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THE JOURNAL OF MENTAL SCIENCE.

No. 59. OCTOBER, 1866. VOL. XII.

PART I.—ORIGINAL ARTICLES.

Address; on Medico-Psychology. By W. A. F. BROWNE, Commissioner in Lunacy for Scotland.

(*Read by the President at the Annual Meeting of the Medico-Psychological Association, held at Edinburgh, July 31st*, 1866.)

THIS is the first occasion upon which we have assembled under the title of the Medico-Psychological Association. The event appears to me auspicious both as inaugurating a more correct designation, and as pointing to a wider and more legitimate destiny. We can no longer be mistaken for a mere friendly club or a mutual defence society. We may now claim as among our objects the investigation of *all* subjects bearing upon the science of mind in connection with health and disease, as well as those which affect our personal interests or the interests of those committed to our charge.

We claim even a wider, almost a universal range for the science of Medico-Psychology, and we claim for it a distinct position in science. The difficulty is to assign and to restrain it within limits. The multiform phases of actual insanity will be confessed by all to fall legitimately within its province. The still larger and more proteiform affections, unequivocally morbid, but compatible with such an amount of health and work-a-day self-control as neither to violate law, nor decorum nor delicacy, may be tacitly conceded, and, at a certain stage, naturally and inevitably come within the same category. But it is held to be a corollary of the definition of medico-psychology now accepted, that all physical diseases, all changes in structure, have a psychical, and often a morbid psychical side; that to overlook the mental condition of

the fever- or consumption-stricken patient because the disease is corporeal, would be as absurd as to disregard the bodily condition of the melancholic or of the general paralytic because the disease is mental.

It would not be enough, according to this estimate, for the psychologist to interpret delirium as an indication of cerebral disturbance, to allay fear or to sympathise with suffering—acts which might be performed by the humane and the uneducated; but it would be incumbent to connect the special mental condition with the particular changes going on in the organisation, to employ the mind as a medium of treatment, or, conversely, to act through the body upon the mind—and, in short, to embrace all the phenomena presented, and precisely in the same manner, as if they were of equal importance or demanded the same consideration.

A glance of the idiotic, imbecile, backward, hebete, criminal portions of our population will infallibly suggest the advantages of bringing such views to bear upon the education and training of the young, to such an extent, at least, as that the attempts to impart knowledge should be in harmony with the laws of health, and with the temper and temperament of the individual as affected by structure. For in the errors of education may lurk the poison which grows into insanity or eccentricity, and, in like manner, into sound training may be introduced the preservative against eventual latent mental incapacity.

The conservative mission of our science in anticipating, preventing, and modifying mental maladies is hitherto an unworked, and, it is matter for regret, a neglected problem. The laws of *hérédité,* moral and intellectual degeneration, and of intermarriage, constitute a science in themselves; and, perhaps, contain the basis of the future development and utility of prophylactic medicine. The importance of due attention to transmitted tendencies, not merely in connection with alienation, but with character and conduct, where no open interference of medicine or law could be thought of, and with other affections which are not brought within our cognisance, illustrate the usefulness of such an application of our science. There is a vast class of instances of mental unsoundness, perversity, obliquity, extravagance, which place the sufferer at nearly an equal distance from health and disease, from insanity and crime, and which, undoubtedly, depend upon physical causes, tend to modify other forms of disease, are the sources of incalculable social, domestic, and personal evil, and may originate the pronounced and palpable instances of alienation. The same observation applies when epidemics of mental disease, of theomania, or of suicidal impulse, arise, and even *now* agitate large communities, in the broad, bright sunshine of modern intelligence, and in what are styled, it may be ironically, the centres of civilisation. It

cannot be doubted that the ravages of such moral plagues, although, like cholera or fever, they may select their victims from the predisposed and susceptive, must owe their origin to some common cause or causes, it may be political or religious commotion or excitement, or imitation, or social conditions, or atmospherical changes, which, if they cannot be counteracted, deserve to be studied. Even the mental phases, the panic, the temerity, the fatalism which so often accompany and aggravate the disasters of ordinary epidemics, claim our consideration.

We may obtain a better view of the fair proportions of the subject by clearing away the rubbish and obstructions which have gathered around it, and by showing what it is *not*. The mere custody and care of lunatics certainly do not constitute a man a psychologist. Even where the physical wants and diseases of the class are attended to, and where an intuitive penetration into character imparts a certain suavity and address to the management, there may not be even a remote or indistinct conception that it is the immortal part of our nature, the godlike attributes of reason and imagination, and even of *faith* itself, and their ultimate destiny in time, which are dealt with, and which are, as the case may be, ignorantly neglected, unconsciously tampered with, or rashly and ruthlessly invaded and disturbed. It is true that, in many well-constituted and well-prepared minds, the experience which grows from mere contact with and observation of the objects of care and solicitude—the actual shortcomings and failures which experimentalisation involves—suggest, obtrude, necessitate the origin and growth of a philosophy, an analysis of the laws of mind as influenced by disease, which, though crude, is invaluable as affording a basis for moral treatment, and for systematising the relations and responsibilities which connect the physician with his patient. It is beginning at the wrong end to learn the physiology from the pathology of mind; but it is better to do this than to stagger and stumble blindly on without a physiology at all.

But could we realise the absurdity of a pure metaphysician being entrusted with the study or reconstruction of the mind diseased, the anomaly would be as egregious and disastrous. It would be vain for such an expert to ponder over the states of consciousness as presented in himself, or to form his opinions or his course of practice upon abstract principles or the subjective analysis of intellect, emotion, or impulse; and, though the unwelcome facts might be forced upon his attention that his most delicate crux failed to detect the elements of which a morbid act was constituted, or that a tendency handed down through and by a long line of ancestors—

"Through all the blood of all the Howards"—

perhaps, or that an attack of catarrh, or that a fit of indigestion

introduced new and inappreciable relations into the mental phenomena, he would fail altogether in comprehending or combating the difficulty.

It is not with the view of exciting a smile that I ask you to conceive a disciple of the "pure reason" face to face with a furious maniac, or an animist, exorcising the demon delusions that spring from diseased lungs, liver, or ovaries.

Nor would the mere drug-worshipper fare more successfully. Perhaps the recognition of insanity as a bodily disease, while it conferred incalculable benefits upon the patient, contributed to divert the attention of the physician from the psychical side of the diagnosis; and while he trusted to opium and tartar emetic, he was tempted to forget the "dietetics of the soul," as Feuchtersleben designates our dealings with the moral nature. There is, however, the greater and more unpardonable fallacy in the proceedings of this class of prescribing, and over-prescribing, for the mental condition, of giving opium to cure mania, or iron to cure melancholia; worse than the old and inextinguishable error of treating a symptom, in place of the disease; in so far as the morbid operations of mind are further removed from the reach of remedies, and are actually the expressions of changes in consciousness, depending upon the influence of impressions conveyed through altered structure. Such a view does not exclude enlightened therapeutical treatment; it enhances its value, and gives not only a wider scope, but a more precise and intelligible aim, in its employment. If our knowledge of the physical changes upon which the different forms of alienation depend was more extensive and sound, the limits and effects of remedies might be as much relied upon as in other maladies; but even at the present stage of our science, when treatment is founded and judiciously conducted on the principle of restoring to health the organisation generally with which mind is connected and upon the normal state of which its soundness depends, success attends the attempt in a large proportion of cases. There is, consequently, ground for regret that the millifidianism which has gained a footing in the profession has contaminated the alienists, and that the consumption of drugs in asylum practice presents infinitesimal quantities, even where these are not exhibited in infinitesimal doses; that the active medication of the insane is relinquished so early, that large communities are consigned to the limbo of expectancy, and that so many of our brethren entrust their charges to the kind but somewhat dubious and unregulated influences of food, air, water, light. He who refuses the aid of medicine is as much a heretic to the true faith as he who doubts the efficacy of moral agents.

The pure hygienist—powerful handmaids and coadjutors although food and air, &c., must be confessed to be—is likewise one-sided and weak-sided, and restrained by self-imposed bonds. He who, with

that potent instrument, a well-appointed, smoothly moving asylum at his command, contemplates, with self-complacency, exquisitely clean, well-arranged, well-aired, and well-lighted and heated wards; and has exhausted his resources when the meals are well served, the baths sufficiently frequent, and the routine of exercise and occupation meets no shock nor hindrance—who marshals his trades, and marches out his squadrons, and subjects all uninvalided patients to the same discipline—is, perhaps, a good superintendent and a splendid drill; but he has failed to embrace the entirety and the grandeur of his mission.

Even he who addresses the æsthetical and imaginative part of our nature—who seeks to reach the highest and purest qualities, and to evoke their influence in spreading calm and order in the agitated and confused spirit through our sense of the beautiful and symmetrical—though wise, is only partially wise, if he trusts exclusively to decoration, and music, and distraction; miles of walls may be covered with pictures and statues, his charges may be enabled to see scenes of natural beauty or the wonders of art, and every succeeding day and hour may have its appointed recreation and enjoyment; and asylum life may be rendered more cheerful and gay, and more devoid of care and duty, than home life; and still this humane system must be characterised as incomplete, and when weighed against the claims and necessities of the mind diseased, must be regarded as frivolous.

In short, the man of one remedy or class of remedies, or who elects such to the undue disparagement or disuse of others, is nearly as rash and in as great danger of defeat as he who fights his antagonist with one hand, or as the physician with no remedy at all, who consoles himself with the antiquated dogma that diseases have a tendency to cure themselves.

We do not undervalue these fellow-labourers; for, humble and limited although some of these approximations to medico-psychology may be, there is involved such an amount of force and dignity of character, such self-possession and self-denial, that neither the public nor our profession know of, think of, and, from their ignorance of the situation and the requirements necessary, cannot realise. There is, however, now no excuse for partial knowledge, since public instruction in medico-psychology may be obtained in conjunction with almost every medical curriculum in Britain.

We are disposed to include in the same category those who conceived that they were curators of the health of the body, and left the mind to its own devices; those who neither courted nor could conceive intercommunion, nor friendship, nor confidence between the physician and his charges; nor who understood the sanatory influence of the healthy over the disordered, of the clear and educated over the ignorant and clouded intelligence, or of sympathy in bring-

ing back the erring sentiments to calm and sobriety. These contracted modes of action have passed away, or are rapidly passing away, not so much because we have become wiser philosophers or better physicians, but because we have been brought experimentally into contact with the diseases we have to treat—because we now regard the condition as a disease, and not as a superstition, or an abstraction or a bugbear, and because our treatment is founded upon a more just estimate of the laws of the nervous system.

In referring the origin of these opinions to a comparatively recent date which are now recognised as the basis of medico-psychology, my course has not been dictated by any supposition that the philosophers of antiquity were ignorant of the laws of mind. They are, perhaps, open to the animadversion that each individual was a school, a system, a philosophy to himself;—a result, it is probable, of their depending more upon reflection than upon observation—of having devoted their inquiries more to subtleties and to verbal abstractions than to the analysis of mental phenomena; and, above all, they may be arraigned of having neglected or omitted the study of insanity, either because it did not come legitimately within the sphere of their inquiry, or that it did not subserve as a mean of illustrating the objects to which that inquiry was directed. They described as divination or possession what was not "dreamed of in their philosophy," but was actually, and what is now, admitted to be departures from the ordinary laws of healthy mind; and to the malign influence of this theory may be attributed the cruel persecutions and punishments to which certain classes of madmen have been exposed down almost to our own time. There are, of course, many illustrious exceptions to this condemnation. Aretæus seems to have anticipated the views prevalent during last century; to have accurately described the two grand categories, mania and melancholia, under which even now many practical men would place all mental diseases; tracing them to vitiation of the humours and fluids; secondly, to have distinguished, with great ingenuity and delicacy, these typical forms from transitory conditions, such as delirium, intoxication, and natural depression; and, lastly, to have been the originator of moral treatment, although a foe to pictorial ornamentation.

In a still nobler mind there appears to have been a foreshadowing of convictions which have coloured or interpenetrated the doctrines and school so long in the ascendant in Germany, and which has still its representatives. "This internal physician, this councillor and aid, is the power itself which, in every individual being, binds and holds together, in a suitable manner, the finite and the infinite—the soul. It cannot have the knowledge which it evinces from its body, of whose existence and life it is the cause; nor from experience which it has had in common with the body, for that knowledge, in fact, preceded this experience, and in the first instance made

it possible." So spake Plato. I quote from Feuchtersleben, and so, twenty centuries afterwards, spoke Stahl, very nearly in the same words.

The views of alienation will correspond to and be a reflexion from the popular or established opinions and creeds of the time. They will be somatic or psychological as materialistic or idealistic opinions prevail. All, however, will be disposed to admit that Plato and Aretæus represent two great schools, lines of thought, or modes of belief, which run through all history, and may, under certain modifications, be as distinctly traceable in the present as in any former age.

Out of the incubation of the fifteenth, sixteenth, and seventeenth centuries there sprang, after many abortive attempts, in full and mature development, the doctrine of the Vitalists. The proposition of Van Helmont was, that all changes, structural or functional, in the body, whether resulting from its own spontaneous action, or from the effects of food, remedies, &c., are under the guidance and governance of a specific agent connected with, but distinct from, the living system. This agent is either an abstract principle or power distinct from matter, or matter so endowed with new qualities and energies as to be entitled to be regarded as an entity. Stahl designated this archæus, or intelligent but unconscious principle, Anima, and recognised it as building up the system, as detecting the presence of all noxious or destructive influences and disorders, and as providing against their effects by exciting such conservative molecular and other changes in the body as may counteract or repair the injury threatened or inflicted.

Dr. Stahl, says Cullen, "has explicitly founded his system on the supposition that the power of nature is entirely in the rational soul. The soul acts independently of the state of the body, and that without any physical necessity from that state: the soul acts purely in consequence of its intelligence perceiving the tendency of noxious powers threatening or of disorders arising in the system, immediately excites motions in the body as are suited to obviate the hurtful or pernicious consequences which might otherwise take place."—Vol. i, p. 6, Preface to Cullen's 'First Series' (Gregory's edition), 1829.

But, in addition to the recognition of this principle, which manifests the attributes of what may be called instinctive reason, and is now dignified by the name of cœnesthesis, or common feeling, and is referred to the ganglionic system, but especially to the phrenic focus; Stahl undoubtedly founded the German psychological school in advocating the dogma that morality, independent of external influences (more or less accidental), is the principle of order in the corporeal and intellectual life, and stands in the same relation to mental integrity and development that the anima does to nutrition and growth; and, on the other hand, that immorality is the sole

cause of perturbation and disease. And to this point may be traced back, in modern times at least, the application of moral agents as remedies.

Heinroth, who forms the next link in this series, held that man lives, as far as he is man, by reason; that the highest point of human activity is gradual progression: that the first degree of this is sense, or individualism; the second is where the individuality, the *me,* is placed in opposition to the phenomena outside of it.

Between these intermediate stages, and in the essence of *me,* grows up the third term, conscience, which is at this point nothing more than the germ of a higher power, which is derived from a still more elevated source. Health, again, is the equilibrium or harmony of our thoughts and our desires, accompanied by the pleasure which attends the complete exercise of a function. Disease is the destruction of this unity in the suspension of one or more of the vital forces; and its origin cannot be found in the body, but in reason. We suffer, we fear, and the result is passion, which, as a disorder of sensibility, reacts upon the other faculties; throws reason into grievous errors, influences the will, leads to extravagance and dangerous delusions, and crime; which, however, Heinroth attempts to distinguish from derangement.

To this disturbance of the spirit, or diathesis, all insanity is traced; and somatic accidents, violent impressions—even education itself—are regarded as prejudicial or destructive to mental health and serenity by and through this medium. This theory has in the process of condensation, and in the attempt to eliminate obscurity and vagueness, been stripped of much of its attractiveness. And, moreover, it would be unfair to measure Heinroth's precepts of moral treatment by such cloudy magniloquence as "the neutralisation of sensibility is a new product, madness," nor even by the epitome now presented.

The precepts themselves form a code of moral management:—

I. Combat excitement or depression by recalling them within their just limits.

II. If imagination suffer, abandoning itself to reveries and unrealities, have recourse to sensible impressions and lively revulsions.

III. When reason is perverted, it must be combated, not by direct arguments or syllogisms, which irritate the patient, but by indirect appeals through other powers—by tact and discrimination.

IV. If sensibility be blunted, it may be roused by joy or pain.

V. In partial insanity, utilise the healthy faculties in treating and guiding those diseased through the influence of occupation, education, and amusement.

The philosophy of Ideler may be summed up in the propositions—

I. The knowledge of insanity should originate in that of the pheno-

mena of the normal psychical state. II. Psychology stands in the same relation to mental affections that anatomy and physiology do to physical diseases. III. The want of correspondence between morbid appearances and symptoms opposes the supposition that mental diseases originate in organic changes. IV. Derangement is not a symptom—it is a result of the moral organisation, in a state of change, of the unequal growth and unequal rapidity of growth in the individual faculties. Here is reproduced the equilibrium supposed by his predecessors necessary to health. Ideler is better known, however, as the pupil and biographer and the incarnation of the genius of Langerman, who is said, epigramatically, to have written no book, but to have left a living book in his disciple behind him. Their conjoined doctrine was, that the lunatic mistakes the real end of life, and subverts the true subordination which should regulate the relations of the faculties, not by an error of logic, but by the unhealthy exercise of the will, and of the desires which precede volition; states which together regulate all human acts; in other words, by the emancipation of these powers from conscience.—Secondly, that the great objects of the psychologists should not be reason, attention, but the moral forces or character; or the tendencies, sentiments, and general dispositions of the mind, and of the passions, either singly or in relation.—Thirdly, that the passions, or the product of sensibility, act as the stimulators of our activity; morality merely modifies or moderates their development. In their predominance and disproportion insanity consists. Joy is an index and measure of activity; pain is the proof of an ungratified tendency. Pain is to the tendencies of the soul what vice is to morality. If passion gives time for the exercise of reason, vice follows—if not madness. Spontaneity determines the action of reason and of passion, which may resist, or modify, or nullify its power. A symptomatic insanity is admitted, as in fever, but the origin of genuine idiopathic mental disease must be sought for in passion, *l'état maladif*, and in disturbance of the primitive instincts.—Lastly, not merely the intellect and sentiments, but even the physical forces, mould themselves upon the type of passion; an assertion which may be accepted as the modern phasis of Stahlianism.*

One whose name and fame still cling to the walls of our university may be regarded as having passed the boundary line—or, perhaps, more correctly, as forming the connecting link between the animists and the modified doctrine which now prevails. Robert Whytt is claimed, and with apparent reason, as a partisan of their respective opinions by the animists, the semi-animists, and the medico-psychologists. No higher tribute could be paid to his memory, or to the judiciousness and moderation, or anticipative soundness of his views.

* "Etudes Historiques sur l'Alienation mentale," par Ch. Lasègne et Aug. Morel,' t. iii et v, 'Ann. Médico-Psychologiques,' 1844.

He was a physiologist of modern convictions, living and distinguished in past time. With the Stahlians, he held that impressions conveyed to the nervous centres excited, by a "physiological necessity" and according to certain laws indicating design and plan and purpose, animal movements—in other words, vital functions, such as digestion, nutrition, circulation; and this without reason, attention, or consciousness. It is very possible that he did not identify this "*physiological necessity*" with a psyche or anima; but he apparently viewed it as different from the rational intelligence—as never rising into consciousness, as self-acting, and as productive of results in the construction, maintenance, or reproduction of that machine, or organisation, upon the integrity and health of which mentalisation depends. His most recent and distinguished biographer seems to be conscious of this; for, while vindicating Whytt from the allegation of Haller that he was a semi-animist, he writes, "There is still room in modern science for a psyche: when the inquirer, not content with mere law, seeks the causes of organic phenomena, he cannot dispense with such an active force. As human intelligence is required to combine and regulate the natural forces which man avails himself of to produce his own works upon earth, so with all the new-found activity of matter derived from the interchange of such forces as light, heat, aggregation, affinity, electricity, polarity, a psyche is indispensable to direct the order and course of these forces in the development and working of organic bodies. Deduct the effects of all these natural forces in the development and working of organic bodies, and the residual force found to be necessary constitutes the psyche—a force just as essential in a protococcus as in the human frame. If it be otherwise sought for, it is nowhere else to be met with, except in the potentialities existing in the reproductive cells derived from the first parent or the first parents of every species in the organic world." He adds further, "such a psyche as is held essential by many modern physiologists—such a psyche as was upheld with much force of argument by the present Professor of Anatomy, in a discourse which he has not yet published, delivered to the Royal Medical Society.*

While we most fully admit, however, that the mind of Whytt was the bridge between the theory of a vital unconscious reason, and those of unconscious cerebration and reflex action of the brain; if he did not, according to Brown-Séquard, initiate or foreshadow them; and, in addition to this, and more important than this, that he advocated, and in his own experience carried into effect, the study of vital and mental phenomena as affected by and observed through organisation, in opposition to all purely chemical and mathematical philosophies,—we cannot resist the conviction that, even as con-

* 'Transactions, Royal Society Edin.,' vol. xxiii, part i, pp. 107-8.

veyed in the following lucid and definite words of Dr. Sellers, and still more palpably in those of Whytt himself, there is a very distinct adumbration of animism, and to which I do not object: "That the peripheral extremity of an afferent nerve being affected by an impression, there results a corresponding condition of the nervous centre, whence, 'in accordance with the constitution of the living frame,' a motor influence is determined through afferent nervous filaments to particular organs which are thrown into movement."*

It is highly probable that this determination of certain messages to particular obedient organs, which act unconsciously for a useful end, and this without any act or interference or cognisance of mind, would have been accepted by Van Helmont and Stahl as an instalment, if not as a fair and accurate exposition, of their cherished dogma. Even the theory suggested by the word *co-ordination*, now in such constant use, involves a similar conclusion. This consideration has been largely insisted upon, because in it is, in my conviction, contained the true theory of the relation between our physical and psychical nature—that the power which regulates must be different from, independent of, superior to the forces regulated.

