hand, it is equally certain that during the last decade there has been a growing disposition to certify as insane old people suffering from a degree of mental abnormality, due to organic disease of the brain, which would not previously have been thought a sufficient warrant for classifying them as lunatics. Very few of this last group are curable; as a rule they remain in asylums till they die. They are, at least, as numerous as the former class; and there can be little doubt that an increase in the proportion of recoveries derived from the one, is counterbalanced by a diminution from the other source. It seems, therefore, a legitimate conclusion that the treatment in the asylums of Scotland has been more successful of late years than it was fifteen or twenty years ago.

It is somewhat ungracious to disturb so agreeable a conclusion by any qualifying observations, but we feel constrained, by facts that have come under our notice, to state a possible drawback. Is it quite certain that *recovery* means

the same now that it did twenty years ago? The Commissioners have correctly urged, as already stated, that the standard of mental soundness is very far from being fixed. May it not be that the idea entertained of *cure* has in some cases undergone a change? And does it not occasionally happen that patients are discharged and registered as recovered who, with perhaps less sanguine superintendents, and in times when there was less competition to show favourable results in annual reports and blue books, would have been entered in other columns?

As might be expected, special prominence is given to what may be regarded as the distinctive features of the Scottish system. To one or two of these we shall give some consideration. First, there is that method of care which is known as the Boarding-out scheme. As some misconception still seems to exist in regard to the nature and extent of this scheme, a few explanatory remarks may not be out of place at the outset. By "Boarding-out," then, is understood the plan of entrusting the insane to the care of strangers in private dwellings. It has reference almost exclusively to the pauper class, though private patients may also be disposed of under the same arrangement. As the term is only properly applicable to cases where the insane reside with strangers, those living with relatives do not fall under the category. The latter constitute the majority of lunatics in private dwellings. The respective numbers at the beginning of the present year were: Staying with relatives, 855; staying with strangers or alone, 560; total, 1,415. These 560 patients are distributed, though very unequally, over the whole country. Many of them have been removed from asylums, but the larger portion had not been in these institutions, their mental disorder, in the opinion of the Lunacy Board, being such that confinement was not required. The great majority are harmless dements, most of whom, however, are able to do some work, many being valuable servants. The people who take charge of them are cottagers and others who have small incomes from other sources, and accommodation in their houses beyond their own wants. The very poor are not selected to be guardians. The inducement to undertake this responsible office lies in the small margin of profit that remains from the parochial allowance, after defraying the cost of the patients' maintenance, together with the saving and gain derived from their work; this element, as already indicated, being often of consider-

able moment. Four is the largest number of patients allowed to be in one house. But the Commissioners of late have not been favourable to more than two being with the same guardian, thinking that this number merges more readily into the family life than the larger one. With the latter there is a disposition in some cases to keep the patients apart from the family circle, and the house then assumes too much of the asylum character. In some districts the lunatic boarders have become grouped together, forming small colonies. Kennoway, in the county of Fife, Balfron and Gartmore, in Stirlingshire, are illustrations. This local concentration has not been due to statutory enactment or to action of the Lunacy Board, but has arisen from the fact that the number of people suitable as guardians was greater in the districts referred to than in others; from the active interest taken in the development of the scheme by the parochial medical officers and inspectors in these districts; and from the gradual disappearance in the surrounding neighbourhood of the fear and distrust of the insane, owing to observation of useful and harmless patients in the houses of the pioneer guardians.

Briefly, then, such is the Boarding-out scheme. It dates from 1862, in which year an Amendment Act was passed for Scotland, a clause of which enabled the Lunacy Board to grant licences for private dwellings to the extent mentioned. A sufficient time has now elapsed since the institution of the system, and it has attained sufficient development to warrant the formation of a fair estimate of its success. What judgment, then, is to be passed? As may probably be expected, it is not one of unqualified approval. Cases have occurred in which guardians have proved to be very unsuitable, and have neglected their charges. Patients also, particularly women, have been sent out as boarders who were not fit to be out of an asylum. The result has been that the inhabitants of one district (Kennoway) petitioned against the scheme. But, notwithstanding the occurrence of such drawbacks, the system as a whole may be considered to have been successful. The number of unpleasant incidents has not been great, and it is likely that they will be fewer in future, as the arrangements for the care and supervision of the patients are now very complete, and the teachings of experience will be a check on the recurrence of the errors of the past.

The success of this scheme is largely dependent on the action of the Deputy-Commissioners, whose duty it is to visit

all the pauper insane resident in private dwellings. Their reports on its working are, therefore, worthy of particular notice, and on the present occasion they have a special interest from the fact that they are the first issued by both gentlemen.* Moreover, as Dr. Fraser, the Senior deputy, before being appointed to that office, had been for several years Superintendent of the Fife Asylum, which is situated near the district where the most serious disaster to the Boarding-out scheme occurred; and as Dr. Lawson, the other deputy, had been assistant in an English asylum where, at least during the time he was connected with it, he would not be likely to acquire a predilection in favour of the system, their testimony is all the more worthy of consideration.

Dr. Fraser's observations have a peculiar value, as he is able to contrast the present condition of a number of the patients under the guardianship of strangers in private dwellings with their state when in the asylum of which he had the charge. He makes the striking remark that 28 out of 37 patients had improved in intelligence, usefulness and bodily health, after being boarded-out; and narrates the case of one who had been regarded as a "confirmed dement" in the asylum, but who had now become intelligent and self-supporting. Only three of the whole number had grown feebler, and this change for the worse is considered to be fully accounted for by the progress of organic disease. The report, as a whole, strongly supports the boarding-out system.

Dr. Lawson's report is of a more general character than that of his colleague. He even surpasses him in his praise of the scheme under consideration. Thus, referring to the insane in private dwellings, he says: "I can also express my sincere conviction that, notwithstanding the mental disadvantages which nature and disease have imposed upon them, and as a direct consequence of the measures which have been taken to ensure their protection and their comfort, they are in the enjoyment of perhaps a greater amount of happiness than falls to the lot of any corresponding number of sane persons of the same social rank." That is to say, in this gentleman's estimation, insanity, if cared for in private dwellings under the supervision of the Scottish Commissioners, is more conducive to happiness than soundness of mind without such supervision! However much may be

* Except a table by Dr. Fraser in "Report of General Board" for 1878.

thought of the boarding-out system, we doubt if many will concur in this conclusion. It seems, too, that the Inspectors of the Poor have been a much belied class. Hitherto they have not been held in very high esteem, particularly by the members of the medical profession who have had official dealings with them; but we now find (quoting Dr. Lawson) that "any summary of the agencies which work together to perfect the system would be incomplete which did not recognise the services of the Inspectors of the Poor, men whose great intelligence, courtesy, and energy have been and are the proximate cause of its success." It is to be hoped, for Dr. Lawson's own comfort, seeing that his duties bring him into close relation with these gentlemen, that he will not have occasion to modify his opinion respecting their estimable qualities.

Whatever opinion may be formed of the comparative merits of the general lunacy arrangements of the three kingdoms, it can scarcely be questioned that in Scotland the supervision of the insane in private dwellings is the most complete. Indeed, we have long regarded it as a serious blot on the English system that there is no inspection by the General Board of the 6,000 lunatics who live with their relatives or friends. It is not improbable that many of these unfortunate individuals are subjected to great hardships, not from the intentional neglect of their guardians, but simply from ignorance on their part of the requisite provisions for the proper care and treatment of their charges. One has only to read the details of cases recorded in past reports of the Scottish Deputy-Commissioners, as well as some of those in the present one related by Dr. Fraser, to have a conception of the amount of misery of this kind that may exist without attracting public attention, and also to see how readily in most cases improvement is effected by the advice and instruction of recognised authority. If similar inspections were made in England, we feel assured that not a few of such cases would be brought to light. It is to be hoped that this point will not be overlooked in framing the next Lunacy Bill, and that, whether or no there be an addition to the Board of Commissioners to enable them to visit the asylums and the lunatic inmates of workhouses more frequently, there will be a staff organised for the systematic visitation of the large section of the insane who reside in private dwellings.

Our remarks on the boarding-out system have been so

extended that we can only notice very briefly other points well worthy of careful consideration. One of these is the freedom from even the appearance of restraint enjoyed by the inmates of many Scottish asylums through the taking down of the walls of the airing-courts and the unlocking of the doors of the establishments. Thus we find it reported by the Commissioners respecting one asylum (Glasgow Barony Parochial) that "only one out of every four attendants carries a key. During the visit it was not necessary to use a key in opening the door of any day-room or dormitory, or of any door leading to the grounds. The asylum is entirely unprovided with any walled or fenced airing-courts." Attention was directed to this subject in the review of the Scottish report for last year, so that we more readily refrain now from entering into a discussion of the merits and possible demerits of what may be called—at least when carried out to the extent above-mentioned—an innovation on asylum management. The present report shows that besides the asylums that adopted these methods some years ago, others that have introduced them more recently have reported the results to be very satisfactory.

Reference is again particularly made to the effects of the Parliamentary grant on the growth of pauper lunacy. The Lunacy Board are of opinion that the grant has had a considerable influence in increasing the number of *certified* insane. Assuming their belief to be correct, as a matter of fact—though we strongly doubt the existence of an important increase from this cause—it is scarcely a result much, if at all, to be deprecated. Those who have been certified thereby would be, in most cases, silly, harmless persons, unable to earn their livelihood. When classed as ordinary paupers of sound mind very many of them, in all likelihood, were very ill cared for, and probably, in some instances, greatly neglected. They would, with very few exceptions, be suitable for living under charge in private dwellings, seeing that their insanity was established simply through the action of the grant, and not through any change in their mental state. As soon as they were held to be insane, and even though there was no change of residence, they would come under the kindly and careful supervision of the Deputy-Commissioners in Lunacy, who would at once require their condition to be raised to the proper standard of comfort. Should a really sane pauper, labouring under physical defect, be by any mistake placed on the roll of lunatics, as in a case recorded at length in the

report, the error would soon be discovered and corrected by the Commissioners themselves.

In another point of view, the terms of the grant have put a most valuable power in the hands of the Lunacy Board—a power which they duly appreciate and act upon: they can withhold the grant in particular cases. Should it be reported by the Visiting Commissioners that the patients are being neglected in any way by the guardians to whose care they have been entrusted, it is intimated to the responsible Parochial Boards that, should the needful improvement not be carried out, participation in the grant will be disallowed. This will obviously act as a powerful spur to indifferent or obstinate Boards and Inspectors.

Had space permitted, we should have liked to consider the views of the Commissioners on the provision for the insane just above the pauper class, and on other important questions dealt with by them, but these will doubtless come under notice in the review of future Reports.

Twenty-eighth Report on the District, Criminal and Provincial Asylums in Ireland, 1880.

From the Report of the Inspectors of Irish Asylums, it would appear that the number of the insane in various public institutions has increased by 234 inmates during the past twelve months, the numbers being 12,819 as compared with 12,585; this increase has principally taken place in workhouses, which contain 154 more inmates than in 1878—whereas, in public asylums, the numbers are only 83 in excess of last year.

This increase of the number of the insane in workhouses is stated to arise from the severity of the past winter, which compelled more of the imbecile and idiotic to seek shelter.

The Inspector considers that, during the past year, Irish asylums have progressed favourably, and improvements, if not quickly, have at least been steadily effected.

On January 1st, 1879, there were 8,407 patients in district asylums. During the year 2,392 were admitted, of whom 1,955 were cases of first attack, and 438 relapses; 1,004 were discharged recovered—being at the rate of 42 on admission, and not quite 10 on the whole number under treatment; 245 improved, and 105 given to the care of friends; 949 died, constituting a percentage of mortality of $8\frac{3}{4}$ on the entire number

in asylums—a very small percentage when compared with other countries. For instance, we find that, during 1879, 4,291 died out of 39,642, the daily average of inmates in English county asylums.

Only two deaths were the result of accident, and one of suicide. The total discharges, deaths and escapes, amounted to 2,310, leaving 8,490 lunatics in the twenty-two district asylums.

The parochial machinery for the admission of the insane poor is stated to be very unsatisfactory; and although the Inspectors urge that every facility is afforded of placing lunatics in safe keeping, we cannot but again wonder that such a defective system which allows so many different admission forms, with no definite law of chargeability or power of transfer, should be allowed to continue. At present no one in Ireland is bound to see that a person becoming insane is sent to an asylum, or is removed from it when ordered to be discharged, or to inquire as to the capabilities of friends to contribute toward the maintenance of their insane relatives.

Attention is called again in this year's Report to the fallacy of regarding the mental contingencies of the insane, in respect to their recovery, as the grounds on which to establish distinctions in their management or allocation; the hopeless and the tranquil, apparently in conduct, for indefinite periods, needing quite as much care and judicious treatment as those whose mental symptoms give more hope of cure.

Of 906 domestic servants who have become insane, no less than 839 were females. The Inspectors consider that this is most likely due to the disappointments, hardships, and isolation of women when removed from their families and friends. But it would be interesting to know the relative number of each sex in the same capacity of life amongst the sane. In so poor a country as Ireland, the number of males employed as domestic servants must be comparatively few.

Seamstresses, tradesmen at sedentary occupations, discharged soldiers and policemen, seem also to furnish a larger number of cases of insanity than occurs amongst other kindred callings.

With reference to the original causes of insanity, those under the denomination of moral are believed by the Inspectors to have an equal effect on both sexes, whilst from physical causes, out of 2,006, 1,250 males were sufferers. Some curious instances are given of the effect of locality on the numbers of inmates in district asylums, who were found to be related—one asylum containing almost a fourth, whilst an adjoining institu-

tion had only seven similarly circumstanced. As regards sexes, males are said to be more numerous than females in Irish asylums, although in the population at large women form the larger body. Just the reverse occurs in England, where males are more numerous amongst the general population, and a larger number of females are in asylums. In the latter case the explanation is given in the thirty-third report of the English Commissioners, by the fact that, although insanity is more prevalent amongst men, and though more women are discharged recovered, the mortality is so much higher amongst men, that females largely preponderate over males in the total number under care, whereas, in the former case, the explanation given by the Irish Inspectors is that physical causes of insanity are more prevalent among men. If so, these causes can have little effect on the mortality in that country.

The Inspectors also draw attention to the marked disproportion between the married and unmarried in Irish asylums, as compared with the statistics of the insane in other countries, as in Ireland the unmarried, but principally the female portion, are fully three times more numerous, whilst in other countries the married exceed the unmarried in a nearly twofold degree. It must be remembered, however, that in Ireland emigration carries away the greater number of the healthy and strong amongst the unmarried, leaving a larger proportion physically weak both in mind and body.

The expenditure in the current maintenance of asylums during 1879 appears to have been about £7,000 less than during the preceding year, and the cost individually reduced to nearly £23 10s. per annum. In calling attention to the very low wages and salaries in some asylums, the Inspectors point out that every excuse must be made for harshness on the part of attendants, when wages sufficient to attract suitable applicants for these posts are not offered, the result being that frequent changes take place, than which nothing is more deleterious to the insane.

"It is very false economy, in our opinion, to bestow cheap wages for cheapness sake on inefficient recipients."

We may congratulate the Inspectors on the interest they appear to take in the general welfare of the officials of the asylums under their care, which cannot but be for the benefit of the insane poor. No doubt the wages of attendants in Ireland are miserably small, so as to render it a matter of wonder how candidates can be got to fill vacancies, and we trust the Executive may be in time induced to fix a scale of wages for the total number of district asylums.

In concluding their remarks on public asylums, the views of the Inspectors with reference to the question of superannuation which is at present engrossing so much attention, are worthy of every consideration: —

If the proper study of mankind be man, the science that essentially deals with the intellectual faculties, be it in health or in their restoration from disease, can be inferior to none beside, so that those who devote their time to it for the public good are well deserving of consideration.

In Irish asylums physicians complain that whilst English and Scotch superintendents can retire in case of ill-health, accident, or any reasonable cause, after fifteen years' employment, on two-thirds of their income, they must serve no less than forty to establish a like claim.

The subject of the superannuation of asylum officials is one which demands the speedy attention of Government in order to devise a scheme which may supply an equitable scale of retiring allowances over the United Kingdom; at the present in each of the three countries dissatisfaction is found with the present system. In England it is not compulsory. In Scotland it is unsettled. In Ireland the period of service is too long, and the loss of service after removal is felt to be unjust.

Referring to the treatment of the insane in workhouses, the Inspectors point out that from the statistics of the relative ages of the idiotic and epileptic class, those under 30 years of age are only 530, whilst those over that age are 1,198. It is, therefore, to be inferred that idiocy is on the decline, a result explicable to the safe harbouring of this class in asylums and poorhouses.

A progressive amelioration, the Inspectors state, has taken place in the food, clothing, and cleanliness of this class in those institutions. On a comparison of the cost of a lunatic resident in a workhouse, and treated in an asylum, it would appear that in the former the cost would be £12 10s., whilst in the latter it would amount to £24 12s. 10d., or subtracting the Treasury Grant, the difference on the tax-paying community would be £1 14s. 10d., as compared with the capitation cost of idiots, the utterly demented, and aged in workhouses.

The Criminal Asylum at Dundrum, at the end of 1879, contained 177 patients—140 males and 37 females. Many of these, the Inspectors state, can only claim to be regarded as lunatics from their noisiness, utter disregard of truth, and desire to do mischief; for these an attempt is about to be made to discover some more suitable dwelling than a lunatic asylum.

The Resident Physician, in his Report, complains of the overcrowded state of the Institution, of the want of dining-room space, and the inadequate supply of water.

With regard to residents in Irish private asylums, for a decennial period up to the present, the average would appear to be 670, the largest number being in 1874, when it amounted to 692. The Inspectors, therefore, are of opinion that lunacy, at least in the better class of life, holds a uniform proportion to the population.

Attention is called to the fact that the licensing of private asylums does not come within the immediate jurisdiction of the Executive or Inspectors. That some central authority should have a voice in the opening or closing of institutions where the insane are placed in charge of persons who derive profit from their detention, would, we imagine, do much to insure the confidence of the public, and give greater security for the proper treatment of those who may require the shelter of these establishments.

At the same time the Inspectors speak favourably of the manner in which private asylums are, as a rule, conducted in Ireland.

Four houses are maintained without any object of personal profit, viz., Swift's Hospital, the Stewart Institution, St. Vincent's and Bloomfield Retreat, which are all creditably managed—any surplus receipts being converted to charitable purposes by the treatment of non-paying patients.

With reference to the Drunkard's Act, not a single person in Ireland has taken advantage of that statute.

We can recommend our readers to the many very useful and explicit tables to be found as usual amongst the statistics. Those giving the various rates of salaries and wages of officials and servants in Irish asylums will be of much value to those who take an interest in the study of these institutions.

We must also congratulate the Inspectors on the advance they have made in comparing and assimilating their statistics with those of the English Commissioners. Table No. 26, in accordance with our suggestion of last year, shows the numbers and distributions of the registered insane for the last ten years, from which it would appear that the inmates of district asylums have increased by 30 per cent., in poorhouses by 18 per cent., in the criminal asylum by 5 per cent., while in private institutions for the insane they have decreased by $2\frac{1}{2}$ per cent.

According to the Inspectors, insanity in the two countries in

less than a generation seems to have almost doubled, the increase being greater in England than in Ireland, where, owing to the decrease of the population, it might have been expected that the number of the insane would have also declined, but the increase is explained by the fact that, as the diminution of the population has taken place through emigration, the decrepit in mind no less than in body are left behind.

In conclusion, the Inspectors can see no reason to suppose that insanity is actually on the increase, various causes tend to bring its existence into light, principally the establishment of well-organized receptacles for the treatment of mental affections.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *American Retrospect.*

(Communicated.)

Archives of Medicine. New York. Vol. iv., 12th August, 1880.

In a communication read last June, before the American Neurological Association, by Dr. William A. Hammond, he endeavours to prove that Thalamic Epilepsy is entitled to distinct recognition on clinical and pathological grounds. He refers to Hughlings Jackson's division and definition of epilepsy before proceeding to detail two out of five cases which have led him to these conclusions. Passing by what relates to Hughlings Jackson's ideas, and the reasons for which they are rejected by Dr. Hammond, we will only confine ourselves to the principal facts suggesting that his two examples exhibit no exclusive characters to warrant the hypothesis based thereon, or that they belong to any new variety of epilepsy, inasmuch as their description plainly sets forward nothing but a sensorial aura, very familiar to those practically acquainted with epilepsy. In proof of this, we lay before the reader the essential points and features of the attacks in the two cases selected by Dr. Hammond to exemplify this alleged new kind of epilepsy.