Running parallel to, mingling at various points, and ultimately merging into one confluence with the school which we have described, was that of which Friederich and Jacobi were the representatives, which held—1. That the spiritualists erroneously regarded exorcism and superstitious ceremonies as among the rational means of moral treatment.

2. That the doctrine of the spiritualists is immoral, as placing disease, and consequently the eventuality of destruction, in the soul, which is one and indivisible.

3. That it is false, as it confounds moral error, delinquency, with the mental state of lunatics. The untenability of such a proposition being demonstrated by the facts—

(1) That large numbers of criminals have not been unsound of mind.

(2) Children are insane before they can distinguish right from wrong.

(3) Upright individuals have been attacked with insanity.

4. That mental diseases originate as often in physical as in moral causes.

5. That they are cured by physical remedies.

6. That our moral nature is superadded to the functions of matter.

About the opening of this century, the opinions of writers and thinkers upon this subject were capable of being divided into three classes :

* 'Phil. Trans.,' ut supra, p. 124.

I. Where the mental operations were regarded as the functions of matter, and mental diseases as bodily diseases.

II. Where the mind was held to have existence independent of the body, and its diseases as resulting from the want or loss of equilibrium, or of due culture in its powers, or as the effects of immorality or crime. And,

III. Where an independent operation or life of mind was believed in, and where its derangements were represented as partly psychical and partly corporeal.*

These represented, in fact, the schools into which physiologists were divided. The recent establishment of sounder and broader views, the result of more accurate observation, and, above all, of the careful *practical* study of mental disease by educated men, have lessened the distance between these conflicting opinions, and have so diminished the difficulties by which they were separated, that mind is now admitted as having an independent existence, but to be so intimately connected with organisation that its operations may be facilitated, impeded, or abrogated through this connection; and that mental diseases are the consequences of the disturbance of that nervous power or influence which, under present circumstances, connects mind and matter. Even Friederich, whom we have cited as the champion of the pure somatic school, is detected by Feuchtersleben in propounding as "one of the arguments for the somatic nature of all mental derangements, that the mind is an independent indivisible energy, and incapable of becoming diseased."

And we may triumphantly point to Griesinger, the pathologist, as holding similar opinions: "Entre ces deux actes fondamentaux de la vie physique il s'entrepose toujours quelque chose excité par sensation, un troisième élément, etc. Cette sphère, c'est l'intelligence."—Pp. 28, 29.

Even the doctrines of Gall and many of the phrenologists, by a route which seemed to end in materialism, led to the same proposition. The assertion that the brain was the organ of the faculties of the mind, by and through which it acted, involved its distinct existence, as well as the proposition which constitutes the basis of medico-psychology.

The course of thought among German psychologists has been introduced and pursued, because if it did not actually form the channel through which all that is true and valuable of the philosophies of early times has descended to us, it certainly has contributed many of the materials of which modern belief has been built up and composed; and this whether we regard the firm and substantial observations of the pathologists, or the more subtle and

* 'Feuchtersleben,' p. 68.

plastic experience derived from consciousness. The prevalent opinions are a union, a harmonisation, a compromise, perhaps, between the materialists and the vitalists; and the general consensus of living medico-psychologists in Europe who have thought out the subject, or thought upon it at all, after making ample allowance for individualisations and idiosyncrasies, may be represented as consisting of convictions that the mind, whatever its nature may be, is intimately connected with, but is not a property of, nervous structure; that its laws, and the relations of those states of consciousness which are named faculties, feelings, instincts, can only be studied and understood in relation to, and as influenced by, the conditions of organisation; that its disorders and diseases must be recognised as expressions of arrested or undue development, or of molecular or other changes—even healthy changes—or of degeneration and destruction of structure; that the remedies when material act by influencing these changes towards health, and thus establishing the normal relation between mind and nervous matter; and when moral, or acting more directly on the intelligence and feelings, they stimulate or repress, or alter, as the case may be, the functional process upon which healthy mentalisation depends. It may be further observed, that this analysis would not express the prevailing doctrine did it limit the relations subsisting between mind and matter to the cerebro-spinal axis. The great characteristic of current opinion appears to be, that wherever there is nerve, *there* is psychical function, actual or potential, which may act dynamically, or through the influence of nutrition, or rise through pain or morbid activity into the range of consciousness. This is the stage at which the archæus of our predecessors ceases its specific instinctive operation, and comes within human cognisance. The nervous influence of the great mass of physiologists, the cœnesthesis of Feuchtersleben, the law of others which is represented as acting altogether irrespectively if not independently of intelligence, becomes part and parcel, and permanently so, of our intelligent being, and furnishes materials for thought—or, more correctly, thought itself. Such propositions as this, and more especially that every mental process must be judged of and treated in reference to the nervous structure and frame in general, and their functions, enormously increase the domain and importance of psychology. If it discloses the innumerable sources of mental disturbance, and that the boasted supremacy of mind is a fable—that it is really dependent for its activity, and integrity, and responsibility, upon the laws and health of the general economy,—it further demonstrates that no circumstance, no impression internal or external, which through these laws reaches our instinctive or conscious nature, but is accompanied with molecular changes, and cannot and should not be excluded from our philosophy. The construction of an asylum—the dietary, the clothing of the insane—the laws under which

they are disposed of and managed—are in this view as rightfully, if not as much, within the province of medico-psychology as the relation of reason to volition; of the evils of concentration, monoidealism, or excitement upon the circulation in the brain; or as the effects of sleep, amusement, religious teaching, in bringing about the equilibrium of the faculties.

We are not open to accusation that the co-ordination of these fragments, and the formation of a consistent and what promises to be a mature view of the whole subject has been late in development. The causes of the delay are to be found *first* in the late period at which the insane were subjected to close and clinical observation, and regarded through any other medium than that of superstition and fear; and, secondly, in there being no body of observers specially prepared or devoted to the investigation, or, indeed, as having power and opportunity to devote themselves.

It is not asserted that to the German school or to any particular class of authorities we exclusively owe the principles upon which our science and treatment are founded or regulated. Such views grow up under all systems, and without system, in every class of minds. Every practical man, even he who boasts of his freedom from the shackles of hypothesis and the vagaries of speculation, has a theory; and wherever *that* is true and sound, or to the extent to which it is true and sound, and has led to a judicious and humane course, it may be confidently claimed as a contribution to the science which its possessor may scorn.

Pinel was an actor rather than a thinker. His writings contain, however, valuable clinical observations. He records his inability to trace mental disease to lesions in the nervous structure, and yet he calls mania "an act of the living principle which must change organisation;" but his habits of thinking and his treatment, though far from heroic, and, in fact, a protest against the sanguinary and exhaustive processes of his contemporaries, were in keeping with the principles then and ever since triumphant in France. His fame depends greatly on reposing unbounded and loyal faith in the law of love and kindness as a mean of cure, amelioration, and management. It would be vain to connect this revelation with the philosophy of his countryman Descartes, or with the lurid dawn of that sun of liberty which was supposed to have disclosed for the first time the destiny of our race; suffice it that Pinel burst the fetters, levelled the oubliettes, proclaimed humanity, and established rational paternal ministrations as the right of the insane, because they remained men although they were mad, and were susceptible of cure or of improvement, though labouring under the greatest and most grievous, but not the most incurable, of diseases. He was born in 1742, the contemporary of Langerman, born 1768; and they may be regarded as types of the mental tone and tendencies of the races to which they respectively

belonged, and which were ultimately to converge and culminate into a more catholic creed. Langerman is rich and recondite in the metaphysical and ethical aspects of alienation; Pinel is perspicuous, practical, philanthropical, but not psychological.

The successor of Pinel was more of an observer than a philosopher, and he was more of a philanthropist than either of these. The writings of Esquirol even now form an inexhaustible treasure-house of carefully noted facts, and when published new to the profession, because the insane had scarcely until his time been submitted to the observation of scientific men, and were placed in circumstances calculated to change and aggravate the character of their malady, and to render them dangerous and formidable, and to suggest grotesque and erroneous ideas of their condition. The achievements of Esquirol consisted in feeling in his gentle and Christian heart, and developing in his practice, what Pinel had hoped and initiated, but much more than he had dreamed of. To his personal manners and example, as much as to the principles he had laid down, are to be traced the rational views of insanity which now prevail. His life was a long clinique, instigated and animated by charity and sympathy. He built up no theory of his own; but, so far as he theorised at all, he may be claimed by the present generation as holding their opinions. His immediate representatives, pupils, and admirers have now for twenty-three years embodied and developed these opinions in the 'Annales Medico-Psychologiques.' Our science is of long and tardy growth; our name is due to the school and the invaluable series of papers to which we are now referring. From the prefatory address or profession of faith by Cerise, in which the mixed or psycho-somatic view is expiscated until now, with such deviation and diversity as are inseparable from free discussion and the co-operation of different minds, the same principles may be traced. This may be, in part, attributable to the work having been conducted by the same editors; but it is much more due to the general acceptance and predominance of the principles themselves. How far this splendid record of the thoughts and deeds of a section of our department may have exerted an influence upon the convictions and literature of the profession in this country, it would be presumptuous in me to say; but we may pass on to another topic with the remark that such an example is deserving of all honour and of imitation.

The study of the literature of our department has become absolutely imperative, were it for nothing else than to prevent rediscoveries and the prosecution of inquiries long since exhausted.

American literature appears to justify the supposition that our fellow-labourers in that country concur in the theory which now prevails in Europe. No systematic works have reached us from the United States since those by Caldwell, Brigham, and Ray; and, in

speaking of American literature, reference is made to the 'Journal of Insanity,' and to those valuable contributions which appear in the form of annual reports from different asylums. These papers, adopting a practice introduced but not generally followed in this country, contain to a great extent the personal experience and reflections of the writer. Although, being addressed to many non-professional readers for the very purpose of dispelling gross and grievous errors, and of substituting sound and benevolent views, they are so far popularised as to be freed from many unnecessary technicalities; they preserve the dignity of the subject, and in no degree derogate from the professional position of the writer, and contain a body of important information and philosophical induction so valuable, that the ephemeral nature of the vehicle to which they are committed is to be lamented. The monographs of Drs. Ray, Butler, Kilbride, Chipley, &c., are of the highest order.

An examination of our own authorities, from the anticipative essay of Beattie, published a century since, to the last profound analysis by Professor Laycock, although they may be found to incline less or more to one side or other, will justify the conclusion that the psycho-somatic theory is here, as elsewhere, in the ascendant. Two illustrations may suffice. Of the classifications now in use, one is founded upon the mental phenomena as indications or symptoms of mental disease; another refers mental diseases to the supposed organic cause, and names them accordingly, but describes them by the mental phenomena; and in a third, the attempt is made to distinguish and arrange the morbid affections according to the primitive instincts and powers involved. But in *all* the correlation of the psychical and somatic aspects are either taken for granted or designedly recognised. The prevalence and sincerity of this belief may be further exemplified in the principles which guide our therapeia. Morphia is prescribed to produce sleep, and thereby to lessen mental activity and to economise force, to check the metamorphosis of nervous tissue, to facilitate nutrition, and, in these ways, to induce healthy mental action. Cannabis Indica is resorted to in melancholia as producing the same result, by reversing the order of the process. Happy and joyous thoughts, and dreams, and even delusions, are suggested. Artificial and temporary convalescence, a lucid interval, are created; active and healthy nervation ensues; the effect on nutrition and sanguifaction is such, that anæmia, generally the origin of the moral suffering and other psychical phenomena, are removed. All moral means, again, act perhaps through their influence upon structure, or, at all events, less by direct operation on the intellect and emotions than by stimulating the nervous structure to that degree of activity which is necessary to the normal exercise of the faculties. And, in contradistinction to this, the shower-bath, counter-irritation, occupation, prove chiefly beneficial

by appeals to fear, suffering, and the sense of discipline. Iron, iodine, bromine, all important agents in the removal of insanity, are supposed to reach the mind through the blood; whereas joy and other moral impressions reach the blood through the mind.

These are considerations which point emphatically to medical men, as the only class who have even partially embraced such principles, and who are entitled to be autocratic in their exposition and application.

Among those who have contributed largely and lovingly to the promotion of medico-psychology, and to its organisation into the form which it has latterly assumed, but have passed away since we last met, must be remembered I. Jean Parchappe de Vinay. Prepared by having passed through and distinguished himself in the offices of lecturer, practitioner, medical superintendent for thirteen years, he was elevated to the position of inspector-general of the insane and of prisons; a combination which, though natural and appropriate in itself, has not yet found a place in the British mind. The elevation was, in one sense, a bauble dignity, as barren as the cross of the legion of honour with which it was accompanied, as he left ample emoluments and a large practice at the call of government. He is described, by those familiar with his life, as simple and industrious in his habits—as a learned physician, a profound philosopher, an able administrator, and master of the most minute details. We, however, know him chiefly as the author of 'Treatises on the Brain, its Structure, Functions, and Diseases;' in which he advocated the psycho-somatic doctrine, and discriminated the cerebral changes found in the bodies of the insane, into those connected with and those unconnected with the mental disease; as the architect of several of the asylums recently erected in France; and as the patron, protector, and friend of those who, as he once was, are placed in the trying circumstances inseparable from the due discharge of the duties of a medical superintendent.

Ripe in years and wisdom, Sir A. Morrison recently died. Though of a generation that has passed or is rapidly passing away, and designated by one of his biographers as a patriarch—and though living in the quiet suitable to the twilight of years—he never severed the ties which connected him with our department. It must have been among his latest acts to endow a lectureship in connection with the Royal College of Physicians, now held by our honorary member Dr. Sellers. He has other claims upon our memory and respect. He was, perhaps, the first who, in this country, delivered a course of lectures upon mental science. His attention was chiefly directed to the physiognomy of insanity; and, I believe, these lectures, and the drawings by which they were illustrated, now form a large portion of his work upon this subject. The physician of two large hospitals for the insane, and personally and practically acquainted with the

imperfections of the human instruments by which those who minister to the insane are compelled to work out their plans of treatment, he founded an association for the purpose of rewarding by honours and prizes the long-tried and faithful among the attendants in asylums, and thus to hold out encouragements to candidates of a higher order of qualifications.

John Conolly displayed, within the university of this town, and in the arena of the Royal Medical Society—dear to many of those who hear me—those predilections and preferences which ultimately determined his destiny, and gave him a position of nearly equal rank among physicians and philanthropists. His thesis was on Insanity, and formed the foundation of that work by which he is most popularly known. A physician in increasing practice, one of the editors and originators of the 'British and Foreign Medical Review and Cyclopædia of Practical Medicine,' and a teacher in a University, John Conolly, I know, never felt that he had secured his true position, or that he had found a fair field for the exercise of his head and heart, until he was appointed medical superintendent of Hanwell. It is not affirmed that he made personal sacrifices in order to accept this distinction; but, like that of many other great and good men, his life was one of much sacrifice and much suffering. It is not my province here, however much it may be my inclination, to speak of more of his good deeds than of the assistance he afforded in the grand revolution effected in the management, and of the effects of his teaching in the propagation of sound views in the treatment, of the insane and of the idiotic. I cannot refrain from claiming him as an advocate—and as a philosophical advocate—of a medico-psychology founded upon induction. His ideas, it is true, seemed to have passed through his heart, and his feelings to have raised and rarefied his intellect. Perhaps it is because of the elegance and popular attractions of his style that his habits of thinking have been regarded as less logical than illustrative; but his "Indications of Insanity" show a familiarity with the laws of the human mind, and especially with the peculiarities and subtle defects by which it is disturbed and unhinged, requiring great perspicacity and penetration, as well as careful analysis.

Sensitive in his rectitude, gentle and genial, he was to all men conciliating and courteous; to his friends, and I judge after an experience of thirty years, he was almost chivalrously faithful and generous; and the insane he positively loved.

It would be trite to say merely that these men, "though dead, yet speak." We repeat their very words, we think their very thoughts; are, or ought to be, animated by their very spirit; and so far as we carry into our daily work lofty aspirations as to science and duty, but humble pretensions as to ourselves, a severe and self-sacrificing sense of the peculiar nature of our professional obliga-

tions, and sympathy for those committed to our care, we shall best do honour to their memory, and best serve our country, our profession, and our God.

The Insane Colony of Gheel Revisited. By John Webster, M.D., F.R.S.

(*Read at the Annual Meeting of the Medico-Psychological Association, held in Edinburgh, July* 31*st*, 1866.)

Nearly ten years ago I visited the very ancient establishment above named, whereof notes appeared in Dr. Winslow's 'Journal of Psychological Medicine' for 1857, and which, I was led to believe, by the discussion that ensued, rendered this interesting institution better known in Great Britain than heretofore. Since that period, various professional and other travellers, as well English as foreign, have paid visits to Gheel, and also subsequently published valuable reports, with remarks on improvements recently accomplished. Being anxious to inspect a second time this colony, and observe the ameliorations which Dr. Bulkens, its able medical superintendent, had effected, I again visited Gheel during May last; and thinking some account thereof may interest members of the distinguished Society I have the honour to address, my present communication has been drawn up, trusting, at least, it may excite some attention from philanthropists and psychological physicians.

However, I would first briefly notice the ancient legend whereon the reputation of that far-famed retreat for insane persons is asserted to rest, and which, I hope, will not prove wholly uninteresting, although likely familiar to members of this learned Association. According to tradition, late in the sixth century, Dymphna, a daughter of an Irish king, was converted to Christianity by an anchorite named Gerebert. The father of this young lady felt greatly enraged at her conversion; and being also enamoured of his own child, threatened dire vengeance. As the noviciate remained obstinate to parental authority, accompanied by her spiritual adviser she fled across the ocean, and ultimately arrived at Gheel, in which remote district of western Europe, Dymphna then resolved to dedicate herself in future to devotion and celibacy, along with St. Gerebert.

But the old pagan sovereign having subsequently discovered the fugitives' retreat, followed in their track, and insisted upon his daughter again changing her adopted faith; but to such proposal she still refused compliance. This continued obstinacy made the savage monarch so furious, that at one blow with a sword he cut

off his daughter's head, having also mercilessly beheaded St. Gerebert a short time previously. These cruel deeds, it is further reported, so greatly frightened several lunatics then present, and likewise produced such strong impressions upon their excited feelings, that they became cured as if by enchantment. Immediately the cry "A miracle, a miracle!" was raised by wondering by-standers; and thus "Dymphna," "saint and martyr," has ever afterwards been the patron of all demented victims, in Gheelois estimation. This belief having spread abroad, not only in Campine but to other countries, lunatics hence flocked to Gheel, in order to get cured through St. Dymphna's intercession. About A.D. 1200, a church was erected on the spot where the two murders just described had been perpetrated, in which the female saint's bones were subsequently deposited, and are still preserved in this sacred temple, according to popular opinion.