A young woman, about 22 years of age, consulted Dr. Hammond to be treated for "visions" of great variety, which she was in the habit of having every day. There was no vertigo or spasm of any kind. As soon as the hallucinations appeared, and while still conscious, she conversed about their characteristics, and was fully aware of their unreality. Suddenly, a loss of consciousness ensued, but, in a few seconds, she would as suddenly make a few coherent remarks, and would be entirely herself. Usually a seizure lasted from twenty to thirty seconds, of which not more than five seconds were passed in

unconsciousness. Sometimes they had been as long as a minute, but very rarely. There was no hereditary tendency; the first attack had supervened four years previously, after a severe period of study at school; her general health was good, and, thus far, there had been no mental deterioration. The attacks were, however, becoming more numerous, and of somewhat greater duration. Menstruation had begun at fifteen years of age, and had always been regular.

The following is the description of the first attack witnessed by Dr. Hammond:—

"A few minutes after entering the consulting-room, and while she was conversing in regard to some points in her clinical history, she exclaimed—'It has come, and, oh! mother, what do you think it is? A beautiful chair covered with red velvet all spotted with gold stars. It is just such a chair as I suppose is used for a throne. Well, this is the first time I ever had a chair appear to me. I have had rocks and all sorts of animals, but, but, but—' Here her head sank on her breast, her eyes were closed, and her respiration became so quiet that it seemed for the moment to be suspended. There was no extraordinary paleness of the countenance, and there had not been the slightest convulsive movement. In about three seconds she raised her head, smiled, and looked as if nothing of an untoward character had occurred. I at once formed the opinion that the paroxysm was a fraud, and I was indiscreet enough to say so in very plain terms. I told her that she had attempted to deceive me, and I demanded her reasons for so extraordinary a performance. She and her mother both became indignant—justly so, I suppose—and left the house."

They, however, returned after about four months, when Dr. Hammond having, in the interval, had occasion to observe a similar case, became satisfied of the error of his opinion, and that there was an actual morbid entity, with very interesting and characteristic phenomena. The visions in the meantime had continued in an aggravated form, the period of unconsciousness had been much more prolonged and severe, and the paroxysms were of more frequent occurrence.

She was kept under observation, scarcely a day passing for more than a month, during which Dr. Hammond did not see her, and he had opportunities of witnessing seventeen paroxysms. Sometimes they were preceded by a well-marked aura, and this consisted always in a singular sensation, apparently somewhere within the cranium, but not capable of being exactly localized or described. This was never felt until within the last two years. It lasted only a second or two, and was immediately followed by the "vision."

Another paroxysm is described, when the patient saw "a large white bear in motion before her on the carpet. It seemed to be walking slowly to and fro, its head bent towards the floor as if scenting something." Dr. Hammond took out his watch, and timed the duration of this attack. Thirty-five seconds elapsed, and then her pupils

suddenly dilated, and she displayed a series of symptoms similar to those noticed with the previous attack. The only point in which there was any notable difference between them was—in Dr. Hammond's own words—the greatly increased duration of the period of unconsciousness, and he was informed by her mother that frequently this was prolonged to two minutes or more. During this paroxysm Dr. Hammond ascertained that there was complete cutaneous insensibility in the face and hands, he "took up a fold of skin on each forearm just above the wrist, and stuck a cataract needle, which was at hand, through it with a like result." After the attack she looked at both her arms where she had been pricked. A drop of blood was oozing from each puncture. She asked what it was, and then, without waiting for an answer, exclaimed, "You bled me."

She was seized with another attack while Dr. Hammond was making memoranda of the phenomena observed during the one to which we have just alluded, and occasion was offered for new experiments on her case. "While she was walking up and down the floor," so the record runs, "she said that she was going to have another attack, as she felt the peculiar sensation again in her head. She had no sooner uttered the words when the vision came. 'It's a girl this time,' she exclaimed, 'a girl with long auburn hair, and a cap on her head; she looks like a French nurse. I think I will sit down, for if I do not I shall fall as soon as I become insensible,' saying which she quietly sat down in a large armchair. I pinched the skin of her right hand. 'Oh!' she exclaimed, 'I feel that, I am not insensible yet. I see everything in the room, as well as I do the girl who is not here; I can feel the least touch, and my hearing is as good as ever.' I asked her what 'the girl' was doing. 'O, nothing,' she replied, 'she is only standing there in front of the fire-place, looking at me.' I told her to shut her eyes, and then to tell me if she still saw 'the girl.' 'Yes,' she answered, 'just as distinctly as I did when they were open.' At forty-one seconds she became unconscious, and remained in this state for one minute and five seconds; awaking—I say awaking, for her appearance was like that of a person asleep—suddenly and apparently in a normal condition of mental and physical health."

Dr. Hammond tried inhalation of nitrite of amyl, of ether or chloroform, firm pressure on the jugular veins, a band drawn tightly around the head, during the presence of the hallucination, and the further progress of the attack to unconsciousness was prevented. A strong volitional effort proved also a successful measure against the attacks. Bromide of sodium, in doses of fifteen grains three times a day, at once diminished the attacks, and made them altogether cease after a month. Having continued this efficacious treatment for over a year, she considered herself cured, and suspended it. She was then married on December 2, 1879, and on the 5th of the same month, while engaged in household work, had a return of the visions, of much more severe character than she had ever had. There had been

strong convulsive movements and loss of consciousness as accompaniments. Others similar had followed. Her husband, who witnessed several of the attacks, stated that the unconsciousness, instead of, as in the earlier stages of the disease, following the visions, was now contemporaneous with them, if not actually the first in order of sequence; that her face became very red, and that she had no knowledge whatever of the nature of the seizure after the attack had passed off. The spasms were throughout of a clonic character, and apparently equal on both sides. The last vision had been of a very terrifying character, and so far as Dr. Hammond could judge, "the paroxysms were now very similar to those of epileptic mania, and certain forms of what is called morbid impulse, with which neurologists are familiar." The bromide of sodium treatment was resumed, with, in addition, gradually increasing doses of the bromide of zinc, beginning with one grain with each dose of the bromide of sodium. The attacks at once ceased, and, up to the time of the reading of the paper, the patient has remained in excellent health, without even the symptoms of a paroxysm.

In the second case we find the same remarkable effects of the bromide of sodium, in doses of fifteen grains three times a day, to stop completely the *thalamic* seizures from the first day. But, in this instance, we are deprived of any personal examination by Dr. Hammond, who rests entirely on the account given by the patient and his wife, to declare, that "there was no spasm of any kind" during the attacks, which consisted of hallucinations of sight, smell, and hearing, accompanied with numbness, or tingling, or a kind of thrill passing through the right side of the body, and followed immediately by periods of unconsciousness.

Slight local contractions and visceral spasms escape detention very easily, and, consequently, we cannot look upon this second example—so far as it concerns the absolute absence of spasm—with the importance attached to it by Dr. Hammond. Possibly, there might have been fleeting delicate convulsions in the mouth, or in the throat, or in the eye, without attracting the attention of the patient's wife. This should by no means be judged an improbable thing, since, for instance, the convulsive movements of the iris had never been observed by Dr. Hammond himself; for when Dr. L. C. Gray, of Brooklyn, read, at the same meeting of the Association, a paper on the "Pathognomonic Value of a Dilated and Mobile Pupil in Epilepsy," Dr. Hammond at once acknowledged that he had not noticed the point that Dr. Gray insisted upon, but would in future.* Yet, the phenomenon is quite conspicuous in almost every case of epilepsy, and, above all, in *epilepsia mitior*, and in the incomplete paroxysms under consideration. It will not be out of place to remark, incidentally,

* "Proceedings of Sixth Annual Meeting of American Neurological Association," in "Journal of Nervous and Mental Diseases." Chicago, July, 1880, p. 518.

that this contraction of the iris is not a new symptom, as Dr. Gray seems to believe, for it was pointed out first by Dr. Clouston* in 1871, and, under the name of the *epileptic pupil*, has been subsequently described by Echeverria, in its relations to the different attacks, and as a valuable sign to detect their simulation.†

Returning to the first case, there is, indeed, nothing to place it out of the range of the ordinary forms of genuine epilepsy. The singularities described in relation with its premonitory sensorial phenomena, establish no differentiation of an essential character, since they actually constitute a sensorial aura, demonstrated, beyond doubt, by the fact, pointed out by Dr. Hammond, that, as soon as the hallucinations appeared, inhalation of nitrite of amyl or chloroform, pressure on the jugular veins, and even a strong volitional effort, would prevent the threatening fit. This certainly settles the real nature of the phenomena ascribed to this new variety of epilepsy, and it needs no discussion that, however, singular an aura might be, it can never establish, clinically or otherwise, any separate morbid entity of the kind of attack it announces, as assumed by Dr. Hammond.

Otto Binswanger, of Breslau, in his paper on Vaso-motor Epilepsy, relates cases which bear great analogy to the present ones; we might cite several from other authors, beginning by Mercurialis and Portal, and, in Herpin's posthumous work on "Incomplete Attacks," there is the whole Chapter viii devoted to the very kind of paroxysms presented by the young woman treated by Dr. Hammond, and which usually lead to the convulsive fits, and, not infrequently, also to the maniacal, attended, as in this instance, with sudden uncontrollable impulses. In regard to such incomplete attacks, Herpin states: that epileptics with this form of fits beginning by vision trouble, are in much larger number than the aggregate of those with disorders affecting the other senses, and, after describing the different varieties of intellectual disorders and of hallucinations initiating these attacks, he concludes—"To sum up, the whole facts belonging to the category of incipient intellectual disorders, or of sensations in the head, show that complete loss of consciousness immediately followed these *preludes* in the majority of cases. Sometimes a short interval of some sensorial trouble, and very rarely of visceral spasm, or external convulsions, supervened between them and unconsciousness."‡

Moreover, we do not see quite clearly that the first attack of the young woman witnessed by Dr. Hammond was so entirely free from the spasmodic element as he assumes. For a spasmodic rather than a natural condition is pourtrayed when the patient, in the middle of the discourse about her visions, suddenly utters—"but, but, but—as

* The Bodily Symptoms of Insanity. "The Practitioner." London. Vol. vii., 1871, p. 21.