Nevertheless, leaving that disputed question for casuists to settle, it will suffice to state, that the tabernacle said to contain St. Dymphna's remains usually stands on four stone pillars behind the church altar, and has a passage under it of about three feet in height, through which lunatics formerly brought to Gheel were accustomed to pass on bended knees. Poets say, "the palace stairs of great personages were often worn away in ancient times by beggars asking favours." Here that sarcasm is really verified, since the stone floor of this much-revered locality is indented to some extent by the crawling limbs of devotees, who came thither to be freed from their mental malady. Similar genuflexions are indubitably now much more rare than in ancient superstitious times, although examples of such ceremonies have occurred in years not long by-gone, where maniacs devoutly crawled through this hallowed precinct, as well as some persons desirous themselves to obviate the contingency of being subsequently attacked by mental aberration. When these formalities took place, the parties accompanying a lunatic continued singing hymns and praying during the whole time, so as to assure more certainly the saint's favorable intercession. Near the central part of St. Dymphna's church, and on the left of its choir, a large case like a sentry-box contains the saint's figure, gorgeously clothed in velvet, with lace, gold, and other ornaments. On the other side of this choir is placed, as if by way of counterpoise, nearly the half of what had formed a stone coffin, wherein, tradition says, were found the saint's mortal remains. But the most singular portion of this sacred edifice is a dark dungeon-looking apartment, in a small house attached to the principal church tower, and apparently used as the present occupants' kitchen, where maniacs formerly brought to Gheel were first lodged, during at least nine days consecutively. Throughout that period, persons reputed insane remained during day-time closely bound to the fireplace by

an iron chain connected with a ring, also iron, on one wrist, besides having another attached to their ankle; while, at night, the wretched victim was tied down in a wooden bed, containing straw instead of a mattress, by strong iron chains, to prevent movement. Besides such harsh treatment, during the *entire nine* days considered essential to ensure recovery, *nine* young virgins, hired for that specific purpose, made a daily procession round the church aisles, passing *nine* times on bended knees under St. Dymphna's tabernacle; invocations being likewise offered up for the patient's recovery; at the same time that a priest recited certain prayers, held essential on these occasions. At one side of this room, close under its roof, there is a small gallery, from whence relatives and curious spectators could witness whatever mystical ceremonies might be going on below. But proceedings like those described being now rare, a stranger's curiosity can be very seldom gratified.

The commune of Gheel, strictly speaking, constitutes part of a province designated Campine, or "Kempen-land," which signifies flat, or plain, without trees. It is fifty miles from Brussels, and forms a level but somewhat elevated portion of eastern Belgium, when compared with adjacent low-lying lands. Gardens and fertile fields occupy the vicinity; but on several sides beyond, these often pretty enclosures are surrounded by sandy steppes, or wastes of considerable extent, having quite a different character. The environs are, however, much more productive than outlying districts; while the town itself occupies a moderately elevated position, lying betwixt the river named "Great Nèthe" and two tributaries, but much smaller, called the Eastern or Little Nèthes. Although not very salubrious—intermittent fevers and typhus being sometimes frequent, while during winter pectoral diseases often prevail—still the district is not deemed so unhealthy as various portions of Belgium, where damp soils and malarious emanations act injuriously on the human frame. The entire commune has nearly 11,000 inhabitants, of whom about 4000 reside in Gheel itself. The principal street is long, broad, and possesses some good houses, with several shops and comfortable hotels, especially the "Turnhout Arms." On one side of its central Place stands the cathedral church of St. Amand, St. Dymphna's being in another quarter; besides which, adjacent streets and hedge-enclosed gardens make Gheel resemble most Belgium towns of the same magnitude.

The entire colony in superficial extent comprises 27,000 acres; its greatest length, from north to south, being nearly fourteen miles; the breadth, from east to west, eight and a half miles; and altogether may be reckoned at from thirty-seven to thirty-eight miles in circumference. The commune is divided into four sections, within which there are seventeen hamlets, some being almost little villages. Each section has a physician, under whose special charge all lunatics

dwelling within its limits are placed, while the superintending physician overlooks the whole establishment. The latter also receives every new patient or lunatic transferred from any private dwelling to the central infirmary, either because the party's physical health had become seriously affected, or mental malady required special medical attention; and further, if temporary seclusion was deemed necessary in particular cases, but which could not be properly carried out at an ordinary residence by the patient's usual attendant.

On the 20th of last May, the total insane residents in Gheel and commune amounted to 1025, being 512 male and 513 female lunatics, or an equality of both sexes, who were divided into four separate classes, with reference to the respective sums paid for their maintenance; but, first, into indigent paupers; and second, pensioners, or private patients, according to ordinary language. The former class comprised 908, of whom 432 were male and 476 female lunatics; the male pensioners being 80, with only 37 females in that category. Again, of the entire number, 867 were native Belgians, the remaining 158 being born in other countries. Throughout the district where lunatics are only allowed to reside, the total licensed houses are 726, classified into four divisions; and seeing the commune contains about 2100 different residences, it hence follows, at least one in every three has a resident lunatic. Houses of the best class amount to 72, where from 1000 to 2500 francs are paid annually; the second comprises 148 residences, in which from 500 to 1000 francs is the remuneration; the third consists of 382 houses, the payment being beyond 200 and up to 500 francs; while dwellings in the fourth list are only 124, and in these 200 francs is the usual allowance. Unless under particular circumstances, not more than three lunatics can reside under one roof; and two demented inmates cannot occupy the same room. Special sanction may, however, be granted by the managing committee, in concurrence with the superintending physician, for a larger number of patients being received, but only after he has reported that the locality and all essential appliances are properly adapted for the proposed augmentation. Usually the sexes are lodged in separate houses; nevertheless, with regard to aged persons, whose malady may be chronic and deemed inoffensive, a male lunatic is occasionally allowed to live in the same family where an insane old woman analogous in character also resides. All suicidal, dangerous, homicidal, or mischievously disposed insane persons are, however, rarely received, or allowed to remain after they decidedly manifest such characteristics; and when patients so become, they are usually sent home, or transferred to some asylum elsewhere. Further, the authorities generally place boisterous and agitated maniacs at remotely situated cottages, or

farmhouses located in open heaths distant from the town, where, having few neighbours, they cannot disturb any insane patient or cause much annoyance. Again, such parties, if much excited, may walk about in gardens or fields adjacent without danger to others or themselves. Being also thereby placed beyond the observation of strangers, and not likely to come in contact with similarly afflicted fellow-creatures, evil consequences seldom result from such arrangements.

Tranquil patients and many of the highest paying pensioners live in Gheel, the total cases of that description being upwards of 230, or beyond one fifth of the whole insane population residing within the commune.

On making inquiry, I learned only one house contained five lunatic inmates; several had four, or more frequently two, but one was most common. It should be stated, however, that recently a large mansion has been constructed in the chief street of Gheel, at an expense of more than 50,000 francs, which will be adequate for eight patients, each having separate bedrooms, and also several a sitting apartment, should such additional accommodation be required. There is likewise an extensive and well-laid-out garden adjoining, with various other appliances deemed essential for the amusement or occupation of lunatics. In short, this new dwelling forms an excellent "maison de santé" of a superior description. Only four insane patients lodged at this house when I visited its interior, all being foreigners, viz., one English, two French, and one Swiss.

In consequence of varied improvements lately effected at Gheel, every class, especially those designated pensioners, or who pay a high annual board, have augmented in number since 1856, when the aggregate insane population was 774, or 251 less than at present. In other words, there are now one third more lunatics inhabiting the commune than ten years ago, when I first visited "Kempenland." Such facts prove the increased repute which this colony has acquired, and the more favorable opinion it has obtained among the Belgian people, as also the constituted authorities, who now transfer thither a greater number of insane patients, contrasted with previous periods. Through this large augmentation of resident lunatics, the money received at least amounts to £15,000 annually, besides various collateral sources of revenue. In truth, the town and vicinity almost exclusively depend upon such means of income, especially as the commune has little or no trade, excepting what its peculiar population may require for their necessary wants and maintenance.

During five years ending 31st December, 1865, the total insane patients admitted at Gheel amounted to 926, 500 being male and 426 female lunatics. The number of recoveries reported were 228, or 24·62 per cent., calculated according to the aggregate admissions.

the deaths were, however, more numerous, viz. 409, or 43·06 per cent.; but this large mortality may be easily accounted for by the chronic types of mental maladies which affected numerous inmates, as likewise the long period many had been insane. Besides these results, it should be also stated that a number of patients left the colony ameliorated, in addition to others removed by relatives, or the communes who had sent them to Gheel originally. According to the authority already quoted, 141 male and female lunatics, after being some time resident, left either uncured, or before they had derived benefit.

Respecting this point, and likewise to illustrate further the Gheelois system, I would refer to another instructive table, also kindly supplied by Dr. Bulkens. According to that valuable return, which comprises ten years ending 31st December, 1865, among a total of 1623 insane patients of all categories, 45, or less than 3 per 100 escaped; while 133 were subsequently removed, either from being dangerous or likely to disturb public tranquillity, and whose malady was deemed incompatible with the régime, free-air liberty, and family mode of management pursued. Remarking, however, that only 133 lunatics, or about 8 per cent. of the whole admissions, were so discharged, it cannot be consequently asserted, with justice, that any extensive or special selection of cases different from the practice prevailing at asylums was made during the period specified.

Another important feature in reference to patients received at Gheel during the same ten years, and also up to the 20th of last May, equally deserves mention; namely, the types of mental disease which were noticed among 1696 cases it comprehends, besides the actual recoveries registered under each category. By Dr. Bulkens's classification of these 1696 patients, 91 male and 127 female lunatics laboured under "melancholia," being 218 altogether, or 12·85 per cent. of the admissions. Among these, 46 males and 56 females recovered, giving a ratio of more than 46 cures per 100, or 50 per cent. in males and 44 in females. "Mania" affected 586 individuals, or upwards of one third the whole admissions; comprising 298 male and 288 female lunatics, of whom 140 males and 114 females were cured; being 43·17 per cent. in that division, or 47 per cent. in males, but only 39 in females. By "delirium" 96 patients were attacked, the sexes being equal, or 48 cases of each; among whom 17 females but only 11 males were cured, or 35·40 per cent. of the former against about 23 per cent. of the latter. "Dementia," like mania, characterised a large proportion of the admissions, viz., 242 males and 275 females, or 517 altogether, forming nearly one third the total cases received; but of whom not more than 31 males and 19 females recovered; that is, 12·80 per cent. of the former and only 8·87 per cent. of the latter sex. In short,

most of the patients thus classified were incurable, which opinion is even more applicable to the 136 cases of general paralysis then admitted, comprising 103 men and 33 women, of whom not one recovered. This remark likewise applies strictly to 143 cases of epilepsy, including 101 male and 42 female patients, seeing no case ended in convalescence. Therefore, deducting these 279 instances of general paralysis and epilepsy from the 1696 cases above enumerated, it follows that among 1417 lunatics remaining, and comprehending every other variety of mental disease, the total recoveries being 434, the general ratio of cures amounted to 30·69 per 100 admissions; while, it should be further remembered, many of the patients had remained a long time insane. But another important fact deserves also special regard, viz., among 436 insane patients deemed curable when admitted, and of whom some reasonable hope was then entertained respecting their ultimate recovery, 302, or 69 per cent., left Gheel convalescent. Such favorable results speak strongly in support of the Gheelois system, and may well bear comparison with statements given in official annual reports emanating from various public institutions for lunatics both in Great Britain as elsewhere.

Notwithstanding great freedom characterises the treatment pursued, objectors still assert that numerous lunatics residing in the colony are confined within their domiciles, often wear straps, manacles, and even have hobbles to prevent escape. In 1856, when I formerly visited Gheel, the total patients then restrained in any form were 69 among 774 lunatics at that period under treatment. During my recent visit, among upwards of 1000 lunatic patients, I learned that the daily average of persons under even temporary restraint by manacles seldom if ever exceeded 20 examples; while those who had hobbles, to prevent straying in fields adjacent, by records kept rarely amounted to five instances. But even then such patients could often promenade in the gardens attached to their dwelling; and I heard of none being confined by strait-waistcoats or analogous appliances. At the new infirmary, where seclusion-rooms have been constructed, only one patient, a female, was in temporary confinement when I inspected that recent addition to the colony; but, it should be added, this refractory case would ilkely so remain during a few hours. Indeed, she had speedily become tranquil after entry, and was very quiet when I visited her apartment.

The infirmary just noticed constitutes a novel feature in the improved appliances introduced at Gheel. It forms a handsome building in the immediate vicinity; has two storeys, with a frontage of fifteen large windows, and every appendage usually seen at similar structures. Indeed, the ventilation, amplitude of dormitories, court-yards for recreation, baths, sitting-rooms, with other appliances, are all of a superior description, and prove highly creditable to Dr.

Bulkens, who, along with the architect, were the chief directing authorities while it was in progress. About 60 lunatics can be accommodated as patients should their physical ailments, mental condition, or recent arrival in the colony render a lengthened residence necessary. At my visit, besides the female already mentioned under temporary seclusion, I recognised a dozen other patients, of whom several had been brought from their customary dwellings on account of bodily infirmities requiring special treatment. In addition to these objects, when a lunatic first arrives at Gheel the party is always placed in an appropriate ward, so that the type and symptoms of each individual case may be specially observed; as likewise thus to enable the superintending physician to determine, among what particular class or section the patient should be ranked. Again, whenever any lunatic became bodily diseased, or if an access of mental malady supervened which required special attention, or it was deemed advisable to place the sufferer under more immediate observation, than at a rural cottage or in town, then removal to the infirmary was ordered by the sectional physician.

The recently opened infirmary, and licensing private houses of a superior description for receiving pensioners, paying higher annual boards than formerly, constitute important changes in the improved arrangements at Gheel. Seeing this infirmary—often recommended by physicians both native and foreign—has been finally established, particularly through Dr. Bulkens's exertions, I suggested to a high official authority in Belgium that it should be designated by a name of much repute among European medical men and philanthropists. During my former visit to the various lunatic establishments in Belgium, I made an analogous suggestion respecting the new asylum then constructing near Ghent, and which was built especially under the immediate direction of Dr. Guislain, the eminent psychologist and physician. As that proposition was ultimately adopted, and the establishment is now officially called "*Hospice Guislain*," I hope a similar resolution may be taken by the Belgian authorities, so that the Gheel Infirmary shall be known in future as "*Hospice Bulkens.*"

Among a community comprising numerous lunatics, the police and other arrangements must, of course, be strict and various, in order to meet contingencies. Thus, during summer months patients cannot leave their residence before 6 in the morning or after 8 in the evening; and during winter, before 8 a.m., or beyond 4 in the afternoon; while only tranquil lunatics and those who conduct themselves decently, or seem not likely to annoy other parties, are permitted to frequent entertainments and places of public resort where they can drink beer, smoke, or enjoy themselves like ordinary frequenters, unless with reference to spirituous liquors. In consequence of existing regulations, as also doubtless originating from other causes, great tranquillity prevails throughout the town; and,

speaking from my own personal observation during the period I lately remained at Gheel, as likewise when formerly visiting the colony, few towns of the same population, where the residents were rational beings, seemed to contain better conducted inhabitants, or appeared altogether so quiet as in the peculiarly constituted capital of Campine, whether at night or daytime.

During recent years, much more care has been enforced respecting the accommodation and general treatment, which insane residents should receive from host or hostess. The licences of several have been withdrawn, in consequence of not fully complying with the rules established, or through negligence towards inmates. Many new houses have also been licensed, in consequence of the augmented number of lunatics sent to Gheel. Further, as the pensioner class, who pay often larger sums than in former years, have also increased, and as those houses where inmates were comfortable now more likely obtain patients paying higher rates of board than otherwise, this circumstance has produced emulation among householders, which the authorities very properly encourage. The accommodation afforded is generally good, considering the class of patients or their previous mode of life; and the treatment indigent residents frequently receive from parties with whom they are placed, to my mind seemed often more than commensurate with the established remuneration. Nay, according to various statements, I firmly believe, were it not on account of the labour and assistance many recipients of insane boarders thereby obtain in their respective trades or occupations, having to lodge, feed, and maintain demented residents for the very small payments allowed, cannot always prove profitable, or even remunerative.

Irrespective of several other important features characterising the Gheel system, this fact deserves special notice—viz., that it becomes more easy, than sometimes at public asylums, to place patients under circumstances where they can be employed in occupations analogous to those they had pursued previously. A large proportion being labourers, mechanics, domestic servants, and the like, the authorities can at once transfer, for instance, an operative shoemaker, a blacksmith, agricultural labourer, or dairy-servant, to dwellings wherein they may be occupied much in the same manner as when enjoying good mental health. Further, being also under proper surveillance, whatever treatment is deemed judicious can likewise be adopted. Seeing a large proportion of insane residents at Gheel are agricultural labourers—indeed, they usually constitute about one fourth of the entire number—while persons employed in household work are even more numerous, besides many dressmakers and milliners, as also carpenters, tailors, with other handicrafts, it thence becomes among the ordinary Gheelois population not difficult to place lunatics with hosts where useful arrangements in that

respect can be accomplished. Still, at Gheel numerous patients are unwilling or unable to work through various causes, the proportion being about 30 per cent. in that category, which therefore leaves seventy among every hundred lunatics occupied according to their respective capabilities.

Although proceedings of the kind mentioned are easily adopted at this insane colony, impartial observers must admit, however much the Gheelois method may meet approval in many respects, and deserves imitation, it will often prove a difficult undertaking to institute an analogous procedure elsewhere, especially in localities whose general population has neither been accustomed to associate with, nor ever had any experience in managing lunatics, or imbecile fellow-creatures. At Gheel the domestic arrangements and customs are dissimilar to those in most other countries, while an experience of many centuries has rendered its inhabitants like hereditary attendants upon the insane, but which attribute is rare, or would not be easily created among any large community. Hence the obstacles which must always exist, whenever a similar colony on an extensive scale is proposed. Further, it cannot be denied, for lunatics belonging to the upper or middle classes, the discipline, employments, and mode of life necessarily followed according to the Gheelois method could be seldom enforced among ladies and gentlemen. For lunatics belonging to the lower orders the system there adopted assumes, however, quite another aspect, and is entirely free from several objections enunciated by adverse critics.

Occasionally writers entertain the opinion, that insanity is oftener met with among persons born in the Gheelois commune, than throughout districts having a sane population. Both Dr. Parigot, late of Gheel, and Dr. Bulkens especially, who has investigated the point, think such idea erroneous. Indeed, the latter says, "Mental diseases do not prevail so frequently among Gheel natives, as in various localities belonging to the province of Antwerp;" while he has likewise ascertained that, in the adjacent canton of Herenthals and Turnhout, where no lunatics are received, the proportion of insane among the native population attains even a higher ratio than characterises Gheel. Another feature should also be noticed, namely, Gheel being situated in a plain extending a great distance, and having no hills or mountains to protect it from any wind which blows, the streets are often very dusty in summer, while during winter northerly or easterly winds are not salubrious. Still, longevity occasionally prevails among insane residents, several having been patients upwards of half a century, others during forty or thirty years, and some had become nonagenarians; but I heard of no individual who could be truly considered a centenarian.

The great annual fête or "Kermis"—viz., "wake" or fair, in English—appointed for the Gheel commune, having taken place

during my stay, I was therefore able to witness the manners and customs of its general population, but more especially the effects which public festivities, ecclesiastical ceremonies of unusual pomp, much popular excitement, and the great crowds assembled from adjacent districts, produced among many lunatics who participated in the varied proceedings of the four days dedicated, in the first instance to religious duties, but afterwards to dancing, beer-drinking, and frequenting various "herbergs," estaminets, &c. On Whit-Sunday, the 20th of May, or Pentecost, St. Dymphna's church was crammed with upwards of a thousand worshippers at one time, but always changing, and of whom many had apparently come to see its gorgeous decorations, or prostrate themselves before the patron-saint's image and tabernacle containing her relics, which was now placed in the centre aisle on an elevated pedestal or throne.

Interiorly, the church was profusely decorated with flowers, gay festoons, canopies, orange and other trees, besides a diversity of ornaments specially prepared for this grand occasion. Over the saint's tabernacle, the figure of a little winged angel, having a laurel sprig in its right hand, with a crown of flowers in the left, seemed as if descending from above, in order to deposit both on the receptacle of St. Dymphna's venerated remains. High mass was also being performed by splendidly attired priests and many officials. An organ pealed forth impressive music, accompanied by numerous voices, whose singing was so good that altogether, I have seldom heard any church service better performed, even in Italian or Spanish cathedrals. Around St. Dymphna's tabernacle, numerous devotees were praying on bended knees, and appearing to invoke the saint's intercession. Many had strings of beads in their extended hands; and after praying during a few minutes, they walked round the precinct several times, but finally resumed their former kneeling position, yet still praying, although inaudibly.