† "American Journ. of Insanity," July, 1873, and "Comptes Rendus du Congrès International de Médecine Mentale," 1878. Paris, 1880, p. 254.

‡ "Des Accès Incomplets d'Epilepsie." Paris, 1867, p. 120.

her head sank on her breast, her eyes were closed, and her respiration became so quiet that it seemed for the moment to be suspended." But, be this as it may, we repeat, that this whole case exhibits nothing uncommon from the regular evolution of genuine epilepsy beginning by incomplete fits preceded by a sensorial aura.

We have already expressed our doubts in regard to the second case, and they arise mainly from the two following reasons. Firstly, the existence of a new variety of a disease based on absence of symptoms acknowledged essential to its manifestations, and which may, besides, be easily overlooked, even by physicians, cannot be sustained on mere unverified assertions of such absence of symptoms by the patient and unscientific persons. And, secondly, because we regard the spasmodic or convulsive element as essential to all the manifestations of the true epileptic neurosis, and capable of being almost always detected by close and attentive inquiry. Furthermore, we may assert, upon careful and extensive comparative study of the premonitory phenomena in relation to the other symptoms of the attacks, that in every case in which they are announced by tingling sensations, or a thrill passing through the limbs to the head, the convulsions are never missing, although they may exhibit a partial, and, so to speak, silent character, limited to the muscles of the throat, the mouth, the face, and now and then to those of the abdominal, gluteal, and cremasteric regions. We are the more positive on this fact that it is very easy to verify it.

It is not our purpose, as said from the beginning, to discuss doctrinal points, and as Dr. Hammond's statements on the morbid anatomical basis of *thalamic* epilepsy are entirely hppothetical, we refrain from arguments on the subject. We will, however, observe, that neither spasms, nor the degree of frequency and extent of cerebral lesions, suffice to constitute epilepsy. The origin of the disease does not essentially spring from the brain or its cortical substance, nor from the organs that may be convulsed, but from the modification excited in the medulla oblongata; or, to be more correct, in its cells connected with the vaso-motor nerves controlling cerebral nutrition. The perturbed nutrition correlative to this morbid irritation, becomes, from the first, incompatible with functional integrity of the nervous elements, and hence the sensorial and mental derangements, which ordinarily accompany the neurosis, and which it would be improper to regard as morbid entities.

We cannot help pointing out a very striking inconsistency of Dr. Hammond in his criticism on Ferrier's views concerning the case quoted from vol. iv. of "The West Riding Lunatic Asylum Medical Reports." If unconsciousness, as held by Dr. Hammond, "is the essential phenomenon without which, in fact, there is no epilepsy," we do not see how he can claim, in support of the doctrines set forth in his paper, a case of epileptiform convulsions attended with paralysis and hallucinations, *without the least degree of unconsciousness.*

Finally, during the discussion originated by the paper here analysed, Dr. Hammond, in answer to Dr. L. C. Gray, asserted that—"there was not a single case on record where a lesion of the optic thalamus was found after death in which there were not hallucinations of sight."* This positive affirmation cannot certainly be granted. The classical paper of L. Türck "Uber die Beziehung gewissen Krankeitsherde der grossen Gehirnes zur Anesthesie," refers to four cases, with autopsies, in which there were lesions confined to the optic thalami, and in none of them mention is made of hallucinations of sight. In the no less valuable contribution on the "Functions of the Optic Thalami," by Crichton Browne, there are several cases in which the phenomenon does not appear noted. Charcot, in his Lectures on "Diseases of the Nervous System," mentions similar instances under his own observation. A case of tumour of the optic thalamus, without any hallucination of sight, observed by Sieveking, has been recently published,† while Hughlings Jackson, and several other eminent authors that might yet be cited, have also reported no less positive examples, which entirely upset the above absolute assertions. On the other hand, cases are by no means uncommon in which hallucinations of sight have existed without any morbid alteration of the optic thalami. Further, they may be completely extirpated without causing blindness, or loss of the pupillary action; and these positive facts strongly oppose the speculations put forward by Dr. Hammond in support of his theory. As to the morbid entity *Thalamic Epilepsy*, much additional light must yet be gained by more definite observations than those presented, before we could with any propriety accept its hypothetical existence.

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2. *French Retrospect.*

By M. Motet, Secretary to the Societé Médico-Psychologique, Paris.‡

Shop-Lifting. (*Le vol aux étalages*). Persons of faulty brain. (*Cérébraux.*) Sudden Insanity. (*Délire par accès.*) A Medico Legal Sketch. By Professor Lasègue. "Archives Générales de Médecine." Paris, 1880.

Professor Lasègue is one of the most respected and renowned chiefs in mental medicine in Paris. At the head of the service of the Special Infirmary of the *Depôt des Aliénés*, at the Prefecture of Police, he unites with a consummate experience of mental affections a pro-

* *Loc. cit.* "Journal of Nervous and Mental Diseases," p. 496.

† "Medical Times and Gazette," Oct. 2, 1880, p. 402.

‡ The following contribution from M. Motet, a distinguished Honorary Member of our Association, forms one of a series which will appear in this Journal.—[Eds.]

found knowledge of the Professor of Clinical Medicine of the Faculty of Paris, and his works have this peculiarly fascinating character—to show the close affinities of mental pathology with the more general pathology of the different diseases which affect humanity.

A man of subtle and delicate intelligence, a most able observer, he excels in ingenious combinations, describes with vigorous precision, and defines with a clearness of expression, which throws the most vivid light upon the subjects of which he treats.

We shall be convinced of this by an analysis of his article published in the "Archives Generales de Médecine," upon stealing from shops.

These thefts have increased, particularly during the last few years, in Paris. The shops are open to everybody where the greatest variety of objects are accumulated and exposed in a manner to excite curiosity, in the hope, which is justified, that it will act as a bait to purchasers. In these shops, in the bazaars, are daily committed more or less serious thefts. Some are committed by men, but most generally by professional female thieves. These do not form the object of this article; the intervention of the forensic physician is not required in such cases. But women are often arrested belonging to honest families, and sufficiently well to do to have expensive toilets, and whose fault would therefore be inexcusable, if the circumstances themselves in which the theft has been committed, the situation of the criminal, the *naïveté* of her confessions and of her mode of defence, did not justly attract the notice of the magistrates. They feel that they have not before them an ordinary criminal; their scruples, their inability to dismiss an unknown person, lead to a medico-legal inquiry.

In these difficult cases, Professor Lasègue desires that the object and subject should be separately examined; the inducement to steal, with regard to the nature of the merchandise, and the intellectual and moral state of the individual who has committed the theft. There is no difficulty in the case of male or female thieves of an impulsive character, who put out their hands by chance, incautiously and awkwardly, like epileptics, general paralytics, and dements. But the problem is altogether different in the case of intellectual disturbance, when the impulse, instead of being permanent, requires a suitable opportunity to excite it, and cause the committal of the deed.

A woman of good family, of irreproachable honour, whose past and present life are above all suspicion, able to satisfy her wants and tastes, steals objects of different value—we are astonished, and we ask ourselves how far mental disease is or is not the cause. The inquiry is puzzling, we do not discover the characteristics of an irresistible impulse; the thief has taken precautions; she has availed herself of a moment when attention was diverted; her conduct, at least in appearance, does not differ from that of the professional thief; and yet how great is the difference! Professor Lasègue brings this out

very clearly. With him it is not through the force of the temptation, but through insufficient power of resistance to a moderate temptation, that the intention of the criminal act and its accomplishment can be explained. The enquiry must not be directed to the greater or less degree of the impulse, but to the degree of intellectual confusion or weakness. It will be seen how delicate is such an enquiry: it can only be conducted by a physician accustomed to discover a pathological state upon data, which would escape the non-professional observer—certain data, however, which prove a permanent cerebral disease, and reduce the theft, however much it may appear to be premeditated, to merely the value of an incident or an episode.

We proceed to give particular cases. A woman, belonging to the wealthy class of citizens, was arrested in a great fancy shop. She had taken a pair of stockings, a cravat, two bottles of perfume, and at the same time she had bought and paid for a pair of gloves and an umbrella. To acquire a correct idea of her state we must go through her whole life. Unhappy in her marriage, she was legally separated from her husband, and lived for several years with a very old, infirm cousin, who died demented. Three years ago she was seized with violent vertigo, and since then she has almost completely lost her sleep. The continuous use of bromide of potassium alone procures her a little rest. She remains usually in bed till three or four o'clock in the afternoon; she complains of breathlessness, of fear, which she attributes to the influence exercised upon her by her cousin frightening her at night when she was a child. She is also subject to spasms of the pharynx or œsophagus, which prevent her eating and drinking. By degrees she is condemned to a state of semi-starvation. She has also other crises, during which she is conscious that "sa tête se brouille" (be-fogged); her mind is not clear; her ideas are confused; her heart beats more quickly, and afterwards a feeling of mental confusion and exhaustion remains for several days, and then she recovers. She is not insane but she is voluble, is unstable in her ideas and movements, and shows a tendency to commence confidential relations which she does not carry on. She defends herself from the accusation of theft which weighs upon her; she adduces reasons more specious than just. She does not comprehend that one can possibly suspect her; and she does not trouble herself about the examination of which she is the object. Her curiosity does not go so far. An enormous blank, a negative fact, the importance of which, however, cannot escape attention.

A woman of 36 years, of deficient intelligence, although we cannot refer it to a pathological state, was attacked two years ago with typhoid fever, with delirium day and night, lasting 28 days. Slow convalescence, as in severe fevers, afterwards nervous disorders characterised by malaise, vague sensations, a constant irritability, a more acute crisis occurring always in the early part of the night, sudden waking, terror, cries; she seems to continue a dream previously in-

terrupted. She gets up, deranged, opens and shuts the doors; she escapes, persecuted by indistinct visions, after which she is put into her bed again, and she sleeps till morning. She is subject to vertigos, but they have never caused her to fall. The memory is defective, the intelligence distracted; she cannot give any detailed account of her disorder, which her physician and her family describe minutely. She was arrested in a shop where she went to buy and pay for a useful article. She had stolen a pocket-book, a kerchief, a pair of gloves, a cotton reel, &c. She does not excuse herself, does not explain anything; she weeps and repeats, "C'est incomprehensible." This woman was evidently affected by a disorder of the brain resembling those which follow upon serious fevers. She was a patient; the theft is nothing more than an incident; she is not a culprit.

A woman, aged 26, was surprised in the act of stealing from the window of a large shop. She confesses and asserts that she had lost several francs, which she intended to procure in order to avoid the reproaches of her father. A wealthy family, wanting nothing; as antecedents, we find in early childhood, serious convulsions; at the age of six, a brain disorder of an ill-defined character; at puberty, intense chorea, which has never completely subsided. She can read and write a little, but cannot distinguish exactly the hour on the clock. At the menstrual period, frequent epileptic fits, falling on the ground, loss of consciousness, without the initial cry, without constriction of the larynx, without foaming at the mouth, semi-imbecility, without apparently bad instincts. This girl, of an intelligence decidedly below her age, makes use of only childish arguments, like the backward and mentally weak. Premeditation is not with her an aggravating circumstance; as is well known, this is not unfrequently present with imbeciles.

Two other observations relate to two men, whose previous life was perfectly honourable and excluded all suspicion. Both arrested for theft *in flagrante delicto*, they were subjected to the examination of Professor Lasègue, who found that one had a convulsive seizure two months previously; subsequently a notable decrease of intelligence, incapacity for accustomed work; indifference to his position which thus threatened to become precarious. It is the commencement of general paralysis. Previously no one had suspected its invasion.

The other was a laborious workman, leading the most regular life, and the theft was the first circumstance which attracted attention. Only one thing is known of him, that his comrades regarded him as an original. Some days after his arrest, an explosion of sub-acute mania almost suddenly occurred, which disappeared in a fortnight, and left behind dementia, with congestive attacks of vain ideas, indecision in the gait, and embarrassment of speech, &c.

Recapitulating these facts, which his experience has allowed him to multiply infinitely, Professor Lasègue insists upon the importance of enquiry into the antecedents. And this study is rendered more

difficult inasmuch as the cerebral defect has become almost effaced. The more serious the disorder, the more the theft furnishes proofs of intellectual inferiority. In the first degree, the thefts appear to be prepared with a greater amount of reverie, accomplished with a mixture of want of foresight and half-calculated precautions, in a state of semi-derangement; in the last stage, a brutal, instantaneous, uncalculating and coarsely satisfied, impulse. It is not in order to elucidate cases of easy demonstration that this study has been undertaken; it is to throw light on the fact, already indicated in a work upon the "Exhibitionists," that a remarkable intellectual defect may exist in individuals moving in society in a tolerably correct manner, until an appetite is aroused by an excitement without which it otherwise would not have developed. All these thieves, male and female, are intellectually weak, and the interest consists entirely in the examination of their intellectual state.

Following up this, Professor Lasègue (in the "Archives Générales de Médecine," Avril, 1880), has published a remarkable study upon a class of diseases which before him were rather suspected than described; for lack of a better title he calls its victims *Cérébraux;* and by the following method he has been able to determine their type—

"Cerebral affections," he says, "do not obey exceptional laws; and perhaps we shall better understand their evolutions by taking examples from other diseases." Having laid down these premises, Professor Lasègue proceeds to point out different types. A young woman is, upon childbirth, attacked with perimetritis, and recovers therefrom more or less rapidly, her health being apparently restored. Nevertheless, pains will recur on the slightest cause, as real, although not well developed attacks, coming on suddenly, or preceded by a few days of discomfort. Now then, this woman has acquired a pathological constitution, she has remained subject to peri-uterine trouble, and will, perhaps, continue throughout her life in a different condition from that of other females.

A railway man is jambed in between two buffers, or a waggoner is knocked down and run over the body by his waggon. Pleurisy supervenes after the accident, the traumatism—like childbirth in the preceding instance—acting as its essential source; such a patient may either recover completely, or, his health remaining from that moment impaired, he will lack his primitive physiological resisting power, for want of natural healthiness consequent on an acquired sickly predisposition which may be for ever ingrafted into his constitution.

Passing on to a second category of cases, Professor Lasègue takes, as an example, a child born, or which becomes in early infancy, hunchbacked. The thoracic deformity will place this child in such a condition that, like the individual crushed by the wheels of a carriage, he will never be a sound man in regard to pulmonary health, for his lungs, displaced and condensed in some parts, will always act imperfectly. This man, whenever affected with bronchitis, "to which he

will be most exposed," will never exhibit an ordinary bronchitis, but one distinguishable from all others by the special characters derived from the peculiar constitution of the individual.

Cerebral affections show analogous conditions to the foregoing: "Just as an individual whose health has become impaired by any primitive affection, such as perimetritis, or a traumatism, or a distortion of the spine, may acquire a secondary malady related to its antecedent one; in like manner individuals whose cerebral health has been deranged by any previous encephalic affection may exhibit secondary maladies springing therefrom. These secondary maladies manifest, besides, characters of their own, with an altogether special semeiology and prognosis."

We have textually cited this passage, as it embodies the whole doctrine, the following considerations being appended as a corollary from it :—A nurse let an infant child fall from her arms, and being attended to, it seemed, without occurrence of any serious disorder, to be quickly cured. However, some weeks, or years later, it was remarked, but without attaching great importance to it, that the child did not sleep so well, that it became lifeless and odd. Towards the age of seven or eight, or of 15 or 18, singular unsteady cerebral disorders were developed, which were attributed to meningitis—although the symptoms did not agree with those of genuine meningitis. This child is in identical conditions with the woman in childbirth, or to the railway man above spoken of. Once cured of the injury it received, it did not grow like other children, but exhibited brain phenomena of an unusual aspect in direct relation with the accident which happened in early infancy.

A man, 25 years old, thrown from his horse, is taken up unconscious, and attended to; but, there being no fracture of the skull, or serious injury, he soon returns to himself, showing a few days after no trace of the accident. However, at the end of six months, or, it may be of one, or ten years, he exhibits indistinct cerebral disorders, or imperfectly-characterised fits. The disease is not a primitive well-defined one, but a secondary disease, originated by the traumatism, whether limited to the skull or involving the encephalon, and which traumatism has converted the brain into a soil differing from the cerebral soil of a sound individual.

The same reasoning applies to cranial malformations. Professor Lasègue, after noticing with deserved praise, the sagacious researches of Morel, establishes the following law, which he has for long verified, namely, a mis-shapen skull influences cerebral functioning in a different way from a regularly shaped skull. This, however, does not refer indiscriminately to every deformity, but to those involving the facial portion and base of the skull, which occasion a compression of the brain incompatible with its normal functioning. This law has been further extended to epilepsy by Professor Lasègue, and declared by him as equally holding good in regard to the fits more or less

analogous to those of the epileptic malady observed in the individuals he calls *cérébraux*, and who have been at first affected with some fault in their encephalon, which leaves them exposed to cerebral affections of a special order.

By what signs are these individuals recognised ? Do they correspond to any morbid type having a special development, symptoms, and diagnosis ? Professor Lasègue answers these questions affirmatively, and returning to the previously cited examples, he endeavours to illustrate by them the most interesting forms of these special troubles, to wit—"the fits of sudden insanity." In these cases we meet at first with an encephalic accident as the originating point, and as a consequence thereof, secondary accidents exhibiting a singular development.

Example : An officer is suddenly seized during a review with what is called sunstroke, and falls down insensible. He is carried home, and appears to be completely recovered, returning to duty in eight days. Yet, from this accident, he ceases to be the same ; he attends to his duties differently from what he did before, as remarked by his superiors, who do not, however, bring any charge against him. His wife, being in a better condition to observe him, has noticed that he goes out oftener than was his habit, that he returns home at later hours, feels disinclined to work, has taken to drink and smoke with excess, and that he sleeps either too much or scarcely at all. To this follow, transient paroxysms of insanity and excitement, either witnessed only by the family which conceals them, or exploding in public ; and, as they display no definite duration or form, occurring with the most changeable aspects, these paroxysms cannot but puzzle the observer unacquainted with their anomalous existence. They are superficially regarded as manifestations of epilepsy, or of general paresis, but they belong to neither, although symptoms may occasionally occur which render possible such doubt.

Certain circumstances may favour the development of these fits. Alcoholism often takes an active share in it, but then there is no previous inebriety of long standing, a single slight excess in drinking sufficing to operate as an occasional but never determining cause of their production.

To sum up : "Whenever the cerebral health has been deranged, even momentarily, by an injury, an encephalic lesion, or a malformation of the skull, recovery is very often nothing else than a suspension of trouble. The patient one thinks cured has acquired a morbid diathesis, which will taint the rest of his existence. He becomes thereby exposed to physical and intellectual disorders, ordinarily occurring under the form of incomplete irregular seizures, not corresponding to ordinary pathological laws, and which should, therefore, be studied as a separate species in the genus of cerebral affections."

We have largely borrowed from the text of Professor Laségue, as it was best, in referring to a new subject, to leave entirely to the

author the explanation of his own doctrines and ingenious outlines. The passages here adduced are marks, without which this analysis would have proved insufficient to their clear understanding. That which is, above all, most striking with them is, their fruitful aim to introduce into mental pathology the process of investigation ordinarily employed for the study of other diseases. To ascribe to individual dispositions, to moral influences, a preponderant part in the genesis of mental affections is a very dangerous mistake, and, without denying the share which properly belongs to psychology, it is but just and in conformity with our scientific tendencies, to direct our inquiries to the disclosure of the cerebral lesion. If we cannot always detect it, there is, however, reason to assume it in every case. Actual facts beyond which we cannot go, do not teach us anything, and the conclusion to which we are forcibly led is—that we must indispensably become acquainted with the whole cerebral biography of the patient to arrive at a proper understanding of mental alienation.

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3. *Italian Retrospect.*

By J. R. Gasquet, M.B.

The first paper in the "Archives" is the conclusion of a very practical article of Prof. Verga's, on the care of the insane in private families as compared with asylums. Our readers will be amused to find that asylums built in separate blocks are suitable for England, "where the thick and perpetual clouds increase the need of air and light, and where the love of isolation is a trait of the national character;" but, beyond this, there is nothing that I need quote.

Prof. Maggiorani has attempted to account for the connection (which he believes to be a very close one) between *phthisis and hysteria*, and the other neuroses, by suggesting that in both states the compounds of phosphorus are ill-assimilated and too freely excreted.