At one time I counted at least twenty-five persons so employed; and whatever some critics may think of such superstitious devotions addressed to what seemed only a covered box, but said to contain the relics of an Irish maiden, none can doubt the sincerity of feeling actuating parties who appeared thus to pray for their own recovery, or of mentally afflicted relatives. After making these genuflexions, generally three times, but occasionally oftener, a number went next before an image of the Virgin Mary having Christ in her arms, both gorgeously apparelled, with jewelled crowns on their heads, and placed under an elegant canopy, having bouquets of flowers around, to perform further devotions.

Subsequently, many of the same individuals also worshipped at St. Dymphna's image, much after the style enacted near her relics. As additional indications of the veneration entertained respecting the martyr whose shrine had here attracted such crowds, the numerous

silver offerings attached to her attire unmistakably demonstrate, whilst indicating the great ignorance prevalent among a Campine populace. Moreover, in order that such sentiments might not be forgotten, or perhaps to proclaim the saint's merits, on the border of her bespangled velvet robe this inscription was embroidered in golden letters so large as to make the words easily readable by even distant spectators—viz., "*St. Dymphna, Hoop der Krankzinnigen*" (St. Dymphna, the hope of lunatics).

Sceptics may ridicule the absurd notions actuating apparently numerous persons assembled in St. Dymphna's church at this day's festival, which lasted several hours consecutively. That view is, however, incorrect, seeing various individuals who had taken part in the ceremonies acknowledge, they purposely visited St. Dymphna's Church, to pray for the saint's intercession in favour of afflicted relatives or patients in the colony. Among several instances of this description, I may mention that of a Belgian serjeant whose insane wife had been some time in the commune. This otherwise intelligent soldier, although admitting the kind treatment received, nevertheless felt faith in St. Dymphna's influence, and had specially visited her shrine on the present, as during a former occasion, in order that he might, by imitating other devotees, promote his wife's convalescence.

At St. Amand's, the chief or communal church of Gheel, a great crowd was likewise assembled, its interior being also profusely decorated with flowers, flags, orange-trees, and numerous ornaments, at the same time that high mass and so-forth was performed. There, as at St. Dymphna's, I recognised various lunatics who, both in this and the former sacred edifice, conducted themselves like rational beings. However, as the services were purely ecclesiastical, although conducted in grand style and really pompous, while many fashionably attired ladies were noticed among a very crowded congregation, no ordinary observer, ignorant of the fact, would have surmised that a number of persons then present were actually insane. Indeed, I have scarcely or ever observed more decorum than that which uniformly prevailed during my protracted visits to both the churches designated. Considering the multitude of persons congregated, the consequent pressure occasioned by many people anxious to get near, and the lengthened period they virtually remained, it is no exaggeration to say, the quietude and order which everywhere prevailed were remarkable.

Next day, or Monday, similar services again took place at St. Dymphna's and St. Amand's churches; while the number of kneeling worshippers near the martyr's sarcophagus was even larger than the previous day, or Sunday. On this occasion, the silver receptacle of the saint's bones was now uncovered, which may account for the much greater crowds who were constantly surrounding, and evidently

contemplating with deep devotional feelings, what was really a splendid specimen of art in the form of a temple, and which, from its size as also elaborate workmanship, must have been very costly. Apparently, many of the votaries present had come from some distance in order to invoke St. Dymphna's aid in favour of a demented relative or friend; while others were patients, as on the day previous. Here, again, and throughout the whole time I remained, the greatest order prevailed; and no one could have inferred from outward appearances, or the behaviour of any individual, that lunatics formed a portion of this large assemblage.

Another phase of quite a different character yet remains to be described, so as to illustrate still further the popular proceedings and festivities in which sane as likewise insane residents of Gheel, with other spectators, took an active part during its kermis. Soon after five in the afternoon, accompanied by Dr. Bulkens as cicerone, we visited several "herbergs"—estaminets which had large rooms attached, where many persons previously engaged in religious services at St. Dymphna's and St. Amand's churches were dancing, or drinking beer; while gay music and talking of numerous parties made the whole scene highly exciting, but not disorderly or uproarious. In one spacious apartment, at least 300 persons were assembled—several being lunatics—who seemed to enjoy the spectacle quite as much as any party present, and conducted themselves like their more rational companions at this reunion. Indeed, had my conductor not pointed out several male and female insane residents at Gheel, I should not otherwise have known any patients were in that festive assembly. We afterwards visited other dancing parties, where much hilarity also prevailed; but in no instance could I recognise by their conduct that any guest laboured under mental aberration. Similar amusements took place next evening, while there was a grand procession of St. Dymphna's relics within her church and vicinity in the forenoon; but everything went off satisfactorily. At least, I have not since heard of any conduct which indicated that the varied proceedings peculiar to the annual kermis then celebrated had caused unpleasant consequences among the Gheelois lunatic population.

In concluding my sketches of the insane colony at Gheel, which some gentlemen whom I have the honour to address may perhaps think rather discursive, I would nevertheless beg leave to remark finally, whether frequenting the dwellings of resident lunatics, perambulating streets, visiting churches, sauntering in secluded high-hedged footpaths, gardens or fields; and notwithstanding I often recognised insane patients as well idle as occupied, even sometimes without an attendant, I never noticed any unpleasant occurrence. On the contrary, I can confidently assert, from personal observation, Gheel and its immediate neighbourhood seemed generally quieter, than most localities having an equally numerous population, more

especially where lunatics seldom if ever promenade public thoroughfares. Consequently, the idea of then residing in a town where mad people were numerous, and lived almost like ordinary inhabitants, appeared to my mind of doubtful realisation.

The Effects of the Present System of Prison Discipline on the Body and Mind.

By J. Bruce Thomson, L.C.R.S., Edin.; Resident Surgeon, General Prison for Scotland at Perth.

(*Read at the Annual Meeting of the Medico-Psychological Association, held in Edinburgh, July* 31*st*, 1866.)

Mr. President,—My first duty on rising to address this Association is to thank you, sir, personally, for your kindness in proposing me, and the members for electing me, to the honour of being a member of the Medico-Psychological Association.

This paper is due chiefly to your own suggestion; and I do now feel that it was somewhat bold in me to accept your hint, and venture upon an inquiry so difficult, and of such paramount social and psychological interest. I hope the subject may be found not altogether aside from the proper functions of this learned body, as I certainly regard it opportune for my having the benefit of any opinions that may emerge in the minds of those I now address, many of whom are eminent for ability and experience in mental diseases so prevalent in prison life.

Can long sentences to penal servitude in prisons be carried through without serious detriment to the bodily and mental condition of prisoners? This was the proposition propounded only a few years ago, when the transportation of convicts was set aside, and the present system, called the separate system of prison discipline, was introduced. In this paper, what I propose is, to examine the results of this sanitary experiment; and how far we are enabled to judge of its success and solve the grave problem as to the effects of long imprisonment on body and mind. The study of the character and diseases of the criminal population has become a specialty confined to but a few; and I feel it all the more incumbent to tabulate my observations, which have been continuously given to the subject for nearly ten years.

Physical suffering, as you know, for the last quarter of a century has been almost wholly ignored in prison discipline. Howard and Romilly did for criminals what Conolly and Pinel have done for the

insane; and the benign influence of criminal legislation has long been and still professes to be chiefly reformatory—curative rather than punitive—on the principles long ago enunciated by Cicero: "Omnis et animadversio et castigatio contumelia vacare debet. Prohibenda autem maxima est in puniendo." Legislation has been, like Penelope's web, a system of doing and undoing; but, however much social reformers may differ as to the physical punishments of prisoners, I think that you will all agree as medical men that it is our duty to return the criminal to society as well in body and mind, if possible, as when he entered upon his sentence of imprisonment.

I have said that the study of prison life is a specialty, and it seems to me, therefore, necessary that I should offer you a few prefatory remarks on criminals as a class distinguished peculiarly from civilians.

All who have seen much of criminals agree that they have a singular family likeness or caste. Prison officials and detectives know them at a glance. An accomplished writer who is well qualified to speak on this subject says, "I believe I have looked as many scoundrels in the face as any man alive, and I think I should know all such wherever I should happen to meet them. The thief appears to me as completely marked off from honest working people as black-faced sheep are from other breeds." In this statement I quite concur.

Their *physique* is coarse and repulsive; their complexion dingy, almost atrabilious; their face, figure, and mien, disagreeable. The women are painfully ugly; and the men look stolid, and many of them brutal, indicating physical and moral deterioration. In fact, there is a stamp upon them in form and expression which seems to me the heritage of the class.

"The physical, being," as I take it, "the foundation of the moral man," the criminals as a class exhibit a low state of intellect compared with the industrial classes. A large proportion of prisoners, as I shall afterwards show by figures, are weak-minded congenitally, and give a large proportion of insanity compared with the civil population. I know this is in the face of popular prejudice, encouraged by the drama and sensational romance, which makes heroes of criminals, endowing them wondrously—as some one said, "with rare abilities, of which God has given the use and the devil the application." These are drawn from exceptional cases for dramatic effect. On the contrary, teachers say prisoners are slow to learn. Officials find it a hard task to train them to the plainest industrial work. Taste in any art or mechanical ingenuity we seldom see among them. Sir W. K. Shuttleworth observed, what is plain to all intelligent observers, that the juveniles at Parkhurst were defective in

physical organisation—from hereditary causes, probably, and early neglect and privation.

These remarks *in limine* on the characteristics of the criminal class it is necessary to carry along with us in our inquiry as to the effects of imprisonment, so as to judge what belongs to caste and what to imprisonment.

It seems necessary to premise also a few words *on the separate system of discipline* in present operation.

The *separate* is a modification of the *solitary system,* which has been everywhere almost wholly abandoned as injurious to the mind. It is singular enough that Howard, the great friend of the prisoner, and true philanthropist, was himself the author of the solitary system, the most severe of all penal systems. The object was to prevent the evils of association; but insanity was the frequent result.

Even the original separate system has been much modified. At first, the prisoner was strictly confined to his cell, which was his workshop and dormitory. He had little or no communication with officers. The exercise was short, and in isolated cages under absolute silence. A mask was worn to avoid personal recognition. The chapel was cellularly divided; or the chaplain stood in the corridors of a gallery, each prisoner only hearing, not seeing him, through the cell-door upon the bolt. The food was passed through a small service door, so that even the warder was not seen. Two purposes were aimed at by this—viz., entire isolation, and seclusion to encourage self-communion and lead to reform.

As you may well believe, it was not long until relaxations were called for of the severities of separation. After a confinement of nine months male convicts, and after twelve months female convicts are partially associated. Exercise is had more freely in open airing-grounds. The chapels are not cellular, but open-seated. Masks are abolished. Warders see and speak to prisoners at least twelve tmes daily. Silence is not strictly enforced; and medical officers have free power to associate all who are regarded unfit to bear the separate system: such are juveniles, epileptics, weakminded, and suicidals, Highlanders who cannot speak English, and all the sick.

I hasten to consider now—

I. *The effects of the separate system of prison discipline on the body.*

II. *The effects upon the mind of prisoners.*

I. *Of the general health, sickness, and death-rate of prisoners.*

The general health has of late been very good in Scotland, especially during the last decennial period. During the decennial period 1844 to 1853 it was not so. General debility, scrofula, and scurvy were found to prevail among our prisoners, in consequence of a de-

fective dietary. The truth is, the dietary of prisoners must be good for two obvious reasons: their systems are deteriorated by hereditary and habitual vices; and in prisons, the same amount of assimilation of food does not take place in imprisonment as in freedom. This latter, I suspect, applies to asylum and hospital patients generally.

I am satisfied that a bare minimum of subsistence is a dangerous allowance to prisoners, and a liberal dietary is the truest economy in prison. Hence, during the decennial period 1854 to 1863, an improved dietary proved more economic than the lower dietary, there being reduced sickness and death-rate, and, consequently, more labour from prisoners. A good diet and careful hygiene, also, I think, help to explain our singular exemption from epidemics.

A table before me shows all the cases of disease (noting the diseases) which occurred during the decennial period 1856 to 1856, inclusive, in the General Prison for Scotland under my charge.

The total ten years' population was 646, of whom 1 out of 72 were placed on the sick register; the sickness being, therefore, at the rate of 14 per cent.

The prison rule for registering sickness is, "The surgeon shall enter in his register every case of illness which is sufficient to prevent a prisoner from working, or which is infectious."

A few months ago, in a joint report by Professor Christison and myself, the following statements in regard to our death-rate and sickness of prisoners in the different prisons of Scotland are given:

"In consequence of an improved dietary during the last ten years, the death-rate (notwithstanding the substitution of long imprisonments for transportation) has fallen from 1·41 to 1·15 per cent.

"Diseases from defective nutrition have disappeared.

"Diseases contracted *after* admission to prisons have decreased from 27 to 15 per cent.

"Prisoners off work from sickness have been reduced from 4½ to 3¼ days on the total average daily prison population.

"The amount of sickness has fallen from 65 to 45 per cent. over all Scottish prisons."

To this very favorable account of the general health, sickness, and death-rate of prisoners, I must offer some exceptions.

1. Juveniles and those at the growing periods of life suffer much from stiffness of limbs; and a standing rule is, to associate all under fourteen years of age, and even sixteen, the governor and surgeon concurring; also juveniles are drilled to military manœuvres and exercises, as precautions against stiffness of limbs.

2. *Untried prisoners,* partly from their recent dissipations, and partly from being tossed betwixt hope and fear as to their trial and sentence, fall off, but revive again after their trial.

3. Convicts, a few months before liberation, become anxious,

sleepless, and lose health and strength from their anxieties as to the future. Convicts say the most irksome period of imprisonment is immediately preceding liberation.

4. Out-door labourers, shepherds, poachers, fishermen, as a general rule, fall off under imprisonment.

I am bound further to make this general observation, that more or less in all prisoners there is a slow and torpid state of the locomotive organs (partly, perhaps, mental), which seems to be the result of seclusion.

Upon the whole, the foregoing facts and figures satisfy us that the effects of imprisonment do not materially injure the body; but rather that the general health is well sustained, and certain diseases, phthisis and scrofula, are ameliorated or arrested. I look upon the hygienic and sanatory treatment of prisoners as one of the best triumphs of medical science; and looking to the condition of paupers when contrasted with prisoners, I do not wonder that some have sneered at our care of criminals, like Rochefoucault, when he says, "Il s'en faut bien que l'innocence trouve autant de protection que le crime."

II. *Effects of imprisonment on the mind.*—What I have advanced seems sufficient to relieve all anxiety as to the effects of imprisonment on the mind. But, remembering the effects of the solitary and silent systems, of which the separate is but a modification; keeping in view the necessary ameliorations lately introduced into the separate system; and further, considering the sources, physical and moral, of insanity belonging to the criminal class—there appears a foregone conclusion that there is danger to the mental condition from the separate system of prison discipline.

Let me bring before you figures showing the amount of mental disease which is found to prevail in the General Prison for Scotland, and compare this with the ratio found among the civil population.

I observe that among criminals there is a large amount of weak-mindedness, not regarded as insanity, viz.:

Prisoners weakminded, but not in the lunatic department—of two kinds: *Separate,* but under special observation; *not separate,* but whose mental condition does not bring them within the category of the insane.

Perhaps there are few see so much of this class as I do of various grades, verging upon and lapsing at times into insanity, reminding one of Hamlet's description of falling

> "Into sadness—then into a fast;
> Thence to a watch—thence to a weakness;
> Thence to a lightness; and by this declension,
> Into the madness wherein madmen rave."

Here is a decennial table, 1856 to 1865, showing the number of

those *associated* as unfit to bear the separate system of imprisonment :—

Mental Condition—	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	Total.
Imbecile or Weakminded...	22	34	14	21	20	16	26	13	17	15	198
Ditto, and Suicidal	3	2	2	4	7	9	6	2	4	1	40
Epileptic	4	7	4	11	2	7	13	6	15	7	76
	29	43	20	36	29	32	45	21	36	23	314

For the last decennial period, we have had at the average of forty per annum who, in addition to the above, have been placed under special observation, expected to suffer from separation.

We have therefore had

Associated, as unfit for separation	314
Separate, but specially observed	400
Total.....	714

The average daily population having been 6468, or 646 per annum, we thus show that mental weakness (but not insanity) belonged to about 11 per cent. (nearly 1 out of every 9) of the general prison population. This is probably much within the actual mark. In a paper I lately published in the 'Edinburgh Monthly Journal,' being an analysis of fifty-nine epileptic prisoners' cases, it appeared that all, with the exception of fourteen of these, were noted for mental weakness; that prisoner epileptics were 1 per cent. of the prison population, while the ratio in civil and army populations was estimated at a mere fraction of this, viz., 0·009.

I proceed to give a table of the *number of prisoners who have become insane* in the General Prison during the last decennial period :

	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	Total.
From the General Prison...	2	4	4	6	6	4	2	3	3	9	43

In the form of an equation this gives—

The average daily population.....	6468	=	1
The number becoming insane	43		150

One out of every 150 became insane during the last ten years. The average daily population I speak of is the sum of all who during the year have passed through the prison divided by 365. I should add that I am aware of several who went out of our prison weakminded, and shortly afterwards went to asylums; so that 1 out of 150 is probably a small enough calculation of those becoming insane under imprisonment.

Let me extend this inquiry beyond the General Prison for Scotland, and show as near as I can the number of existing insane

among the total prison population of Scotland. The criminal lunatics of Scotland are nearly all placed in the lunatic department of the General Prison for Scotland, under the authority of the Secretary of State and during Her Majesty's pleasure.

Some years ago, the Medical Superintendents of Asylums objected to the reception of criminal lunatics. It was not considered fair or favorable to insane patients that they should be classed with criminal lunatics, many of whom had committed heinous and violent crimes; and the Medical Superintendents objected to come under the obligation called for by the Secretary of State, to keep the criminal lunatics in "close and safe custody"—a condition not only highly responsible, but detrimental to the curative treatment of milder and ordinary cases, admitting of considerable freedom within and even without the asylum precincts. Lunatic asylums, therefore, being found unfit places of detention for criminal lunatics, the late General Board of Directors of Prisons made arrangements, under statutory powers, for the present lunatic department of the General Prison to be fitted up for the custody, treatment, and maintenance of all criminal prisoners unfit to be brought to trial, found upon their trial to be insane, or at the time of committing the offence charged; also prisoners who have become insane while undergoing punishment. The hospital for lunatics was opened in October, 1846, and contains, with few exceptions, all the insane belonging to the criminal population.

The following shows the existing insane in the lunatic department for criminals during the last five years:—

	1861	1862	1863	1864	1865
No.	33	34	34	40	51

The entire prison population of Scotland, annually averaged for the last five years, amounted to 2,316; and the above would show—

Annual average number of criminal lunatics $\frac{38}{2316} = \frac{1}{60}$
Number of criminals .....

One out of 60 *existing* criminal insane.

Criminal insanity is on the increase, however, and my report of 1865 shows—

Criminals insane ..... $\frac{51}{2416} = \frac{1}{47}$
Total criminals of Scotland .....

One out of 47 existing criminal insane, as reported for 1865.

Compare this ratio with what is found in this and other countries. The materials are by no means satisfactory, but I offer some of them:

In France the number of lunatics has been recently estimated at	1 in 1028
In England and Wales at	1 in 824
In Scotland, about	1 in 473
In Ireland, at	1 in 1291

The lowest calculation for England I have ever met with is made by Drs. Bucknill and Tuke in their work on 'Psychology,' which is an estimate made by adding a supposed number of lunatics and idiots to the reported number given by the Commissioners in Lunacy; and this lowest estimate supposes that 1 out of 300 is the ratio of insane to sane in the population of England.

The foregoing prison statistics lead to the following conclusions:—

1. That weakmindedness is very prominent in the criminal population as a class.

2. That in the General Prison for Scotland about 1 out of 9, or about 11 per cent. are weakminded.

3. That epilepsy shows a much larger proportion among prisoners than among the army or civil populations.

4. That prisoners are noticed *on admission* in considerable numbers to be weakminded; rendering it doubtful whether their mental peculiarities are the result of hereditary influences, or may be due to the seclusion of cell-life and frequent imprisonment.

5. That individual prisoners (not of the criminal class) suffer much mentally from the seclusion, want of intercourse, and inaction of mind as well as body under the separate system of imprisonment; these effects being shown chiefly in juveniles, foreigners especially, and Highlanders, who cannot converse in English, and those generally who do not belong to the criminal class.

6. That the ratio of those who become insane in the General Prison for Scotland has been 1 in 150.

7. That the existing criminal insane have been, during the last five years, at the ratio of 1 out of every 60 of the prison population in Scotland; and in 1865, 1 in every 47 of the prison population were criminal lunatics; *i. e.*, existing at the time.

The important corollary from these statistics is, that, with all its recent relaxations, the separate system of prison discipline is trying upon the mind and demands the most careful attention on the part of medical officers, inasmuch as mental diseases are most prominent among criminals in prisons, and seem to be on the increase.

I bring forward these facts and figures asking for further inquiry and regular statistical information from the surgeons of English convict prisons, especially on two points:

a. What is the proportion of insane (becoming insane or existing insane) among the criminals of England?

b. What proofs, if any, are there of this insanity being the result of imprisonment?

These statements seem to me extremely interesting, and I should like your free comments upon them.

The number of weakminded renders it probable that much crime,

when committed, is done by persons labouring under mental disease, crime and insanity having clearly a natural alliance which puzzled the old classic philosophers as well as modern psychologists, in regard especially to the question of responsibility. "A knave is always a fool" says the proverb; and Hale had an axiom, that "all criminals are insane." It has almost been asserted in as many words by eminent psychologists, that "all murderers are insane." Without going this length, I must admit that I am satisfied that, as a class, criminals are extremely liable to mental disorders and diseases, apart altogether from imprisonment.

Hear the divine Plato on this subject:—"All *disgraceful conduct* is not properly blamed as the consequence of voluntary guilt; *for no one is voluntarily bad;* but he who is depraved becomes so through a certain habit of body and ill-governed education. All the vicious are vicious through two most involuntary causes, which we always ascribe rather to the planters than the things planted, and to the trainers rather than those trained." Such doctrines, whatever truth may underlie them, are not tenable to the extent which this philosopher held; otherwise we must in a great measure set aside all moral responsibility.

Paralytic Insanity and its Organic Nature. By Dr. Franz Meschede. Abridged from 'Virchow's Archives,' 1865, by G. F. Blandford, M.B. Oxon.; with a Prefatory Note.

The disorder commonly called "general paralysis of the insane" presents so many points of interest to the pathologist and the physician, that as a necessary consequence it forms the commonest topic among the writings of those who specially study insanity. But after so much observation and so many treatises, it is disheartening to find that even now scarcely more than one fact with regard to it is laid down as settled and established beyond the possibility of doubt. One there is, the saddest that can be. It is, that for this malady we hitherto have found no cure; that to diagnose it is to pronounce the sentence, not only of incurable insanity, but also of speedy death. The marvel of the whole is, that although death occurs in every case at no very distant period, though post-mortem examinations of general paralytics are made by hundreds every year in this and other countries, yet even at this day no two observers are agreed as to the pathology and morbid anatomy, as to the part in which it has its origin, or which constitutes its peculiar and proper seat. No

wonder that the whole of the morbid anatomy of insane brain is vague and ill-defined, when this, the specially fatal form of mental disease, still hides itself from us—still wraps itself in the mystery which envelopes all that relates to mind. I make no apology for drawing the attention of the readers of this Journal to a paper on the subject, published in the October and November numbers of 'Virchow's Archives,' 1865, and for giving a short and necessarily imperfect summary of its contents, it being too long for reproduction. But as every outline must needs be unsatisfactory, I trust my readers will go themselves to the original. In default of opportunity of examining many brains of paralytic patients, I present as a contribution to the English treatises on the subject these observations of another.

First of all, however, I wish to make a few remarks; one upon the nomenclature of this disease, and especially upon the new name lately bestowed upon it. This, "general paresis," was introduced to us by Dr. Ernst Salomon, a translation of whose paper appeared in this Journal in 1862. Paresis is not a new word; it is an old medical term familiar to the readers of the 'Zoonomia' and other works of that time. In barbarous Latin, worthy of the days of Sprenger rather than of the era of the microscope, Dr. Salomon explains paresis as "insania paresans," "paresifying mental disease." At the same time, he enumerates a great many but not all of the synonyms of various authors. The term most universally known, which has been, we may almost say, officially adopted, is the time-honoured "general paralysis," or "general paralysis of the insane." There needs some strong reason for changing this. The name we substitute ought certainly to be a better and not a worse. But is there a single reason why paresis should be preferred to paralysis? Is there any meaning of the verb παρίημι which squares with the symptoms of the disorder more than that of the verb παραλύω? Physicians in ordinary practice, who have seen with me patients in the earliest stage of the disease, have objected to the term "general paralytic" as inapplicable to men who showed no diminution of bodily strength. Yet the only meaning which paresis has which makes it in the slightest degree available is that of *slackness* or *weakness*. And not only is this word substituted for general paralysis, but it is applied to ordinary hemiplegia, being usually converted into *pareesis*. An old gentleman the other day lost the use of one side, and I was rebuked by the family for calling his malady paralysis, and told that the most eminent of the faculty had pronounced it to be only *pareesis*. But are there no other names? If we object to the term "general paralysis" as vague and unscientific, must we go back a hundred years and rout out a disused word from the garret of our great-grandfathers, and apply it to a new disease unknown to them? We generally give M. Calmeil the credit for

having first fully described the disease with accuracy and clearness. No work even now surpasses his own, or that part devoted to it in his treatise on the inflammatory diseases of the brain. M. Calmeil denominates it "periencephalite chronique diffuse." Here we have a definite appellation, almost a definition. It conveys a pathological theory, true or false. It would be well, I think, to adhere to such a term as this till we have reason to reject the theory and can substitute another and a better in the place thereof. I have seen it stated that M. Calmeil considers it to be a meningitis. Dr. E. Salomon says, "Calmeil makes it a peri-encephalo-meningitis chronica diffusa." Calmeil does nothing of the sort. In his 'Maladies Inflammatoires,' i, 486, he says distinctly, "Sans nier l'influence réactive que l'état inflammatoire des méninges est à même d'exercer sur les centres nerveux encéphaliques, dans les cas où se manifestent les symptômes que nous venons de passer en revue, nous croyons bien plus rationnel de les attribuer principalement à l'état d'inflammation permanent où se trouve elle-même la substance corticale des hémisphères cérébraux." The article of Dr. Meschede of which I propose to give a summary will bring strong testimony to corroborate this view of M. Calmeil, and will vindicate the propriety of still maintaining the name he has originated, viz, "periencephalitis chronica diffusa."

Much discussion has arisen as to whether the symptoms of general paralysis are simply added to ordinary insanity—epiphenomena, as they are called—or whether it is altogether a distinct and special disease. Here it would seem that we are drifting back to old doctrines, according to which diseases are to be looked upon as entities. If we put aside the question whether general paralysis be or be not a special disease, and consider only what that is which is diseased, what is the "pars affecta," we shall arrive at greater certainty.

The readers of this Journal do not require to be told that the "pars affecta" in general paralysis and in non-paralytic insanity is one and the same. We may arrive at this conclusion apart from the post-mortem examination of diseased brain. The symptoms of the two forms in life will indicate, I think, that the seat is the same, and will aid us in interpreting the pathology of the disorder. Although, speaking generally, the exalted notions, the *délire ambitieux*, stamp with a certain distinctiveness the mental disorder in general paralysis, as the stutter marks the bodily affection, yet it is not to be forgotten that in many cases these are both absent. On the other hand, there is not a single delusion of ordinary insanity that we do not find in paralytic patients. "Believes himself given over to the devil"—"Thinks poison is put in his food"—"Believes he has committed sins too enormous to be forgiven"—"Thinks he is going to be arrested." These are from four cases of general paralysis. And in cases of ordinary curable mania we constantly find

exalted delusions of being kings, inventors, millionaires. All this shows that the line of demarcation between ordinary insanity and general paralysis is excessively fine, and the whole history and progress of the latter points rather to a difference in degree than in kind. That general paralysis is intractable, *malignant*, is the one fact we are certain of. Probably the distinction between it and other curable forms of insanity is analogous to the difference between certain innocent and malignant growths. There is a tendency to depart more or less from healthy structure. This tendency in some is strong, and the growth is malignant; in others it is weak, and the new formation is not so far removed from what is normal, and if excised does not return.

It may be objected that the paralytic symptoms, the inarticulate speech and quivering lips, point to a different seat of disease. It may be said that in ordinary mania there are no paralytic symptoms, that in progressive dementia following upon mania there is no loss of muscular power. These objections do not, I think, point to any different seat of disease, but only to a gradually advancing degeneration and decay of the parts originally attacked. That these parts are the same in both ordinary mania and in general paralysis, seems indicated by these considerations:—

1. General paralysis constantly exists, and is evidenced beyond any doubt by the mental symptoms without any perceptible defect of articulation or other lesion of motility. This is a fact which must be familiar to all my readers, and I therefore shall not stop to adduce cases. It constitutes one of the difficulties of diagnosis in this class of patients.

2. The defect connected with the inarticulate speech seems as if it lay in the highest nerve-ganglia which impel the muscles and supply force to them along the conducting fibres. The fault lies at the origin, not in the course of the transmission, not in the transmitting organs. This appears if we closely examine the phenomena of the defective articulation. The patient by an effort can correct it. When he exerts himself—when he shouts, for example, he speaks clearly. I am now speaking of the early stages. When, by a violent effort of will, he forces all his nervous energy in one direction, he does that which he wishes to do. The defect appears to be in the nerve-centres which supply the volitional power. And this will account for the absence of unilateral symptoms, which are often absent throughout, and which, when they are found, are chiefly the sequelæ of apoplectiform or epileptiform attacks. Up to the last, many patients seem to have nothing the matter with their limbs and muscles except a deficient supply of force.

If we take other forms of abnormal muscular action, we may find in a similar way that the defect arises not in the parts themselves or in the conducting nervous organs, but in what we must call the

highest mental originators of nerve-force. An instance is at once suggested by general paralysis. This is ordinary stammering. In spite of all that has been said about the action of the laryngeal muscles, &c., it is now, I believe, generally held that stammering depends on mental emotion; that the mental centres are the seat of the disorder, and that to avoid it we must, as Dr. Carpenter says—1. Reduce mental emotion; 2. Avoid exciting mental emotion; 3. Elude mental emotion. This has been well urged by Dr. Monro in a pamphlet entitled 'Stammering and its Treatment,' by Bacc. Med. Oxon., 1850. General paralytics do not stammer always—do not always lisp over the same word. This would appear to be an affection of a very high nervous centre. And probably the same may be said of some forms of chorea. Certainly it may, of all the quiverings and shakings that depend on terror or the like. Poor Æneas says—

"Obstupui, steteruntque comæ, et vox faucibus hæsit."

3. Another reason for thinking that the seat of the disease we call "general paralysis" is identical with ordinary insanity, is that the cause is so often the same. Although it sometimes appears as if the former were more often due to physical causes than the latter—due to drinking, sexual excess, and the like,—yet it very frequently is clearly attributable entirely to mental causes. Dr. Sankey gives several cases, and every one will recollect some such. Now that great mental emotion is capable of producing not only ordinary insanity, but actual organic lesion, whether of general paralysis or of other kinds, is a fact, I believe, much overlooked. We are so apt to think that organic lesion is the cause of the mental derangement, that we overlook the fact that mental disturbance may produce organic lesion. Yet, while writing this, I happened to take up the May number of the 'Medical Mirror,' which contains a case related by Dr. Broadbent:—"A servant-girl, æt. 24, in perfect health, goes for a holiday on September 24th to the British Museum: she meets her sweetheart walking with another woman; a violent scene ensues, the young man tearing a brooch containing his portrait out of her shawl. Next day she fretted very much; on the following day she became violent and delirious—in fact, maniacal. She then fell into a state of stupor, and was admitted into St. Mary's Hospital on the 29th. She evidently heard and saw, but all the mental faculties were oppressed. No paralysis. She was noisy all the night. Next day she was delirious, constantly talking; not answering when spoken to. On October 2nd she became rather suddenly comatose, and died. P.M. exam.—The convolutions appeared to be slightly flattened, and the surface of the hemispheres was paler and the veins less full than usual. Brain-substance firm and pale: in the left hemisphere, external to the thalamus and corpus striatum, and slightly

above their level, was found a very large recent clot, estimated to weigh at least an ounce." Here we have a healthy young woman dying very rapidly of an apoplectic clot after violent emotional excitement at an age when apoplexy is rare, especially in women. There was no paralysis, and the symptoms throughout were mental as well as the cause. This case seems valuable to those who are considering the relations of functional and structural disorder in mental diseases. General paralysis, then, may begin in the same centres as ordinary insanity, and be produced by the same causes; but it may go on progressively till it causes degeneration and destruction of those parts—not remaining stationary, like chronic mania or dementia.

One word as to the nature of the disease. Not long ago, general paralysis was considered an inflammatory affection, and treated as such by the remedies then supposed to be efficacious in such cases. I have seen many patients treated by a course of bichloride of mercury, but without good result. It is possible, however, that the theory was more correct than the mode of treatment. General paralysis seems to be the peculiar degenerative inflammation of the cortical part of the brain, ending in total annihilation of the life—that is, the functional activity—of the part. It seems as if each of the viscera has its own peculiar degenerative disease; other disorders, as cancer, tubercle, abscess, &c., being more or less incidental and depending on extraneous causes. Thus, the liver has its proper disease destroying its excreting and secreting function. So have the spleen and the kidney. Dr. Salomon has noticed the analogy between general paralysis and Bright's disease. And probably the adhesion of the capsule of the kidney, the tearing of the granular surface, and the disappearance of the cortical portion, may have suggested a comparison even to superficial observers.

When we say that general paralysis is an inflammation, we must clearly understand what we mean by this. In Mr. Simon's admirable article in Holmes' 'System of Surgery,' we read that "the phenomena of inflammation are modified phenomena of textural life. There is an excess but an incompleteness of textural change, shown, on the one hand, by effete material unremoved, softened and degerated tissue; on the other, by nascent forms unapplied, which have either perished before maturity, or definitely ripened into mere abortions of texture." And further he says, "The action whereby inflammation begins is one which physiologically cannot be distinguished from hypertrophy. The line of distinction is drawn where the effort of hypertrophy becomes abortive, and where the forms of increased growth are mixed with palpable refuse of increased decay. . . . . Cancer and inflammation have the most intimate morphological affinity; and probably what is distinctive of cancer lies far less in the nature of its textural phenomena, than in the

hitherto unknown causes which give them their fatally continuous progress."

A nodule of cancer continues to spread, returns where excised, and progresses till it destroys life; while a similar non-cancerous nodule is removed, and does not return. The cause of the ineradicability of the former, however, is not explained by any known laws. In the same way, the hyperæmic and hyperactive condition of the brain in simple acute mania subsides, perhaps recurs, subsides again, and so on; while the hyperæmic condition of general paralysis leads us at once to textural change and death. But we cannot as yet discriminate the origins of the two conditions. Truly we may call general paralysis the malignant disease, the true *morbus maleficus* of the gray matter of the hemispheres.

I have presumed to offer these remarks as a preface to the summary of Dr. Meschede's paper. His strictly inductive observations serve to test the accuracy of these views, which are as much deductive as inductive. The whole, I think, points to that unity of disease which modern science teaches, rather than to the special entities which diseases were thought to be in the days of nosological classifications. Specific remedies are almost abandoned: probably specific diseases will share the same fate.

I now proceed to the article by Dr. Meschede.

I. *General view of the disease.*

General paralysis appears to have greatly increased during the last ten years. It is interesting to us, because it chooses its victims as a rule from amongst the males of the better classes; it prostrates those organisms which appear the strongest, and at a time when they are at the height and zenith of life and activity. It is a problem worth solving, the discovery of the nature, causes, and cure of this fatal disease, which is as yet a psychological puzzle.

While the mental powers are sinking to destruction, the self-feeling swells to a pitch of grandeur. The patient, as he declines to the condition of the brutes, feels himself lifted up to the dignity of a god, thinks himself God and above God. The phenomena of a violent storm pass before our eyes, agitating the depths of the mind with fierce eruptions and never-ceasing force. Sometimes the symptoms are milder; the mind-organ wastes with less sparkling glow. The victims of this form appear in a state of beatific rest; their life floats on as in an Olympus of the happy. If we only observed these easy dreaming "emperors of the world" and "higher gods," we might be inclined to look on the disease as an exquisite passive atony, to deny the first active symptoms, and to consider the image of an overwhelming storm as an extravagant phrase—only that suddenly outbreaks of mania flash out to tell us that

even here a consuming fire still burns under this covering, and carries on slowly, but surely, the work of destruction.

Certain epochs in this work of destruction are prominently marked out by the attacks of paralysis, in which the patient suddenly collapses in convulsive movements in the midst of the apparent harmony of his existence. In cases running an acute course, these attacks come on in the height of the fury, after the rush of ideas and the tempest of emotion have been getting more and more intense for some days. But even in the more chronic cases they give notice of their advent by an increased agitation, and are accompanied by a heightened temperature and unmistakable signs of cerebral congestion. With and after each attack, the mental and bodily strength declines. The motor powers are impaired so that the central influence is withdrawn, and inharmonious irregular muscular movements follow. Parts of the mental acquisitions, too, are destroyed, and fade from the memory. So the world of mind, step by step, sinks to ruin. Even if the patient after a few days recovers somewhat, so as to leave his bed, if the connection of body and mind is somewhat restored, yet it is evident that the cohesion of the life of the mind is thrust down a step lower, and cannot again be raised to the former level. So these attacks mark out the steps by which the paralytic process goes on to complete annihilation. The actual cause of these attacks is not yet clearly made out. There is not always a hæmorrhage in conjunction with them. They are the co-effects of the paralytic process, but are worthy of note because even in the slower cases they indicate an active organic process of destruction, and draw attention to the decay which step by step advances.

II. *The exalted delirium and the progressive destruction of the mental strength, symptoms of organic processes going on in the brain.*

The exaltation which is so characteristic of general paralysis arises not out of weakness of intellect; it is not only a disturbance of the imaginative activity, but its essential point is an exorbitant expansion of the feeling of self. The life of ideas is influenced by the dominant emotion, and shapes itself so as to correspond. The feeling is not the consequence of the ideas; for often we find in general paralysis the feeling of grandeur without any delusions of greatness—also the feeling generally precedes the outbreak of the peculiar delusions. The ideas vary, changing from minute to minute; the feeling is constant, and forms the ground of the ideas. Now the causes which bring about a change of feeling are partly mental and partly bodily, and both work upon and through the brain. The effect of sudden and violent passions is well known;

it extends to the nervous system, to the secretions, &c. On the other hand, organic diseases of any part have a deep influence on the emotional condition of the mind, and that without the intervention of ideas. Now everything which promotes the feeling of self calls up pleasure, everything which thwarts calls up pain. The brain is the organ through which the mental influences work upon the remaining organisation, and *vice versâ*, through which organic conditions affect the feelings, being itself a part of the organism and subject to organic changes. Therefore, we must conclude that organic changes of the brain affect both the feelings and ideas. The life and activity of mind and feeling ebb and flow according to the strength of the organic excitation. We see this in the influence which exciting substances, as wine, exercise on the emotional activity. We also observe that a certain degree of turgescence and of organic tension calls up a feeling of pleasure and contentment. The turgescence and tension of the brain will produce this feeling of pleasure, and affect the emotions and ideas more than that of any other organ, because there is no intermediate step. Out of the importance of the excitation by means of arterial blood, arises the necessity for recognising the importance of changes of the tissues. These principally take place in the inner layer of the cortical substance of the cerebrum, which is provided with an ample capillary network. On this we must particularly bestow our attention.

The excitation which is produced by vital stimuli may in the brain attain a strength which exceeds the limit of health. In this case the mental activity, especially the emotions, must also undergo an increase. We see such an excess of excitation in intoxication. In general paralysis we see this heightened condition accompanied by irritative turgescence and an accelerated change of tissue, which awaken in the patient the feeling of an energy of life never known before, of indescribable pleasure and delight, which, however, through the consumption of the 'oleum vitæ' and the nerve-force, lead to the annihilation of the organic elements. In this way we may explain both the immense expansion of the self-feeling and emotional impulses, and also the final disruption of the mental life. Certain particles of the mind-organ on whose vitality the mental functions depend are in a constant condition of heightened vital activity, and so the ideas also undergo an increase, the idea of self gains in intensity, and the patient leads a life of greater power and greater pleasure, and constructs his ideas accordingly.

Now, as the organic changes in the brain are chiefly brought about by the nerve-cells, we conclude that the delusions of grandeur of the paralytic are a manifestation of the disturbance of the cell-life. The relation of his "ego" to the outer world is altered, his "ego" becoming continually greater and mightier. He feels himself hurried

along by the impetus of the organic processes, and free from all hindrances and incumbrances such as usually influence the emotions, but which now are no longer taken into account. There is now no longer the oppressed feeling of a trouble-laden pilgrim of earth. He is released from earthly bounds, and is a god. The consciousness of insufficiency which always floats before our eyes, exists no longer for the paralytic. All the old ideas which once were present in the mind merely as wishes or imaginary thoughts, or ideal fancies, are now revived, and acquire life and the appearance of reality; and whatever ideas are started in the organ of ideation, are produced only in the dominant note of the exalted feeling.