Prof. Stefani, of Ferrara, gives some interesting details of the results of destruction of the *semi-circular canals;* whether from disease (as in a cock he had the opportunity of examining), or from vivisection in pigeons. As might be expected, this is followed by atrophy of the cells of Purkinje in the cerebellum, to which he ascribes the violent torsion of the head to the opposite side, which occurs some time after the destruction of the semi-circular canals on one side. The posterior convolutions of the cerebellum at the same time undergo fatty degeneration; but this he considers is due to the manner in which these birds frequently strike their heads. He proposes to investigate, by further experiments, which cells of Purkinje correspond to each semi-circular canal.

Dr. Bonfigli makes a very detailed examination of Prof. Lom-

broso's work on *Pellagra*, which was formerly reviewed in this Journal. He concludes that there is no sufficient ground in supposing pellagra to be due to a fungus in the maize, but rather that it is a disease of chronic inanition, owing to the Italian peasantry having often no other food than Indian corn, which is insufficient alone to support life. This is a return to the views expressed by the Mantuan Commission, which Lombroso had opposed. He also (it may be remembered) looked upon arsenic as a specific for pellagra ; and Bonfigli agrees with him so far, that it is the most valuable means for improving nutrition in that disease.

Dr. Porporati describes eight cases of what he terms "*pseudo-athetosis*" occurring in the insane, by which he means that continual repetition of certain movements, which is familiar in melancholic and demented patients. These phenomena appear to be more akin to rhythmic spasm ("Romberg's static spasm"), than to athetosis ; but in any case they deserve further notice than they have received, and it is for this reason that I refer to Dr. Porporati's cases, which are too few (being, moreover, accompanied with no post-mortem observations) to supply any satisfactory explanation of their nature.

Professor Verga gives an interesting account of *David Lazzaretti*, a poor Tuscan carter, who (it may be remembered) founded a communistic religion, of which he was the prophet. He gained some followers, but excited the suspicion of the Italian Government, and was finally shot, while leading a procession, by the police in 1878. From the details collected of his life, it appears that his paternal uncle had suffered from religious insanity, and that he was himself of markedly insane temperament. He had three visions, at distant intervals, in his early life, but was not "converted" by them until 1868, when he went to Rome to relate them to Pius IX., and afterwards published them in his native country. His hallucinations of sight and hearing, always bearing on religious matters, and on his own prophetical office, became more and more frequent, and led the police to look upon him as an impostor. Prof. Verga has no difficulty in showing that this was not the case ; and the particulars of his visions are well worth comparing with those of Swedenborg, and others who have suffered from the same form of insanity.

Dr. Raggi has treated two cases of melancholia, accompanied by extreme anæmia and exhaustion, with the *introduction of defibrinated blood into the peritoneum*, as recommended by Ponfick. The blood was passed, by means of a funnel and elastic tube, into a canula which had been introduced as in the operation of paracentesis : no serious results occurred, and considerable improvement in each case rapidly followed.

In the "Rivista Sperimentale," Dr. Maragliano gives the results of some very careful experiments on the *hypnotic action of lactic acid*. His conclusions are—that it has no effect if administered soon after a meal (probably because it is then employed in digestion), or imme-

satisfactorily settled, but which would, he hoped, be improved by the consideration given to it by the Association. He thought that the tables issued by the Commissioners in Lunacy were certainly very useful, and a step in advance; but they had great drawbacks, and he was inclined to disagree with Dr. Major in accepting them as the best he could get ("No, no," from Dr. MAJOR). Well, at all events, he should endeavour to obtain a better tabulation at the outset, for unless they went at reform boldly at the outset they would not get it. It was best to aim high, even if they fell short of their mark. He quite agreed with Dr. Major that the statement of a single cause in cases of insanity would rarely prove correct, and that multiple causes should be stated in every case. Taking heredity, for instance: that might be a cause which in a given case might be only five per cent. of the whole. On the other hand, there might be a case in which heredity was ninety-nine per cent. of the whole, and the other cause, the fright, or the grief, or the trouble would prove to be the last straw which had broken the camel's back. To classify these causes side by side in the same table was obviously absurd, and it was only by taking multiple causes that they could reduce the result to anything like truth. Of course, if there were, say, four causes in a certain case, and each were stated, it would reduce the operation of each to 25 per cent., which would probably be much nearer the mark than singling out one and valuing it at one hundred per cent. He should not venture that evening to propose any scheme, which would be a work involving very considerable time and thought, but he trusted that the Statistical Committee would endeavour to elaborate one much more comprehensive than that now in use.

Dr. BOWER referred to the incompleteness of the particulars given on the forms of admission, which were frequently absolutely wrong and represented only part of the cause. Drink was sometimes put down as the cause of insanity, when it was, perhaps, only the result, and as the cases in private asylums were greatly associated with drink, he suggested that the experience of medical superintendents of private asylums should be ascertained as well as that of the superintendents of public asylums.

Dr. STEWART said that, with reference to the remarks from the Chair, as to the suggested information being looked upon only in the light of a copy of the Reports furnished to the Commissioners, or what medical superintendents would return in their own private reports, he must say, from his own knowledge of three county asylums, that he believed medical superintendents very often considered that they were under an obligation to return to the Commissioners statistics which, as physicians, they would be rather disinclined to return, and which they would not like to be published as the result of their own ideas. Then, again, in this particular matter, one of the things which had been alluded to strongly in Dr. Major's very excellent appeal to them was a very important one, and that was the absolute incorrectness of a very large number of the causes given in the papers, and when they thought of such large institutions as Dr. Major's own, the Kent Asylum, and others, and remembered what a very great labour it was to get at the causes except through those documents which they had in their possession, one almost hesitated to ask medical superintendents, unless they were plentifully supplied with skilful assistance, to sift out the causes in such a way as to be of any practical use. Of course, if they could accept the statements contained in those papers by laymen, the difficulties would be greatly removed, but the chances were that they would have to start afresh, as though no information had been given at all. Would it not be well to make an appeal to the Commissioners in Lunacy to use their influence to get the certificates as sent in to the various medical superintendents altered in this respect, so as to have a statement signed by one at least of the medical men who gave the certificates containing one or two facts in reference to the case which he could give his authority for? At present the causes were only stated by laymen. It should be the duty of the physician, and this mode of proceeding had been already carried out in Ireland with very beneficial results. He felt sure this had only to be urged by the Committee, and the sooner it was

taken in hand the better. With regard to the suggested request to medical superintendents being issued by Dr. Major, they all knew the enthusiasm with which that gentleman entered into anything connected with science, but he was sure that Dr. Major would quite agree with those of them who thought that his own opinion would be fortified, and his appeal very much strengthened, if he was associated in it with the other members of the Committee. It was very unlikely that anything would be done in regard to the statistics of this year, and if anything were done which could be published next January, it would be thought a sort of private appeal. It would be better to defer it so as to give time in the early part of the next year for the Committee to meet. Then, with regard to Dr. Rayner's remarks, as to a more elaborate system being started at once, he should be very much against that. That was far more likely to be gained by asking for adoption of such tables as Dr. Major had brought to their notice.

Dr. Savage said that it seemed to him that the collection of statistics, as it was at present going on, was altogether a mistake. He thought that neither Dr. Major nor himself would place one atom of value either upon the statistics of the Commissioners in Lunacy or the reports from any single asylum. If that were true, the mere collecting and elaborating of those statistics still further would be merely adding rubbish to rubbish (hear, hear, and laughter). His feeling was that the investigation of the causes of insanity would not be effectually carried out by mere generalization.

Dr. Bacon said that he quite agreed with what Dr. Savage had said. He had always felt, in making the returns to the Commissioners, that it was labour lost. He had done it to the best of his ability, but he had ever had in his mind the fact that the cause could not possibly be arrived at without knowing all the circumstances and history of the case. That was very rarely given, and medical superintendents had to endeavour themselves to get hold of the family circumstances by private enquiry, which was practically impossible in the majority of cases. He recollected very well the first year that he made the return to the Commissioners, they sent it back to him because he had put down so many "unknowns," and they asked him whether he could not put more known causes in. He wrote back that it was impossible, and he gave instances showing the utter impossibility of stating definitely what they wanted. He felt the same difficulty to the present day, and therefore would certainly not anticipate the slightest benefit in publishing tables of causes. He had always declined to do it in his printed reports, simply because it was utterly useless, and would only add to the rubbish heaps which Dr. Savage had alluded to. He would, however, be most happy to co-operate in any plan for bringing about a satisfactory result.

Dr. Major, in reply, said that, although the remarks made might be quite true, and they might not be able to get all the facts which they required for the causes, still there was a certain amount of information within their reach. If they were only to proceed upon statistics of exactly even value, the chances were that they would never advance. Now, when they came to look at the Commissioners' tables, which had been so criticized, they would find a remarkable similarity between the statistics of the three years, and if there was not a grain of truth at the bottom of it, there would not be this similarity. For instance, in the case of domestic trouble, one year's percentage was 6·3, another 6·8, and another 6·7; Intemperance was 14·9, 14·6, and 14·0. There must be a grain of truth in this, and where there was any value at all, he felt that they ought to continue their researches in that direction—even with imperfect data to go upon, it was a practical fact that by trying and trying again, a great truth might be illustrated more than one might be disposed to think. In regard to the mode of approaching the medical superintendents, he quite agreed with Dr. Hack Tuke, and thought that it would be best for the matter to come from the Committee as their proposal, and not in any sense as a proposal of his own. Speaking candidly, an objection which he felt to his own proposition was that the Commissioners in Lunacy would be made the arbitrators of the

tables in question. He would prefer that the Medico-Psychological Association should itself be the arbitrator of the tables. What he would have liked to see done would be, that a proposal for a general table should emanate from their statistical committee, who should receive and consider suggestions from medical superintendents, and report the result of their considerations to the Association; but he was not quite clear how they would get the collective results. According to his present proposal, it would be done by the Commissioners, but if done in any other way it could only be through the "Journal of Mental Science." As to the statements on the forms of admission, his feeling was that they were frequently wrong, and entirely useless. He wished to lay particular stress on one thing that he had mentioned, namely, that although the tables in question were by no means perfect, under the arrangement which he proposed there was nothing to prevent an entire revolution of the system, the uniformity being at the same time entirely kept up; so that it would be quite possible for a person in four or five years' time to refer to the tables, and find that suggestions of improvement had been made and carried into effect throughout the whole; and he could not but think that the tables would, in the meantime, have proved of some value.

Dr. Fletcher Beach read a paper on "Hypertrophy of the Brain in Imbeciles."

Dr. Savage said that there seemed to be two or three conditions of sclerosis which had not been sufficiently investigated. He had seen some brains from general hospitals in which there was a general hypertrophy of particular parts of the brain. Whether this excessive development of the connective tissue of the brain occurred as the result of constitutional vice, or the result of some local disturbance, they did not know, but it was not the rule in these cases to get all parts of the brain similarly affected. In some cases it was more and in others less. He might refer to a case at the Children's Hospital, in which the anterior part of the brain seemed to have become hypertrophied and sclerosed, &c. He would like to know the distinction which Dr. Fletcher Beach made between the purely sclerosed brain and the purely hypertrophied brain.

Dr. Major said that a very wide field of investigation presented itself in relation to the various layers of the cortex in imbecility and idiocy, as compared with a state of health. For instance, if it was found that one of those layers was absent in idiocy, it would be a very important point gained. He himself, some time ago, investigated the case in apes, when, to his disappointment, he found that among the higher apes there was exactly the same number of layers as in man.

Dr. Hack Tuke enquired whether Dr. Beach had found the grey matter to be hypertrophied in cases of idiocy, as alleged by Mierzejewski.

Dr. Boyd observed that 62 ounces, the weight of the brain, in one of the cases described by Dr. Fletcher Beach, was very remarkable, as it was above 15 ounces in excess of the average weight of the male adult brain. In a translation by Costello of Pinel "On the Functions of the Brain," in the "Medical Gazette," 1845, the weight of the different parts of the brain by Meckel and Parchappe are given. In Dr. Boyd's tables the left cerebral hemisphere was found on an average to be half a drachm heavier than the right hemisphere. The brain arrives at its maximum size at the ages from 14 to 20 in both sexes, the average weight being in the male, 46·7, and in the female, 41·7 ounces.

Dr. Beach, in reply, said that, with reference to Dr. Savage's question, he had rarely found hypertrophy of a limited portion of the brain. His own experience was opposed to that of d'Espine and Picot, who said that imbecility only occurred when hypertrophy of the brain was accompanied by sclerosis. There were two forms of hypertrophy according to d'Espine and Picot and Brunet, one with and one without sclerosis. His (Dr. Beach's) experience agreed with that of Brunet, who had seen hypertrophy without sclerosis in imbeciles. He had never seen hypertrophy of the brain with sclerosis in cases of imbecility. In regard to the examination of the cortex, he had been trying to make out the difference between the cortices of imbeciles and healthy per-

sons, and there was a certain marked difference. The second, third and fourth layers had round cells and pyramidal with two or at most three processes; no tripolar cells. In the round cells the nucleus was often eccentric, the part around degenerated, and a clear space round that. In answer to Dr. Hack Tuke's question, Dr. Beach said that he had found the grey matter atrophied, but never hypertrophied.

Dr. JULIUS MICKLE read a paper entitled "Notes on a Case of Brain Injury."

Owing to the lateness of the hour, Dr. Savage did not proceed with his "Notes on Cases of General Paralysis," which had been placed on the agenda.

The proceedings terminated with a vote of thanks to Dr. Savage, and the authorities of the Bethlem Hospital for the use of the room.

ILLUSIONS OF THE SENSES.

At the Casual Club, London, Mr. Stuart Cumberland gave, on the 25th Nov., some curious illustrations of the way in which the senses are liable to be imposed upon and mystified, especially when under the guiding, or rather misguiding, influence of expectant attention. The primary object of the exhibition was to expose modern spiritualism; but its interest for the psychologist consisted mainly in the confusion induced in the sensory perceptions by certain manifestations. Thus, for example, Mr. Cumberland placed himself at a table with two gentlemen, sitting one on either side of him, with whose hands he joined his, the gas being lighted. Having satisfied themselves that both Mr. Cumberland's hands were attached to theirs, they, at his request, shut their eyes, and were asked whether they still felt his hands touching theirs. They answered affirmatively, without any hesitation, whereas Mr. Cumberland had dexterously removed one of his hands, and made the other do duty for both. Having obtained their full assent to this proposition, the operator, having one hand free, employed it as a "spirit hand" to touch the heads of the gentlemen, placing also upon one a trombone. Mr. Cumberland then resumed his former connection by both hands, without the subjects of the experiment being conscious of the change; and when they opened their eyes they were clear in their opinion that whoever touched them and placed the instrument upon the head, Mr. Cumberland did not. The illusion was complete.

With other tricks resorted to by professional mediums we need not concern ourselves now; but we shall, we suppose, be expressing not only our own desire, but that of honest believers in spiritualism themselves, when we say that we hope Mr. Cumberland will ruthlessly expose every spiritualistic impostor in Britain whom he can lay hands on.

If it be true, as he maintains, that he can produce every manifestation which occurs in the presence of mediums, under precisely the same conditions (no confederates, and submitting to the like examination of dress, &c.), any one who wishes to investigate Spiritualism ought to ask Mr. Cumberland to accompany him to the *séance* he attends.

Obituary.

WILLIAM LAUDER LINDSAY, M.D., F.R.S.E., F.L.S.

In our number for last January we noticed the retirement of Dr. Lauder Lindsay, on account of the state of his health. Rest from his labour did not prolong his life, for he died in Edinburgh, on the 24th of November, at the age of 50. He was born in Edinburgh, and studied there as a boy at the High School, and as a student at the University, graduating as M.D. in 1852. Then, as ever after in his life, he was most industrious, carrying off prizes and medals in nearly every class. Whatsoever he did he did with all his might, from the

beginning of his life to the end. He was an omnivorous reader and a keen observer of nature, and was one of those earnest men who take life almost too seriously from the beginning. We believe it would have been well for him had he taken more relaxation and devoted more time to social intercourse. It seemed as if that would have sweetened and prolonged his life. But we know that a necessity is laid on some natures to work, and never to rest. It is one form of the tyranny of their organisation. The power to relax all their energies, to put off their harness, to do nothing, to think of nothing, to feel nothing for a time, is not in them. For them variety of occupation is not rest, and they wear themselves out before their time. The power to work hard is one of the most valuable of brain qualities no doubt, but it is less recognised that the power to do nothing needs to go with it to make a rounded and perfect existence with long life and average happiness.

Dr. Lindsay, after taking his degree, had charge of the Cholera Hospital in Edinburgh, and studied that disease clinically, in face of the greatest personal risk. His observations were embodied in several valuable papers on the communicability of the disease to the lower animals, on its clinical aspects, and on its natural history. Even as a student he showed himself to be an original botanist, selecting lichens as his favourite study. He afterwards published the "History of British Lichens," a very popular hand book. In the year 1853 he was appointed Assistant-Physician to the Crichton Royal Institution, Dumfries, then in the most flourishing period of its existence, under Dr. W. A. F. Browne's admirable management. In six months—far too short an apprenticeship to the complicated art of working successfully an asylum for all classes of society—he was, in 1854, appointed to the Physician-Superintendency of Murray's Royal Asylum, Perth, which he held for 25 years. From the moment he became the medical officer of an asylum he threw himself into the study of insanity, and very valuable articles on the subject from his pen began to appear in the medical journals. It seemed indeed as if his pen was never idle. He studied and wrote on the dietetics of insanity, especially investigating the properties of glycerine as a fattening agent, on the pathology, therapeutics, and hygiene of the subject, on the management of asylums, the superannuation of their officers, and the use of mechanical restraints in the treatment of the insane. He produced a new classification of insanity, and his annual Reports were exceedingly laborious and exhaustive. He also wrote articles on toxicology. But it was in the region of comparative psychology that he did the best work on the whole. For many years he observed the mental development of the lower animals, and gathered up all that appeared on the subject in books, articles, and newspapers. No story of a dog's sagacity, or a parrot's loquacity that ever appeared in the most obscure corner of the most provincial newspaper, ever seems to have escaped him. In this and other journals he wrote most elaborate articles on this subject, and last year embodied the result of his life-long labours in his great work on "Mind in the Lower Animals in Health and Disease," a marvel of research, a mine of facts, and a wonder of arrangement and classification. He did not confine himself to professional matters, but both thought and wrote on educational and social questions in the Edinburgh newspapers.

He was a man of slight physique, with the pinched features of the chronic dyspeptic in later life. His temperament was highly nervous, sensitive, and a little irritable. His character was humane and honourable, and he always had the courage of his convictions. His habits were retiring, but industrious to a degree that shortened his life. Not a moment was wasted. He enjoyed a talk with a friend, but not general society. His amusement was travelling, and he had gone all over Europe from Norway southwards. He had visited America, Asia and New Zealand; and wandered, spud in hand, all over his native Scotch mountains. His temperament made him most jealous of any interference with his individual freedom of thought and action as an asylum physician. To official and statutory regulations and inspections he never took kindly, and was ever as ready to criticise the way in which Commissioners and Directors did

their work as they were to find fault with his. But to his patients he was always kind and forbearing, and his fellow officers loved and respected him. No institution in the kingdom of its size contained an older staff of officials. We think it was the sensitiveness of his temperament to control, and his not mingling much personally with his professional brethren that made him take up so fiercely a reactionary attitude towards the non-restraint movement. It was certainly not any want of benevolent feeling towards the insane. But he hated to be coerced by even a right public opinion into doing anything. One would have thought from some of his writings that he kept many of his patients in crib beds and strait jackets. In reality he used such things very sparingly. But if he thought one case in a million was the better for them he stoutly vindicated his intellectual freedom by proclaiming to all the world that such restraints were needed in *some* cases, and that therefore he would and did use them. The best of us have a hobby, and Dr. Lindsay's was to run a muck at the non-restraint principle, which he nick-named "Conollyism." He was so logical that he could not see that a few exceptions prove the rule. But the best proof that his views on this matter were recognised by his friends as being the hobby of an otherwise sound and progressive alienist, was the fact that they were allowed to pass without notice or reply. They were, we need hardly say, totally opposed to the opinions and sentiments of the great body of British alienists.