A new life and a new view of the world starts up to the patient with the morbid and increased action of the nerve-cells. Out of a new fountain of mental strength established in his organism he has visions never before known.

Beautiful thoughts and ideas stream along and overleap all opposing conceptions arising from external facts. The world needs reforming. Of the relations of earthly life he takes no notice. Where these really oppose his doings or wishes, his self-feeling reacts in rage, which does not, however, last long. It vents itself in furious mania and dangerous attacks, or in a volley of threats.

The destructive nature of the process is soon apparent. In the intellect we see not only a stormy disturbance, but also striking defects. There is an extraordinary forgetfulness, an inability to take in outer perceptions and occurrences, and fix and engrave them. All the activity of the mind is centrifugal, not centripetal. And so the mind gets worn out, and all the exaltation comes to an end, and often intense depression follows. There is such a rapid metamorphosis of the organic part, that the idea-images are wiped away and are only of ephemeral duration. There is no fixed delusion except in certain chronic and hybrid cases.

III. *Different opinions of authors as to the seat and nature of the organic process.*

We have hitherto considered the phenomena of the distorted mind. The deductions we have reached require completion by means of pathological anatomy. This will determine whether, when the storm has ceased and the fire is extinguished, real organic products of this fire are to be found. We shall have to test our view of the organic foundation of the "megalomania" by the microscope and micro-chemistry. We arrive at two questions: What is the seat, and what is the nature of the anatomical change, which is at the bottom of the paralytic process? In the works of authors since Haslam we find a jumble of contradictory opinions, arbitrary hypotheses, and the strangest explanations. Almost every part of the brain has been assigned as the seat—cerebrum and cerebellum, white

and gray matter, ventricles and cortex, membranes and cranium, cellular tissue and vessels; and every kind of change has been called the cause—hardening and softening, œdema, sclerosis, hypertrophy and atrophy; hæmorrhagic, fibrinous, and albuminous exudations; meningitis, congestion, and extravasation; atony, rheumatism, atheroma, stasis, &c.

This divergence of opinion leads us to think that the real organic change is not yet known; and this is conceded by such men as Esquirol, Calmeil, Guislain, Falret, Conolly, and Griesinger.

IV. *Parenchymatous inflammation of the cortical substance, the basis of paralytic insanity.*

Looking at the series of phenomena thus briefly sketched out at the time—the intensity, the progressive rise and fall of the storm which bursts upon both mental and vital powers,—we cannot help feeling that the so-called general paralysis of the insane is not a mere negative state like other paralyses, but an active process, the expression of an independent activity consuming the mind, and so reducing the patient to a passive existence. Observation, not of the dementia of the final stage, but of the behaviour in the acute and early period, teaches that here all is fire and flame, storm and tumult, even in the bodily functions. Hasty eagerness, excesses in eating and drinking, and profusion of secretions and excretions, salivation, erections and ejaculations, accompany the first outbreak. And continual and excessive play of the emotions is no less common. If this be the character of the first stage, consideration of the final state leads us to the *à priori* conclusion that the total confusion or destruction of the mental life cannot come to pass without deeply ravaging changes occurring to the organ which carries on the mental processes.

A series of investigations carried on since 1857, by the eye and the microscope, have led me to the conviction that degeneration of the nerve cells of the hemispheres of the cerebrum, especially of the cortical portion, constitutes the peculiar intrinsic pathologico-anatomical change in paralytic insanity. The alteration of the cells is found in different degrees from mere parenchymatous swelling down to their reduction to molecular detritus. In advanced cases all the transition forms may be seen. There may be an aggregate of fat-globules with the characteristic outline and nucleus of nerve-cells. The nucleus will be surrounded closely by small fat-globules highly refracting, and also with pigment-granules yellowish and shining; or the outline will be seen only round one half of the cell, the other half being replaced by a margin of globules. And besides cells with a perfect outline, but filled with fat- and pigment-granules, there are others which have completely lost all outline, and are a mere collection of granules round a nucleus, as to the nature of

which we should be in doubt if we met with them elsewhere or isolated. In acute cases running on quickly to death, we do not always perceive these stages of degeneration so completely defined. The granulated cells occur more rarely, and we find more with a definite outline and with only a moderate amount of fat-granules and pigment. There is, however, a general swelling, a congestive turgescence and succulence of the cortical part. On section, it appears wet and darker than it ought. Often we may notice with the naked eye a bright red appearance, not so much of the surface or the pia mater as *in the inner layer*. This redness only penetrates to the surface in the more advanced stages and in certain spots. It is of different degrees, ranging from pale rose to dark violet; sometimes of as bright a red as a phlegmon or conjunctivitis. It is not due to post-mortem causes, to blood-gravitation or imbibition, for it is chiefly observed in the anterior parts of the cerebrum, especially on the convexity and in the temporal lobes, and also the parts which are most intensely red are frequently marked by punctiform capillary apoplexies. The microscope shows us in this portion a highly developed capillary network filled to excess with blood-corpuscles, with here and there points of extravasation and elongated vessels. The nerve-cells in this appear softened, more voluminous and more isolated. We seldom see this stage, because death does not usually occur till much later.

So then we have hyperæmia and parenchymatous swelling of the inner layer of the cortical substance on the one hand, and fatty pigmentous degeneration on the other, as the beginning and the end of the organic changes in general paralysis. Between these poles lies the destructive process, which by analogy we conclude to be a parenchymatous inflammation. Although the identification of hyperæmia or redness with inflammation is a much-disputed point, yet a marked and pronounced red injection and congestion are always strong indications of inflammatory action. And if we go through the cardinal symptoms of inflammation, we shall find not unfrequently that we may recognise *swelling* in the firm tension of the sac of the dura mater. The next requisite, *heat*, is not to be proved by the thermometer *in loco;* but the investigations of Dr. Ludwig Meyer have shown an actual increase of the general bodily temperature, whilst my own prove that during congestive exacerbations the heat is above the normal, whilst at times of collapse it is below. And we are warned by the redness and turgescence of the face, the hot temples, the reddened ears, that an increased cerebral congestion is present, and that the proper heat of the brain undergoes an advance. The fourth symptom, *pain*, we must not look for, because the malady attacks the organ of intellect, not that part of the brain which perceives pain. Patients protest they never felt so well. But they feel sensations in their heads which indicate what is going on

there, and in the premonitory period they often complain of actual pain. These have been cases where traumatic or syphilitic affections were at work, where meningeal irritation prevailed. And the absence of pain in the best-marked stages of general paralysis is an argument against the theory of its being a meningitis.

The passive character of the final stage in general paralysis must not make us think that the whole is a passive process; neither must we be misled by the diminution of the volume and weight of the brain-substance. The brain-atrophy is only one of the results of the disease; it is not the cause of the paralytic insanity. In the outset, not the atrophic, but the hypertrophic, are the victims of this. We have only to look at the strong athletic frames, with their full muscles, the well-formed skulls and florid faces. Here we have an excess of nutrition and over-stimulation. A primary atrophy cannot produce the phenomena of excessive activity. The exaltation of the self-feeling cannot be a consequence of depression of the nutritive process.

In cases of some duration the degeneration of the nerve-cells is visible even with the naked eye. We have no longer the redness of the inner layer of the cortical structure, not even the light rose tint, but a peculiar dark, dull yellow; and on trial with the scalpel or finger the consistence of this layer appears altered—sometimes softer, more frequently harder, like leather or felt. This is brought about by the shrinking of the tissue on the destruction of the cells, by condensation of the connective tissue, Virchow's *glia*, and by wasting of the vessels. In this yellow layer blackish-brown or rust-coloured spots, caused by pigment accumulations, are met with, the result of capillary extravasations, of active processes connected with an afflux of blood.

For the examination of the nerve-cells I have used preparations, either fresh and wetted with cerebro-spinal fluid, albumenised water, hydrochloric acid, glycerine, carmine solution, weak chromic acid, or pieces macerated a long time in these media so as to isolate the cells. I have also allowed pieces of the cortical substance to dry in a dry chamber, so that thin transparent slices could be cut off with a knife. With a low power, 40 to 120, we can survey at once the whole thickness of the cortical part, and detect the change in the integrity and size of the cells. I usually compare preparations taken from parts of the brain which appear normal with those visibly affected; and I also compare portions of the brain of paralytic patients with others from the brain of the insane who are not paralytic, and also with those from the brain of the sane. A favorable opportunity for such an instructive comparison was afforded me by two patients who died on the same day, one of whom suffered from paralytic dementia, the other from epileptic dementia with hemiplegia. The difference in the nerve-cells was most striking. In the general para-

lytic, the cells appeared large, and, in very advanced stages of degeneration, filled with fat- and pigment- granules; the sharp outline was partly obliterated, so that they often appeared only as heaps of granules with a nucleus. In the epileptic, the cells were smaller, sharper; the outline more perfect, much clearer and more transparent; very few fat- or pigment-granules. The capillaries here appeared slender and delicate, and the network they formed was but scanty; while in the paralytic patient the capillary network was much developed, and the walls of the vessels thickened and convoluted.

The degeneration of the inner layer is not uniform over the whole of the cerebrum, but prevails in certain definite localities. It is tolerably constant in the convolutions of the temporal lobes, and on the convexity, along the longitudinal fissure, and also in the frontal lobes; much less on the basilar surface, and least of all in the convolutions of the posterior lobes. I have also found the cells of the gray matter in the interior of the brain altered; *e. g.* the corpora quadrigemina. My researches, however, in this direction are too few to enable me to form a final judgment.

This much appears to me certain—that the changes in the inner layer of the cortical substance constitute the peculiar and intrinsic organic ground of paralytic insanity. This assertion, arrived at by comparative pathological observation, tallies with physiological investigations as to the functions of the different parts of the brain, which, without discussing them here, amount to this—that the convolutions of the great hemispheres, especially the cortical part, have a closer relation to the functions of the mind, particularly to the operations of ideas and thought, than any other part of the encephalon.

The other cranial and cerebral changes which we meet with are too variable and too inconstant to be able of themselves to constitute the essential pathological lesion of general paralysis. The ventricles are often distended with fluid; but often they are of normal size, or even contracted. The ependyma may be granular and full of amyloid corpuscles. The choroid plexus may be hyperæmic and full of cysts. The white substance of the hemispheres may be dry and inclined to sclerosis, or œdematous and softer than it ought to be; of dull colour, with stains of rose or yellowish hue. The soft meninges are in many cases partially thickened, œdematous, with stains of ecchymosis, occasionally with true thin blood extravasations. The vessels of the pia mater are often hyperæmic upon the convexity, in places atheromatous, in a few cases blocked by emboli. The arachnoid is, over a greater or less extent, milky and thickened, studded with Pacchionian granules, and by these united to the dura mater; also so luted with the pia mater to the surface of the brain, that on removing the meninges the cortical substance comes away

with them. On the inner surface of the dura mater we find in many cases a thin, gelatinous, soft, hæmorrhagic, pseudo-membranous layer, reddened by points of extravasation, or by fine vessels, especially on the parts corresponding to those of the inner layer usually attacked by inflammation, viz., the temporal fossæ, the convexity, and anterior fossæ. These layers are mostly thin, sometimes stratified, often only consisting of a rust-brown or blackish pigment. They are the residua of an afflux of blood to the brain. Of themselves they constitute no process of meningitis.

The condition of the skull varies. The dura mater is often closely adherent to it. The condition of the connective tissue is not clearly made out. It is easy to understand that this, especially its cell elements, must undergo change, as a consequence of the inflammatory parenchymatous degeneration.

Although no one of these changes can be looked upon as the essential condition of paralytic insanity, yet they play their part, albeit a minor one, in the psycho-paralytic drama. Their importance varies; they may be starting-points or predisposing influences, or modifications of the process, or co-effects or consequences of secondary significance. If the nerve-cells of the inner cortical layer come into a chronic condition of irritation and altered nutrition; if the organic vital motion of the same is altered and accelerated, running on to dissolution and disorganisation; if the inflammatory state which was once outside the nerve-cells has extended to them—then first do we have distinct general paralysis.

People are too fond of looking upon the nerve-cells and fibres as a kind of privileged class of cell elements, whose higher dignity cannot be subjected to the processes of vegetative life and disease, and which can only undergo functional disturbance. Some think, with reference to the nerve-cells, that there must be either perfect integrity or total annihilation of their action. This is a mistake. The nerve-cells are developed out of embryo-cells. They have a common origin with all other cells. Their existence is prolonged along with the whole living organism. From this they imbibe their nutrition; cut off from this, they perish. Though through differentiation they have a specific mode of existence, yet they never cease to depend on the continuous vegetative force of the organism, or cease to take part, to live and move, therein. They have their development, their history, their different ages—their adolescence, decrepitude, and premature old age. They depend on the arterial blood, so that pressure on the carotids interferes with their function, which is restored when the flow of the *pabulum vitæ* is allowed to go on again. If, then, the nerve-cells partake of the vegetative life, they must be subject to the disturbances of it. Though they are endowed with special energies and functions of a higher order, yet their nutrition may undergo a degeneration which may pervert their

function, and lead it out of its accustomed track without reducing it utterly to inaction. In this vegetative life there are many degrees between perfect health and death. The nutritive functions may undergo a shock by which they may be brought into an anomalous state, and a conflict of heterogeneous phenomena may result, exhibiting that condition which we call *disease*. We must here recall Virchow's stand-point of cellular pathology—the independence of the individual cell-life, the relative autonomy of cells. If we grant this to cells, so must we also presume a greater possibility of disturbance of their vital movements, a greater capacity for disease; and we must assign certainly not the lowest place to the cells of the central nervous system, presiding as it does over muscular movement, and receiving from all sides excitation.

The capillary network in which the nerve-cells of the cortical substance are imbedded not only mechanically regulates the blood-flow, like the pendulum of the brain-clock, but it is the bearer of a vital vegetative process; it is the canal system which conducts the heating material which the nerve-cells need for their life and strength. In the inner layer of the cortical substance the system of conducting arteries resolves itself into a thick network of the finest capillaries, and here the chief seat of the organic nutritive phenomena is to be looked for. Here the vegetative life of the brain is most concentrated, the interchange is most active; and if by irritation it is forced, it must undergo an excitation which will exceed the bounds of health. If severe mental distress inflames and breaks in upon the mind, both the bounds of the vegetative life and of the functional activity will be broken down, and then follows destruction of mental strength. This violent action is inharmonious, turbulent, confused, presenting the characteristics of destruction and annihilation, bringing into jeopardy the stability of the organ. Both the centripetal and also the centrifugal energy of the cerebrum is weakened, the receptivity and recollection, and also the expression of ideas and wishes. This shows that not only dynamic or functional disorder exists, but also organic disease—that the mind-organ is attacked at its very core.

These views are confirmed by observation of the *ætiology* of the disorder. It is favoured by everything which causes cerebral congestion and irritation. Men are attacked whose activity of brain-life and brain-circulation is in excess, whose feelings are much excited, who are harassed by business, and who, by reason of a kind of psychical hyperæsthesia, feel keenly the weight of strokes of fortune; men who eat a strong flesh diet, much meat and drink—who fully taste life's troubles and joys, excitements and delights—whose brain is much irritated, somatically and psychically, and whose

power of resisting is weakened by hereditary taint or illnesses. The slower kind of men are seldom attacked.

Sex, too, confirms it. I have found seventy-seven men attacked, while only twelve women were sufferers. Women have no business, and less cerebral irritation; they are not injured by alcohol or tobacco.

Age proves the same thing. General paralysis is a disease of prime manhood. Few cases happen before the age of twenty-eight or after sixty. It comes on when the brain is at the climax of development and its maximum of weight. The average age is about forty-one and a half years. Just before the brain reaches its highest weight, there appears to be great nutritive excitation going on, and great attraction of nutritive material to bring the development to perfection. Any forced nutrition or over-stimulation at this period will bring about parenchymatous swelling, and lead later to disorganisation. The inflammatory process goes on in a series of exacerbations, one following another, and attacking one set of cells after another. The downfall of the mind is gradual, marked out by apoplectiform or epileptiform attacks.

[Dr. Meschede then gives the result of four post-mortem examinations of typical cases to illustrate his theory.]

I. The first is that of F. G—, who when admitted was sixty-two years of age, and had shown symptoms of general paralysis for three and a half years. After nine or ten months he died. Post-mortem examination thirty-six hours after death. The heart was enlarged, the muscular substance soft and fatty; the aorta was thickened and atheromatous; the arch was dilated like an aneurism; the spleen contained many small calcareous concretions; the kidneys showed traces of fatty degeneration; the skull was thick and heavy, the diploe vascular; on the inner surface of the dura mater was a thin pseudo-membranous layer, of a rusty colour, in the right temporal fossa; the arachnoid was here and there milky and thickened, with œdema of the pia mater and subarachnoid space; the pia mater was adherent in places to the cortical substance; the arteria foss. Sylv. dextr. was obstructed by an embolus. The cerebrum was œdematous and soft; the white substance yellowish, with yellow and rose-coloured stains; the gray matter soft, dark, and yellowish—in certain places reddened. Both ventricles distended and full of opaque serum.

The microscope showed on the surface of the left corpus striatum a patch of softening, consisting of granular detritus, fatty particles, fatty and degenerate nerve-cells, and cells in a state of transition. The vessels were partially diseased, and one small capillary was blocked by an embolus.

In the inner layer of the cortical substance of the cerebral convolutions, the microscope showed considerable degeneration of the

nerve-cells, while in the outer layer little was to be seen. The cells appeared to consist of fat- and pigment-granules. Many had lost the sharpness of their outline; many were mere rudiments of cells; many were larger than usual. Here and there were collections of granules in the shape of cells. A portion of the inner layer, magnified from fifty to sixty-five times showed hundreds of opaque, yellowish-brown, pyriform granules, standing out against the clear connective substance. These appeared like miniatures of the degenerate nerve-cells, and were arranged with tolerable regularity, increasing in number and size from the periphery to the white matter. The vessels of the inner layer formed a thick network, and were somewhat dilated, atheromatous, and fatty. These changes were most noticeable in the discoloured portions. In the outer layer this development of vessels was not to be seen.

In the gray substance of the corpora striata and quadrigemina advanced fatty degeneration of the nerve-cells was visible.

II. E— was admitted when forty-three years of age, after a month's illness, with symptoms of acute general paralysis. In a fortnight after admission he had an apoplectic-paralytic attack, and died the following day.

Post-mortem examination forty hours after death.—The heart was somewhat large and covered with fat. The muscular structure showed commencing fatty degeneration. There was thickening and atheroma of the aorta. There was congestion and hyperæmia of most of the viscera. The skull was rather thin. The sac of the dura mater was completely filled by the brain. In the right half of the basis cranii, chiefly in the temporal fossa between the dura mater and arachnoid, was a dark, half-liquid, recent blood extravasation, from one half to one and a half line in thickness. Neither the pia mater nor the arachnoid were perceptibly thickened. Nowhere were there any pseudo-membranous formations. There were some spots of atheroma on some of the arteries of the base. The whole of the right temporal lobe, especially the inner layer of the cortical portion, was completely softened and almost gelatinous. The cortical part, when cut through, displayed an outer layer of a whitish-gray colour, and an inner very highly reddened. The first varied little from the normal tint. The inner was of a dark red colour, and showed, even to the naked eye, a highly developed network of vessels, and many capillary apoplexies. The microscope showed in the softened portions of this inner layer extravasated blood-corpuscles, granular masses, nuclei, softened and fatty nerve-cells, and transition forms.

This was a case of paralytic insanity running an acute course. The inflammatory character of the disorder is manifest, and it is

the inner and not the outer portion of the cortical substance that is softened and degenerate.

III. The next may be termed a subacute case. N—, 53 years of age, was admitted September 16th. Before he was attacked, he had become religious and somewhat gloomy. In August his speech was affected, and exalted ideas showed themselves. These were chiefly of a religious character. In November he had two paralytic attacks, and died November 24th.

Post-mortem examination thirty-one hours after death.—Skull small, thickened. Dura mater adherent. The soft meninges thin and delicate; the arachnoid atrophied and perforated. Here and there the pia mater was adherent to the brain. The substance of the cerebrum was soft and somewhat moist. In the posterior lobes, the inner layer of the cortical portion was slightly reddened. The change of texture was unmistakable; it was soft and pappy. In the temporal lobes and in the anterior part of the frontal lobes, the inner layer was highly reddened, vascular, and very soft. The cortical substance was everywhere of its normal thickness, and presented no appearance of atrophy.

The microscope showed in the reddened portions of the cortical substance aggregates of fatty granules, either in the form of nerve-cells or in amorphous collections. In places the cells appeared full of fat-granules, in others the cell-outline was lost. The network of vessels was highly developed, the walls in a moderate state of fatty degeneration. The viscera of the body presented nothing remarkable. There was atheroma of the ascending aorta and its arch.

In this case, which may be called subacute, there was no marked atrophy of the convolutions, nor sign of meningitis; but there was great injection, softening, discoloration, fatty degeneration, and destruction of the nerve-cells of the inner layer of the cortical substance. There was some amount of alteration in the gray matter of the optic thalami; very little in that of the corpora striata.

IV. The fourth was a chronic case of a man of great muscular development, who had indulged in both sexual and alcoholic excesses. X—, admitted October 1, 1855. His malady had commenced in the first half of 1854, when 48 years of age. He displayed inarticulate speech, kleptomania, and loss of memory. The course of the disease was remitting, without active symptoms. Sometimes there was depression. He had hallucinations both of hearing and sight. After a gradual decline, he died of pneumonia after an apoplectiform attack, February 18, 1859.

Post-mortem examination thirty-six hours after death.—The right lung showed pneumonic infiltration and yellowish softening. The

heart was healthy; atheromatous thickening at the commencement of the aorta. The other organs presented nothing very remarkable.

The skull was hard and thick. The soft membranes upon the convexity, especially on the anterior half of the cerebral hemispheres, were thickened and adherent to the brain-substance. The cortical substance was discoloured and soft, the nerve-cells were in a state of fatty degeneration. There were many granule cells and others in a state of transformation. The vessels were tolerably free from fatty change. On the floor of the fourth ventricle were some amyloid corpuscles.

In conclusion, we observe that in these four cases the skull, meninges, and consistence of the brain differ. All four agree in there being one constant and identical modification, a parenchymatous degeneration of the inner layer of the cortical substance, which we must look upon as the essential change in general paralysis. We find it in remitting and chronic cases, in acute and subacute. In chronic cases we find residua of the active process, pigment-stains, alterations of the membranes, regressive destruction of the cell elements; but without undervaluing the significance of the changes of the meninges, we must look upon the parenchymatous inflammation as the essential cause of paralytic insanity.

CLINICAL CASES.

Remarks on Aphasia, with Cases. By J. Keith Anderson, M.D. Edin.; President of the Royal Medical Society of Edinburgh.

(*Read before the Royal Medical Society of Edinburgh, 9th March*, 1866.)

In the following remarks I have endeavoured to combine and arrange the opinions expressed by recent writers on the loss of speech which depends on disease of the brain, and which is frequently present in cases of paralysis. This cerebral loss of speech has been designated by the various names of alalia, aphemia, aphasia, and verbal amnesia. As aphasia is the term generally employed, I shall make use of it in this paper.

Aphasia is a disease, or a collection of symptoms, which it is difficult strictly to define; but its leading features may be shortly stated as follows:—Aphasia is distinguished from all other forms of

loss of speech by its being due to a cerebral lesion alone, and not to any paralysis or defect of the organs of voice or of speech. It differs entirely from the silence of deaf-mutism, insanity, and defective intelligence. The patient has ideas which he in vain labours to express in words, although his organs of vocalisation and articulation are perfect. An inability to express thoughts by writing coincides, in most cases, with the loss of speech; and reading and calculation are also frequently lost. Loss of the power of articulate speech is, however, the principal characteristic of aphasia. In most cases the loss of speech is not complete; but there exists such an impairment of that function as to render the expression of thought by its means difficult or impossible. The impairment may exist in all degrees, from that in which there is merely an inability to recollect or to cause to be pronounced certain words, to that in which speech is altogether unintelligible.

In place of attempting a further definition of aphasia, I think it better to give such a selection of cases as will suffice to convey an idea of its principal characteristics.

Case I.—In 1863 a young man was brought to Professor Trousseau. Four years previously he had had a hemiplegic attack of the right side. He had recovered in a great measure the use of his limbs, but since the attack he had never said any other words than "Non," and "Maman." When asked his name, he replied "Maman;" his age, "Maman, Non." To all questions he replied thus. He had learned to write with his left hand, but could only write his surname. He was ordered to pronounce it, but he said "Maman." He was asked to write this, but he wrote his surname. Thus this man had only two words which he could say, and one which he could write; yet he was able to play well enough at cards and at draughts. He appeared to read; but as he kept the book for only a few minutes at a time, it was doubtful whether or not he could really do so. His intelligence appeared to be tolerably good.*

Case II.—A gentleman, æt. 46, had a hemiplegic attack, after which he entirely lost the power of speech. The only articulate sounds which he could utter were, "ee—o." He varied the tone of these so well, that, with the aid of expressive gestures, he was able to convey to those about him his meaning upon ordinary subjects. He perfectly comprehended what was said to him, and clearly understood what he meant to answer, but was only able to utter these sounds, "ee—o, ee—o." He believed, however, that he used the proper words for the expression of his ideas, and often appeared surprised and displeased when he was not understood. He sometimes tried to explain his meaning by writing on a slate; but he generally substituted one word for another, and almost always erred in spelling what he wrote.†

Case III.—A lady, affected with cancer of the left anterior lobe of the brain, was frequently unable to recall the names of the most familiar objects, and was reduced to express them by signs, or to point to them with her

* Trousseau, 'Clinique Médicale de l'Hôtel-Dieu de Paris,' 2nd edition, p. 590.

† Cooke 'On Nervous Diseases,' quoted in Forbes Winslow's 'Obscure Diseases of the Brain and Disorders of the Mind,' p. 412.

finger. When the word which she wanted was pronounced before her, she recognised it, and could repeat it.*

Case IV.—A man, æt. 40, was attacked with hemiplegia of the right side. The attack occurred during the night, and, when he was found in the morning, the only articulate sounds which he uttered were, "Cou si si," "Cousisi." For four months he could utter no other syllable, except, in moments of anger, an oath. When he came under the observation of M. Trousseau, he was able to write his name with his left hand. He was asked to pronounce his name; he said, "Cousisi." He was then asked to write his name, and he wrote it correctly, "Paquet." The next request was to write his address, and he again wrote "Paquet." Perceiving, however, that this was an error, he turned away his head impatiently, saying "Cousisi." He was made to copy the word "billet," and he wrote it correctly; but, being again asked to write his name, he wrote instead, "billet." He had good enough intelligence, and was able not only to play at dominoes and draughts, but even to cheat at those games. He read books; but it was observed that he read the same thing day after day, and even many times in the same day.†

Case V.—A man, æt. 60, had hemiplegia of the right side. The only words which he could utter were, "Ah! fou;" and these he used on every occasion.‡

Case VI.—Dr. Hughlings Jackson records the following case. E. H—, æt. 34, who had generally had good health, and who still looked healthy, was seized suddenly whilst walking across a room. He staggered, and then fell; and when put to bed it was found that the right arm and leg were paralysed, and that he could not speak. For a year he could not speak at all, except to say "yes" and "no;" but about that time he began to talk, if such interjectional expressions could be called talking. He relearned to say "d——n," "d——n your eyes." He had been in the habit of swearing, but now can say nothing else except "yes," "no," and "aye." I think he can now make signs, but not always correctly. He tried to tell me his age by his fingers, but was not quite correct. His writing—the penmanship of which, considering that it is written with his left hand, is pretty good—does not really consist of words at all—scarcely, indeed, of letters. It appears to me to resemble the word "damn," rather suspiciously.§

Case VII.—A boy, æt. 18, had an attack of hemiplegia of the right side. The paralysis rapidly disappeared, but for three weeks he was unable to speak at all. After that time he was able to speak, but he made constant mistakes in words. His mistakes in speaking were of this kind:—"I hear quite wetty," instead of "quite well." "I can witter it in my ear." He called a book a "totano," and a chair a "handkerchief." When reading, he called farmer "farming," and consistent "constant."‖

Case VIII.—Dr. Graves gives the following case:—A farmer in the County of Wicklow, æt. 50, had a paralytic fit in the year 1839; since

* "A Case of Amnesia," by Thomas Hun, M.D., 'American Journal of Insanity,' 1850-51, p. 358, quoted in 'Archives Générales de Médecine,' 1864, vol. i, p. 343.

† Trousseau, 'Clinique Médicale,' p. 581.

‡ Ibid., p. 592.

§ Hughlings Jackson, 'London Hospital Reports,' vol. i, 1864, p. 452.

‖ Ibid., p. 415.

that time he never recovered the use of the affected side, and still labours under a painful degree of hesitation of speech. He is, however, able to walk about, take a great deal of active exercise, and superintend the business of his farm. His memory seems to be tolerably good for all parts of speech except noun-substantives and proper names; the latter he cannot at all retain, and this defect is accompanied by the following singular peculiarity: that he perfectly recollects the initial letter of every substantive or proper name for which he has occasion in conversation, though he cannot recall to his memory the word itself. Experience, therefore, has taught him the utility of having written in manuscript a list of the things he is in the habit of calling for or speaking about, including the proper names of his children, servants, and acquaintances; all these he has arranged alphabetically in a little pocket dictionary, which he uses as follows:—If he wishes to ask anything about a cow, before he commences the sentence he turns to the letter C, and looks out for the word "cow," and keeps his finger and eye fixed on the word until he has finished the sentence. He can pronounce the word "cow," in its proper place, as long as he has his eye fixed on the written letters; but the moment he shuts the book it passes out of his memory and cannot be recalled, although he recollects its initial, and can refer to it again when necessary. . . . He cannot recollect his own name unless he looks out for it, nor the name of any person of his acquaintance; but he is never for a moment at a loss for the initial which is to guide him in his search for the word he seeks.*

Case IX.—M. Bouillaud records an interesting case, in which the patient was quite unintelligible by reason of a want of words, or from using words which did not apply to the objects which he wished to indicate. In writing, the letters were well formed, but were placed without order, not forming words, and their meaning could not be guessed at. The patient could understand what he read, but could not read aloud more than two or three lines at a time, and even then only by an extreme effort of attention and will. He could sum up two lines of figures, and, most surprising fact of all, he was able whilst in this condition to compose and write down a piece of original music. He was then able to sing the air, without words.†

Case X.—Dr. Hughlings Jackson mentions the case of an aphasic patient who could sing "I'm off to Charleston," and "So early in the morning," though he could say nothing else, except "Don't know," and "How d'ye do?" and some devotional phrases.‡

Various attempts have been made to determine the situation of that part of the brain to a lesion of which aphasia is due. I shall mention the principal of these, with the arguments which have been adduced in their support.

In 1808, Gall, the founder of phrenology, from observing the peculiar position and appearance of the eyes in certain persons who had a marked aptitude for learning and reciting by heart, was induced to place the seat of the faculties of the sense of words and the language of speech in that part of the anterior lobes of the brain

* "Observations on the Nature and Treatment of Various Diseases," by Robert J. Graves, M.D., F.R.S., 'Dublin Quarterly Journal of Medical Science,' vol. xi, 1851, p. 1.

† 'Bulletin de l'Académie Impériale de Médecine,' 1865, p. 752.

‡ 'London Hospital Reports,' vol i, 1864, p. 448.

which rests on the orbital plates. He regarded as the organ of the memory of words that part of the brain which rests on the posterior half of the orbital plates.

Professor Bouillaud, of Paris, in his 'Traité de l'Encéphalite,'* and in various memoirs read before the Academy of Medicine,† brought forward evidence to show that the faculty of articulate language resides in the anterior lobes of the brain. He has collected the records of from 75 to 850 cases of cerebral disease, in 116 of which there was aphasia with a lesion of the anterior lobes only; in the others there was no aphasia, and the anterior lobes were found healthy. Trousseau‡ has put this localisation to the test by counting only those cases with autopsy observed during four years, as these have all the necessary conditions of exactitude. These cases are thirty-four in number, and of them eighteen are in favour of Bouillaud's view, and sixteen against it. The numbers are thus nearly equal; but it is worthy of remark that, while all of the cases favorable to Bouillaud's doctrine are cases of aphasia, only four of the contrary cases are of that character. Adding these four to the eighteen cases favorable to Bouillaud, we have twenty-two cases of aphasia, in eighteen of which the lesion was in the anterior lobes only, making Bouillaud right in 82 per cent. of the cases of aphasia. Various objections have been urged against the twelve cases which were not aphasic, but it is needless to mention them.§

The next attempt to localise the cerebral faculty of language was made by M. Marc Dax, of Sommières. He had been struck by the fact that, in all of the cases of hemiplegia with loss of speech which came under his notice, the paralysis was invariably on the right side, indicating a lesion of the left half of the brain. He compiled these cases in a memoir read before the Medical Congress held at Montpellier in 1836,‖ in which he related forty cases of loss of speech, the cerebral lesion being to the left in all. He therefore concluded that in aphasia the lesion was invariably seated in the left half of the brain. M. Baillarger has combined the statistics for and against this doctrine with the following result:—He has collected 155 carefully reported cases of hemiplegia with aphasia, and he finds that in 145 the hemiplegia was on the right side, and in the remaining ten on the left.¶

In 1865 the son of M. Dax wrote a paper** in which, after sup-

* 'Traité de l'Encéphalite,' Paris, 1825.

† 'Archives Générales de Médecine,' 1825, t. viii, p. 25. 'Bulletin de l'Académie de Médecine,' t. iv, p. 282, 1839. Ibid., 1848, t. xiii, p. 699. Ibid., 1865, t. xxx, p. 613 and p. 735.

‡ 'Bulletin de l'Académie Impériale,' 1865, p. 668.

§ See 'Bulletin de l'Académie Impériale de Médecine,' 1865, p. 842.

‖ "Lesions de la Moitié gauche de l'Encéphale coïncidant avec l'oubli des signes de la pensée," 'Gazette Hébdomadaire de Médecine et de Chirurgie,' p. 259.

¶ 'Bulletin de l'Académie Impériale,' 1865.

** Ibid., p. 260.

porting his father's view, he attempted a still finer localisation. He assigned the seat of the faculty of articulate language to the external and anterior part of the left half of the middle lobe of the brain. This localisation rested on very feeble evidence, and has not been supported by further observations.

In 1861 M. Broca, of Paris, who had been an opponent of the principle of cerebral localisations, was converted into its most earnest advocate, under the following circumstances:—A discussion had taken place, before the Society of Anthropology, between M. Gratiolet, who maintained that the principle of cerebral localisations was false, and M. Auburtin, who affirmed that Bouillaud's localisation was at least proved. In this discussion Broca took the side of Gratiolet. A few days afterwards Broca found one morning, in his wards at the Bicêtre, a patient in whom he recognised a typical case of loss of speech from a cerebral cause. I shall give an abridgment of his account of the case, as it is one of extreme interest, and gives a fair idea of the condition of one class of aphasic patients.

A man, æt. 55, named Leborgne, attacked with diffuse gangrenous erysipelas of all the right lower limb. His history was as follows:—He had been subject to attacks of epilepsy from his youth upwards, but had been able to work till he reached the age of thirty. At that time he lost his speech, and two or three months afterwards was admitted to the Bicêtre, where he remained for the rest of his life. On his admission there, he presented no symptom whatever, except the loss of speech. He could say nothing except "Tan," and by this name he was known. He understood whatever was said to him, but replied nothing except "Tan, Tan," accompanied with very significant gestures. When he was not understood, he became excited, and swore, the oath being invariably, "Sacré nom de Dieu." He bore a bad character, but was always considered responsible for his actions. After he had been ten years in the hospital, a new symptom supervened. The right arm became gradually weak, and finished by becoming completely paralysed. Little by little, the paralysis extended to the right leg, till it also became entirely paralysed, and the patient had to remain constantly in bed. He reached this condition four years after the beginning of the paralysis of the arm, and fourteen after the loss of speech. During the next seven years no fresh symptoms showed themselves, with the exception of some weakness of sight. At the end of this period he came under the care of M. Broca.

From the weakness of the patient, Broca was unable to make a thorough examination of the state of his intellectual powers, but the following details were ascertained:—He appeared to comprehend all that was said to him, but, being only able to manifest his ideas by the movements of his left hand, his meaning could not be well comprehended. Numerical replies were those which he made best, by opening and closing his fingers. He was asked how many days he had been ill, and he sometimes replied five days, sometimes six. He indicated, exactly, how many years he had been at the Bicêtre. When this question was repeated, he again answered correctly; but the third time he lost his temper, and emitted the oath already mentioned. He could tell correctly the time on the clock, and could point out the order of succession of his different lesions. Frequently, however, questions to which a man of ordinary intelligence could have replied by a gesture, remained unanswered.

Sometimes the meaning of his replies could not be made out, while at other times the reply, though clear, was wrong. It was therefore evident that his intellect was profoundly affected; but he undoubtedly possessed a degree of intelligence sufficient for the act of speech.

It was clear that in this case there had been a progressive cerebral lesion, affecting at first only a limited portion of the brain substance, and gradually extending till it caused the lesions of motility. That this lesion occupied principally the *left* half of the brain was evident from the paralysis of the opposite side of the body.

At the examination of the brain, which was not made till the organ had been hardened by immersion in spirit for two or three months, a great loss of substance was detected in the left anterior lobe, consequent on a chronic softening which had originated there, and had spread to the corpus striatum of the same side. By a careful analysis of the appearances, Broca satisfied himself that the beginning of the softening had been most probably in the posterior part of the third left frontal convolution, or, if not there, in the second left frontal convolution. As for ten years the sole symptom had been the loss of speech, he concluded that this was due to the initial lesion; in other words, that the loss of speech was caused by the softening of the second or third left frontal convolution—most probably the latter.*

Shortly after the examination of this case, Broca met with another, in which the loss of speech was the sole symptom, and in which the intelligence appeared unimpaired. The patient had only three or four words at his command; but by means of these and of expressive gestures he managed to make himself perfectly understood. He could not write from the trembling of his hand, so that it remains uncertain whether or not he could express ideas by writing. At the autopsy there was found an old apoplectic cyst occupying the posterior parts of the second and third left frontal convolutions, the brain being otherwise healthy. The second convolution was much less profoundly altered than the third; Broca therefore concluded that to the lesion of the latter convolution the loss of speech was due.†

A number of subsequent observations have shown that there is a remarkable connection between aphasia and lesions of this convolution on the left side. So far as I know, no case has been published in which there was a lesion of this convolution on the left side without aphasia.

Several cases, however, have been recorded which show that aphasia may occur independently of disease of this particular convolution. These I shall briefly mention. M. Charcot had a case in which there was aphasia with a lesion of the left parietal lobe. The lesion was prolonged across the fissure of Rolando as far as the transverse frontal convolution, which was diseased just at the point where it joins the convolution of Broca. In the latter convolution

* Broca, 'Sur le Siége de la Faculté du Langage Articulé, avec deux observations d'Aphémie (perte de la parole),' Paris, 1861, p. 16.

† Broca, op. cit., p. 32.

there was no appearance of disease, with the exception of a few "compound granular corpuscles," detected by the microscope.* This case has induced Broca to modify his opinion, and to admit that lesions of the left transverse frontal convolution may affect articulate speech. This convolution is directly continuous with that of Broca, and many anatomists class them as one. A somewhat similar case is given by Vulpian.† Several cases of aphasia with a lesion of the right side of the brain have been recorded. Boyer mentions a case in which a man received a thrust of an umbrella in the right eye, penetrating the orbital plate, and lacerating the *right* anterior lobe of the brain. The patient instantly lost the power of speech.‡ Several instances of aphasia with *left* hemiplegia are on record; but such cases are not worth much without post-mortem details. One case is, however, too important to be omitted, as a careful autopsy was made. A woman with left hemiplegia was also aphasic. After death, the right Sylvian artery was found obliterated by a clot, and the posterior part of the third *right* frontal convolution highly softened. The left side of the brain was healthy.§ That this convolution on the right side may be injured without causing aphasia is shown by a case of M. Parrot's. In this case the speech was perfect, and after death the third right frontal convolution was found destroyed in all its posterior part.‖ Similar cases have been placed on record by Fernet and Charcot.¶

Having thus discussed the various anatomical sites which have been assigned to the lesion causing aphasia, I shall now review the different theories which have been proposed as to its nature. And, first, it will be expedient to consider the nature of language itself.

Language consists essentially in the establishment of a definite relation between an idea and a sign by which that idea is manifested. This sign may be verbal, vocal, graphic, or mimic. Language may thus be divided into vocal language, written language, &c. We may speak, therefore, of the general faculty of language, meaning thereby all the different modes of expressing thought, and of the different special faculties of spoken language, written language, &c. It is held by Bouillaud** and others that all these special faculties of language are distinct and independent.