It is sad to think that Dr. Lindsay enjoyed his life and his pension so little after his retirement. He bore the burden and heat of the day, and had no calm evening of rest and reward. The cares and worry of asylum life, and the strain of continued personal intercourse with the insane, wore him out before his time. It is doubtful if such sensitive temperaments as his should take to such a life at all. But he did his work nobly up to the last. Every officer in every asylum in the kingdom owes him a debt of gratitude for his work on "The Superannuation of Officers in British Hospitals for the Insane," in which with enormous labour and no little expense to himself, he set forth the facts and the arguments for pensions to old officers.

Few men in our profession have contributed to so many journals. That his scientific work was appreciated by the most competent authorities is best proved by the number of honours he received. He received a gold medal for his Thesis from his University, the Neill prize of the Royal Society of Edinburgh, and a medal from the Royal Society, besides medals from the International Exhibition of Fine Arts, and from the New Zealand Exhibition of 1865.

DR. E. SEGUIN.

By the death of Edward Seguin, M.D., of New York, medicine has lost one of its brightest ornaments, while those who are interested in the study of Idiocy and the education and training of Idiots and Imbeciles have sustained an irreparable loss. He was, so to speak, the pioneer in this great work, pointing out the landmarks to be observed and the means to be adopted in carrying it on. His attention was first called to the subject by Itard, who prevailed upon him to undertake the education of the famous wild boy of Aveyron. As a result of his efforts, public attention was called to the subject, and in 1842 a portion of the Bicêtre was set apart for the instruction of idiots, and Dr. Seguin was appointed director. Here he remained for some time, but subsequently established a private institution for idiots in Paris. During this time he prepared his treatise on the "Traitement moral, hygiéne et éducation des idiots," a work of much merit. In consequence of the Revolution in France of 1848, Dr. Seguin went to America, and was soon appointed Superintendent of the Pennsylvania School for Idiots. After a while he resigned this appointment, and commenced practice as a consulting physician in New York. He then brought out a book, entitled "Idiocy, its

Diagnosis and Treatment by the Physiological Method," which, in 1866, was revised by his son, and is now a standard work on the subject. In 1876 an Association of Medical Officers of American Institutions for Idiotic and Feebleminded Persons was founded, and Dr. Seguin was elected its first president. To this society he contributed various papers. He was several times appointed delegate to the International Medical Congresses which have been held in different parts of Europe, and he attended from time to time the meetings of the British Medical Association. Of late he had taken much interest in and became an advocate of the metric system in medicine, and only this autumn read a paper on that subject at the International Congress of Hygiene at Turin. Dr. Seguin was a man of indomitable energy and great perseverance. He possessed a highly cultivated intellect, which through a long and active life was devoted to the best interests of the imbecile. His amiable character secured him many friends, not only in his own country, but also in England. Though he is dead his work still lives, and will grow and extend as years roll on.

F. B.

CORRESPONDENCE.

The following correspondence has been forwarded to us for publication :—

St. Andrew's Hospital, Northampton,
Oct. 1st, 1880.

Dear Sir,—In the "Journal of Mental Science," which I have just received, I notice that in the discussion of Mr. Mould's paper on "Lunatic Hospitals" at the meeting of the Medico-Psychological Association, held in London on July 30th, Dr. Thompson is reported to have said "he heard that at Northampton they were making thousands a year, and that they did not know what to do with it, and yet the poor patients whom it was meant for were swept up and sent into the pauper lunatic asylums."

Will you be good enough to inform me whether this is a correct report, and, if so, will you also give me your authority for such a statement ?

I am, yours faithfully,

Dr. George Thompson. J. Bayley.

City and County Lunatic Asylum,
Stapleton, near Bristol,
Oct. 2nd, 1880.

Dear Sir,—I hope to be able, in the course of a few days, to reply in detail to your letter of the 1st inst.; meanwhile I will ask you to favour me by sending to me copies of your Reports for the years 1878 and 1879. Strange to say, these are the only Reports I do not possess.

Believe me to be, my dear Sir,
Yours faithfully,

Dr. Joseph Bayley, &c., &c. George Thompson.

St. Andrew's Hospital, Northampton,
November 19th, 1880.

Dear Sir,—On Oct. 2nd you wrote: "I hope to be able, in the course of a few days, to reply in detail to your letter of the 1st inst."

As I have not yet heard from you, I think it possible the matter may have escaped your memory. I hope you received the Reports, which I sent by return of post.

I am, yours faithfully,

Dr. Thompson. J. Bayley.

City and County Lunatic Asylum, Stapleton, near Bristol,
Nov. 21st, 1880.

My Dear Sir,—I ought to have replied to your letter of the 1st of October long before this, but I had some difficulty in finding the relatives of a former patient of yours who subsequently became a pauper inmate of this asylum; and then I must confess to sheer neglect as the further cause of delay in my answer.

I admit that the report contained in the Journal was somewhat like what I said at the meeting, and you will see that I put it in the form of questions, not knowing that at the moment I rose to speak you had left the room. I was much surprised to find when I had done speaking that you did not reply. Although I had the case I have just mentioned (and others not squeezed out of your asylum) in my memory, at the end of my speech I only meant to imply that at your asylum thousands a year of profit were made, while probably the same thing was going on elsewhere in similar institutions.

If, then, I was wrong in saying that the process of squeezing out was carried on at your asylum, I freely apologise to you; but surely your Annual Reports, as well as the Lunacy Blue Books, show that all the sums received annually at your asylum are not spent entirely on the care of your patients, but that some of it goes for other purposes. As at the time you wrote to me, the Report of your asylum for the year 1877 was the latest one I could place my hands on, I will quote only from that and the Report of the Commissioners in Lunacy for the same year:—

1877.—Total expenditure, as per Asylum Report.....	£33,678	18	4
,, Average weekly cost, in the Commissioners' Report ...	£22,310	12	4
,, Unaccounted for, but including balance due from Institution of £3,115 16s. 10d.....	£11,368	6	0

I remain, my dear Sir, yours faithfully,

To J. Bayley, Esq., &c., &c. George Thompson (Med. Supt).

St. Andrew's Hospital, Northampton,
November 22nd, 1880.

Dear Sir,—As you do not give me the name of the patient who you say became an inmate of your asylum after leaving this hospital, I cannot ascertain the circumstances under which he or she was discharged; but I can say that no patient has been removed from here and sent to a pauper asylum unless the Committee of Management had fully satisfied themselves by careful enquiry that the case was not deserving of assistance from charity.

In your reply to my first letter, you asked me to send you our Reports for the years 1878 and 1879, hinting that you could not reply in detail until you had them. You have had those Reports nearly two months, and yet you now say that the Report for 1877 is the latest you could place your hands on, and that you will quote only from that.

If you have made use of the Reports I sent you, you must have seen that the profits made, which you state are unaccounted for, have been, and are, used solely for the benefit of the patients:—

1st.—By the purchase of an estate in the neighbourhood for the express purpose of enabling us to provide accommodation for chronic patients of the middle classes, so that we may reserve the wards here for acute and curable cases only.

2ndly.—By supporting about ninety patients for sums considerably below the cost of their maintenance, several being kept and clothed free of charge.

3rdly.—By very large expenditure in extensions and improvements, and also in the purchase of furniture.

4thly.—In reality, a large proportion of the patients who are not counted in the charity do derive charitable assistance, inasmuch as their payments are not remunerative, unless any return in the shape of rent is overlooked, and they have comforts and accommodation for which they would have to pay much more elsewhere.

In this statement I am corroborated by the following extracts from the Report of the Commissioners in Lunacy on their visit in October last.

Referring to the house occupied on our recently-purchased estate, they say :—

"We were much pleased with the home-like comfort provided for eighteen ladies of the chronic harmless class. All the ladies expressed themselves as much pleased with the place, and we do not consider that at any other place could these patients receive such accommodation for such payments." Again, referring to the hospital itself, they say :—"In conclusion, we have only to express our gratification at the condition in which we found the hospital, and we hope that nothing will prevent its full development, supplying at it does, accommodation for a class not easy to provide for in many places."

It is right that I should add that your figures are altogether misleading as to the surplus income of the hospital, for the average cost taken from the Commissioners' Report is based upon certain items of expenditure only, the Commissioners excluding all sums paid for rates and taxes, repairs to buildings, and other items, which together amount to a very large sum of money.

As your remarks were published in the "Journal of Mental Science," I intend to send this correspondence to the same Journal.

I am, yours faithfully,

Dr. Thompson. J. Bayley.

Appointments.

Banks, W., M.B., to be Assistant Medical Officer to the York Retreat.

Spence, J. B., M.D., to be Medical Superintendent of the Staffordshire Asylum, Burntwood, near Lichfield.

O'Meara, T. P., M.B., L.R.C.S.I., to be Medical Superintendent of the Carlow District Asylum.

Boyd, R. J., L.R.C.P.Ed., L.R.C.S.Ed., to be Assistant Medical Officer to the Cambridge County Asylum, at Fulbourn.

We are glad to observe that the Committee of this Asylum has at last appointed an Assistant Medical Officer, after, as shown by the Annual Reports, years of refusal to comply with the recommendations of the Lunacy Commissioners and the Home Secretary. It is not to the credit of the Justices that false ideas of economy should have for long left this County Asylum the only one in the Kingdom in the position of refusing to afford a Superintendent the assistance he requires, however ably he may perform his duties.

Field, A., M.B., C.M., to be Medical Superintendent of the Lunatic Asylum and Visiting Physician to the Lazaretto, Barbadoes.

Harris, F. W. H., M.R.C.S.E., to be Assistant Medical Officer to the Suffolk County Asylum.

Rutherford, R. L., to be Assistant Medical Officer to the Devon County Asylum.

Compton, T. T., M.B., C.M., to be Junior Assistant Medical Officer to the Norfolk Asylum.

Clark, A. Campbell, M.B., C.M., Edin., to be Medical Superintendent of the Glasgow District Asylum at Bothwell.

Errata in No. CXV.

P. 386, line 12, *read* Dr. Bucknill (Manual of Psychological Medicine, p. 571.)

P. 471, line 14, *read* "Physiology."

P. 471, lines 22-23, omit "for the British Medical Association," and insert after "made," the words "by the Medical Section of the British Association."

LIST OF AUTHORS AND CONTRIBUTORS.

Illustrations.

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[*The Editors are indebted to Dr. Newth for the compilation of this Index.*]