* See Trousseau, 'Clin. Méd.,' p. 600; also 'Gazette Hebdomadaire,' 17 Juillet, 1863; Auburtin, 'Considérations sur les Localisations Cérébrales,' Paris, 1863, p. 59; and Broca, 'Remarques sur le Siége, le Diagnostique, et la Nature de l'Aphémie,' Paris, 1863, p. 6.

† Trousseau, 'Clin. Méd.,' p. 601.

‡ Auburtin, op. cit., p. 56.

§ 'Bulletin de l'Académie Impériale,' 1865, p. 665.

‖ 'Gazette Hebdomadaire,' 31 Juillet, 1863.

¶ Trousseau, 'Clin. Méd.,' p. 601.

** 'Bulletin de l'Académie Impériale, 1865, p. 605.

Human speech or articulate language consists in the voluntary production of a series of articulate sounds associated in words, and has as its object the representation of a series of ideas corresponding to these words, and joined together in such a manner as to express a thought.* The expression of thought by speech requires—1. The intellectual possession of a language susceptible of being spoken; 2. A proper conception of the relation between an idea and the words which express it; 3. The will of expressing this idea by articulate sounds; 4. The possession of means of communication between the will and the muscles concerned in articulation; and, 5. The power of so co-ordinating the movements of these muscles as to produce a series of articulate sounds corresponding to the series of ideas. Speech is, therefore, accomplished by the employment of three distinct kinds of psychical force:—1. Of intellectual force, in the formation of a thought capable of being expressed in words; 2. Of voluntary force, in the determination to utter these words; and, 3. Of motor force, in the realisation of the movements necessary to the articulation of the words.† All of these forces, though necessary to the expression of thought by speech, are not necessary to the act of speech itself. In moments of emotion, the first and second may be dispensed with, and an oath or an ejaculation may be uttered without any exercise of the intellect or the will.

It is probable that a number of cerebral co-ordinations are also necessary to the proper expression of thought by speech. In order that speech may be intelligent and fluent, the ideas and the words require to be arranged in a certain order. In health the words may be arranged properly by an exercise of the intellect and the will by the speaker thinking over the words which he is about to use. In such a case the utterance of words is slow and deliberate, as the speaker requires to make a double effort of his attention in finding first the idea, and then the words by which most clearly or elegantly to express it. Where the speaker is engaged in ordinary conversation, or where he is deeply interested and excited with the subject on which he is talking, his words come quickly, and without his bestowing any attention on them. In such cases speech would appear to be automatic. To give a better illustration:—An orator is called on suddenly to speak on a subject on which he has not prepared any remarks. On first rising he speaks slowly, and hesitates as to the words to be used. His ideas are confused, and he has a difficulty in expressing himself in appropriate language. Gradually, as he warms with his subject, he finds his words come more and more readily, and his ideas arrange themselves in more regular order, till at length, in the full swing of his oration, his ideas and his words appear to come spontaneously. There is here, I believe,

* See Parchappe, 'Bulletin de l'Académie Impériale, 1865, p. 679.

† Ibid., p. 681.

an example of cerebral co-ordination—a co-ordination not merely of the actions necessary to the furnishing and proper arrangement of words, but also a co-ordination of those actions necessary for the formation and arrangement of ideas.

For the consideration of aphasia, it will be convenient to adopt a simple division of articulate language suggested by Bouillaud. He divides articulate language into two distinct elements, viz., 1st, the faculty of creating or of learning words as signs of our ideas, and of preserving the recollection of them, which he calls interior speech; and, 2nd, the faculty of pronouncing, of articulating these same words, which he calls exterior speech. Exterior speech is thus only the expression of interior speech.*

The simplest and plainest division of aphasia is that of Baillarger.† He divides it into simple aphasia, in which there is merely an inability to make use of words as signs of our ideas—and perversion of speech, in which words are used to represent ideas with which they have no connection in ordinary language. Although in actual practice these two conditions are frequently found combined, it is expedient to consider them separately.

To begin with the consideration of simple aphasia. At the first glance, it is evident that in this division there are two chief groups. In the first, there is loss of both speech and writing; in the second, there is loss of speech only. By some writers these have been designated respectively amnesic and ataxic aphasia.‡

In amnesic aphasia, or that form in which there is loss of both speech and writing, the easiest hypothesis is to suppose that there is a loss of the memory of words—or, as it has been called, verbal amnesia. Did the patient possess the memory of words, it is natural to suppose that he would be able to express himself by writing; but such is not the case. Some writers have supposed that there are special cerebral co-ordinating centres for speech and writing, and that both of these have been injured to such an extent as to render both speech and writing impossible, by reason of the co-ordinated movements necessary to each being inefficiently performed. It appears to me that such an explanation is very far-fetched, and quite unnecessary, as the theory of forgetfulness of words, though perhaps not altogether a satisfactory explanation of certain cases, is sufficiently plausible. Trousseau § has argued that a person cannot think without words; but the statement of Professor Lordat, of Montpellier, who was himself aphasic, is conclusive to the contrary.

* 'Bulletin de l'Académie Impériale, 1865, p. 618.

† Ibid., p. 818.

‡ See 'Edin. Med. Journal,' March, 1866: "Case illustrating the supposed connection of Aphasia (loss of the cerebral faculty of speech) with right Hemiplegia and Lesion of the external left frontal Convolution of the Brain," by William R. Sanders, M.D., F.R.C.P.

§ 'Clinique Médicale,' p. 624.

Lordat, after his recovery, stated that he was in the habit of composing lectures in his own mind, without being able to put a single idea into words.*

In the second or ataxic group of simple aphasia—viz., that class in which the patient, though unable to speak properly, has still the power to express his thoughts by writing—the explanation is more difficult. And, first, in examining and considering such cases, it is necessary to distinguish clearly between the mere mechanical act of writing and the expression of thought by written language. It is possible for some patients belonging to that class in which I assume there is mere forgetfulness of words, to write clearly and distinctly certain words which they possess, or which they have just heard repeated, or which they have copied; but this is merely the art of writing—it is not the expression of thought by that means. In the group of cases of which I am now speaking, the patients, though unable to express themselves by articulate language, remain perfectly capable of expressing their ideas by writing.† In such cases it is clear that the patients have not lost the memory of words. What, then, is the particular lesion in such cases? Several hypotheses have been brought forward. Trousseau‡ maintains that they resemble the first class in their being due to a loss of memory. This is a loss of the memory, not of words, but of the means of co-ordinating the movements necessary for articulate speech: in other words, the patients have forgotten how to speak.

"The infant speaks," says M. Trousseau, "only because it has learned to speak; and one can comprehend that it can forget what it has learned, and that aphasia can be the consequence of the loss of the memory of the complicated movements necessary for the articulation of words."§ Broca, who also holds this view, thinks that the successive degrees of perfection which we observe in the speech of children are to be explained by the successive degrees of perfection of a particular kind of memory, which is not the memory of words, but that of the movements necessary to the articulation of words; and that it is the latter kind of memory which is lost in this form of aphasia.

Now, the movements necessary to the articulation of words, though started by the will, are only incompletely directed by it. When we wish to utter a certain word, or to pronounce it in a certain manner, we do not consider how this is to be done. We only look to the end to be attained; we do not trouble ourselves as to

* 'Clinique Médicale,' p. 621; also Lordat, 'Analyse de la Parole pour servir à la Théorie de divers cas d'Alalie et de Paralalie,' Montpellier, 1843.

† An excellent example of this is given by Trousseau at page 615 of his 'Clinique Médicale.'

‡ 'Clinique Médicale,' p. 625.

§ Quoted by Baillarger. See 'Bulletin de l'Académie Impériale,' 1865, p. 819.

the means. We do not know all the different movements required for the articulation of words; how, then, can we remember them? How can we recollect acts of which we have not been conscious? If we adopt this explanation of loss of speech, we may as well apply it to all cases of partial or complete palsy in which the muscles are in a normal condition. I therefore consider this theory of forgetfulness of co-ordinated movements as more than doubtful.

Another explanation is that of M. Bouillaud. Bouillaud believes, and since 1825 has laboured to make others believe, that somewhere in the anterior lobes of the brain there is placed a faculty which presides directly over the co-ordinated movements necessary for speech.* He designates the seat of this faculty, the legislative or co-ordinating organ of speech. He holds that, while some cases of aphasia may be due to a loss of memory of words, the majority are owing to a lesion of that part of the brain in which is seated this co-ordinating organ of speech. This theory is a very tempting one, inasmuch as it explains the phenomena of ataxic aphasia in an extremely simple manner. It rests on the fact that, in complicated voluntary movements, the will is only the point of departure. And, since the most complex muscular co-ordinations can be accomplished without being submitted to our examination or combined by our reason, it is natural to explain this by supposing the existence of co-ordinating centres for these movements. But, granting the existence of a separate co-ordinating centre for the movements of speech, why place it in the brain? The doctrine that the gray matter of the cerebral hemispheres is the seat of intellectual power is universally admitted. If, then, we accept the theory that a portion of this gray matter is subservient to a purpose which cannot be considered as in the least degree intellectual, we run counter to all our former ideas of cerebral physiology. Is it not much more probable that the co-ordinating centre of speech is seated in the medulla oblongata? Are not the olivary bodies much more likely, as supposed by Schroeder Van der Kolk, to be the co-ordinating centres of speech, than the gray matter of the anterior lobes of the brain? M. Bouillaud, it is true, has made a suggestion that this principle may reside in the white substance of the anterior lobes, and that the gray matter immediately in contact with it may be the seat of the intellectual element of interior speech.† In other words, M. Bouillaud believes that the white or conducting part of the brain substance can regulate muscular co-ordinations. This theory is quite opposed to modern physiology. Again, if there is a cerebral co-ordinating centre for speech, does it reside on one or both sides of the brain? —in other words, is it single or double? If single, how does it

* 'Bulletin de l'Académie Impériale,' 30 Avril et 15 Mai, 1865, p. 617.

† 'Archives Génerales de Médecine,' 1825, t. viii; quoted in Bulletin de l'Académie Impériale,' 1865, p. 618, note.

govern the muscles of both sides? In those cases in which motor organs are under the special control of certain parts of the encephalon, the muscles of each side receive their nervous supply from separate sides of the encephalon; but here we should have an example of a cerebral centre seated on one side of the body, governing muscular motions on both sides. On the other hand, if this cerebral centre of Bouillaud is double, how is it that the majority of cases of aphasia are caused by a lesion of one side of the brain only? Were the organ a double one, we should expect that its destruction on one side alone would interfere only with the muscular motions of a single side, leaving those of the other side unimpeded. In such a case speech would not be greatly interfered with, for patients with paralysis of one side of the tongue talk quite intelligibly.

The original authorship of the next theory I cannot ascertain; it is upheld in France by M. Parchappe, and in this country by Dr. Sanders. This theory maintains that, in those aphasic patients who can write, the motor impulse to speech cannot be properly conveyed to the articulating muscles, or to the co-ordinating centre of articulation, by reason of some injury of the voluntary initiating or connecting apparatus. Of course in aphasia, which consists in a loss of speech from cerebral causes, the lesion must be somewhere in the brain. Supposing the memory of words and other faculties necessary to speech to reside in the anterior lobes, a lesion of the white matter of those lobes might separate and cut them off from the muscles of articulation. Thus the individual might have the memory of words intact, and have all the inclination to pronounce them, but, by reason of the interruption of the nervous current, he might be unable to cause these muscles to act. This theory somewhat resembles that of Bouillaud, but differs from the latter in this—that it does away with the difficulty of establishing a cerebral co-ordinating centre for articulation. The co-ordinating centre might be in the medulla oblongata or elsewhere, and the voluntary impulse might be conveyed thither from the anterior lobes of the brain. This theory may also suit those cases in which words are pronounced, but in an imperfect manner. Supposing the conducting apparatus to be in bad working order, the impressions conveyed by it might be so altered and distorted as to give rise to altered and distorted muscular motions.

I come now to the last theory or suggestion. It has occurred to me, while considering the various phenomena of aphasia, that possibly these, or some of these, may be due to a deficiency or impairment of those cerebral co-ordinations, of which, in a previous part of this paper, I have stated the probability. It is unnecessary here to repeat the arguments which were brought forward to show that in thought and in speech cerebral co-ordinations are necessary. If the concurrence of many different parts of the brain is essential to the

act of speech—an opinion held by many psychologists—then many different lesions might give rise to aphasia by cutting off the communication between these different parts, and so preventing the proper combination of their actions. In the present state of our knowledge of cerebral actions, very little can be said with regard to these co-ordinations; but it is conceivable that an interruption of them, or of some of them, might give rise to a difficulty or an impossibility of pronouncing, or of properly arranging, the series of articulate sounds which constitutes speech. This theory would allow greater latitude to the position of the lesion than Broca's views assert.

Having now mentioned the various theories with regard to the simple aphasia, or that form in which there is merely a loss or impairment of speech, I come to the other division of aphasia—viz., that form in which there is perversion of speech, and words are used to express ideas with which they have no connection in ordinary language.

This form admits of division into two classes. In the one, the patients believe themselves to be talking correctly; in the other, they are conscious of their errors of language as soon as the words are uttered.

In that class in which the patient utters words totally at variance with his meaning, without being conscious of the error, it is evident that he has lost the proper sense of the relation of words to ideas. The memory of words does not seem, in many such cases at least, to be greatly deficient; it is the memory of their meaning that has failed. There is, however, more than this. A false relation has taken the place of the proper one. When a patient calls for his boots, meaning his razor, and is astonished that his boots are brought to him, his sense of the settled relation of words to things must have become so perverted that he imagines words to express meanings quite different from those assigned to them.

In the other class, or that in which the patient, when he gives wrong names to objects, is immediately conscious of his error, it would appear that the proper conception of the relation of words to ideas or things, though impaired, is not altogether lost. The two classes of patients may be compared to persons of different degrees of education. The one person spells altogether badly, and is unconscious of his errors. The other also spells badly; but as soon as he sees the words written down, he perceives that something is wrong, and rectifies his spelling immediately. In like manner, the patient in whom the relation of words to objects is lost in the minor degree, as soon as he hears himself pronounce a word becomes aware that it is the wrong one. The bad spelling is detected by the eye, the wrong word by the ear.

Having now discussed the different classes into which I have

divided aphasia, I shall speak shortly of those patients who, having only a very few words at their command, are still enabled to swear or utter ejaculations when under the influence of passion. The explanation of such cases appears to me very simple. Oaths are, under such circumstances, emotional and automatic, being uttered without the interference of the intellect or the will. They partake of the nature of reflex phenomena, being excited by stimuli from without, and being uttered without the consent of the individual.

In conclusion, I have only to make a single remark on the intellectual condition of aphasics. In all of the cases of aphasia which I have seen, the intellect was decidedly weakened, but certainly not to such an extent that the abolition of speech could have been due to an abolition of ideas. I believe, therefore, that the loss of intelligence does not necessarily enter into the definition of aphasia, as it is probably due to the extensive softening of the cerebral gray matter which is found in most confirmed cases of the affection.

II. *Cases illustrating the Diagnosis of Paralytic Insanity, with Remarks* (partly translated from the French). By G. Mackenzie Bacon, M.D., Assistant Medical Officer of the Cambridgeshire Lunatic Asylum, Fulbourne.

The ordinary features of so-called "general paralysis" are so familiar to those who treat the insane in numbers, that they are apt to regard its diagnosis as a transparent and very easy matter. It happens, however, sometimes that cases arise which offer all the prominent early signs of the disease, and yet do not go on to a fatal termination. In such instances the mental symptoms are not merely arrested for a time, but the patient to all appearance recovers. It is not unimportant to bear this fact in mind for other than pathological reasons, as a too positive prognosis might recoil unpleasantly on the giver were it refuted by an unexpected recovery. There is, probably, no disease of the brain about which we should be more ready to give a positive opinion than general paralysis, for its symptoms are, as a rule, easily recognised, and its course is so uniform; yet this very fact is liable to produce a false security, and so sometimes to favour error. The most distinctive signs of this disease are allowed to be the grand or optimist illusions and incoherence which precede any actual palsy; and, knowing that these symptoms are most frequently followed by certain destructive changes in the brain, we are

apt to assume that the former must always terminate in the latter. This, however, is not an infallible rule; but one seldom hears of the exceptions. The following cases occur to me as illustrating this view of the subject: they have no special features of interest except as representing the minority, and for that reason are the more instructive.

Case 1.—John S—, æt. 40, a tailor, was admitted into the Cambridgeshire Asylum May 1st, 1863.

This was stated to be his first attack, and of only a fortnight's duration. His mother and brother died insane. When admitted, he was described as "a fine, well-made man, suffering from much excitement, very talkative, and with excessive optimism, without signs of paralysis. Talks of being the cleverest man in the world, possessing great wealth, great strength, &c. All his remarks consist of exaggerations. Health not much impaired." He was, during the first few weeks, very violent and excited at times, and anxious to display the extraordinary powers he thought he possessed; but by the end of June he was more quiet, and worked at his trade, at which he was very skilful. At that time, however, he talked with the greatest amount of optimism, as to the quality of his work and the amount he could do, &c.

He improved gradually, becoming more quiet and steady in his habits, and not showing the same caprices of conduct; but he continued to talk in the same exaggerated style—not a mere boasting on his part, but a genuine belief in his strength and abilities. After a period of probation, he was discharged recovered in November 1863. He has since earned his living as a tailor; but his conduct has been marked by extravagances and oddities difficult to reconcile with a sound state of mind. He is now (June, 1866) in good health, living at large, and much the same in mind.

Case 2.—Edward M—, æt. 49, married, a wheelwright by trade, was admitted into the Cambridgeshire Asylum August 18th, 1864.

There was some hereditary taint, and a previous attack was said to have occurred. An outbreak of violence led to his being sent away from home. The certificate mentioned "extreme restlessness and excitability. Incoherence, and threatened violence to those about him. Destruction of household furniture, cruelty to his children, robbing his neighbours of their poultry and rabbits, &c."

At first he showed no signs of insanity, but after a month he became incoherent and talkative. He had then unequal pupils, tremor of the facial muscles, and talked in an incoherent and exaggerated style. He afterwards got destructive, tore up the bed-clothes, and collected rubbish of all sorts, such as pieces of wood, string, glass, rags, and useless articles; he also said he was well off, and offered to write cheques for large sums of money. He was always repeating that he felt very strong and never was better in his life, and would write incoherent letters every day. Sometimes he was very abusive, and after swearing and declaiming about his ill usage, would begin to cry, and then give way to some fresh emotional disturbance. About April, 1865, he improved, ceased to be mischievous, and employed himself steadily. In July he was discharged, on the application of his wife, after a month's probation, and has not reurned to the asylum.

In the first case the exaggerated delusions were very remarkable, and would have led many people to anticipate general paralysis; yet,

though these remained in a greater or less degree, the patient improved in other respects, and sufficient time has now elapsed—setting other reasons aside—to prove that the case was not what it seemed likely to be at first.

The second case, perhaps, more nearly resembled ordinary general paralysis; the partial dementia, destructiveness, tremor, and delusions as to wealth, &c., all pointing to such a conclusion. The man has, however, since his discharge, returned to his business and continued well. It is also curious that he had, according to his wife, shown similar symptoms two years previously, and quite recovered from them. It must be admitted that persistent optimism is hardly known in any other disease than general paralysis, which is necessarily fatal; and this makes the anomalous cases the more striking.

In connection with this subject, I have read with interest an article lately published in the 'Annales Medico-Psychologiques,' by Dr. Munoz, who has had charge of the asylum at Cuba. Familiar with general paralysis as seen in this country, he mentions a class of cases which have occurred to him, in which, though all the early signs of this disease have been developed, the subsequent history has belied his unfavorable anticipations. His experiences on this point are valuable and clearly recorded. In Cuba, the differences in race, climate, and in the conditions of life are so considerable as to make a comparison of general paralysis as observed there and in Europe a matter of some interest, and the author's conclusions as to the relative frequency with which the mixed races in the island are attacked are rather striking.

I subjoin a translation of Dr. Munoz's paper, which tells its own tale too ably to require any further introduction:—

"The population of the island of Cuba is composed of a mixture of several races—of native and European whites, both of whom are for the most part Spaniards; of African negroes, of native blacks and creoles; and, lastly, of Chinese, who were introduced into the country some fifteen years ago in great numbers, in order to stimulate colonisation. This circumstance, as may be supposed, has given me the opportunity to make a comparative study of insanity among all these different people. I have thus been enabled to study the forms under which insanity shows itself among the negroes, the Chinese, and the native whites; the relative frequency of these forms, their course, termination, and variation.

"For the present I will confine myself to an explanation of those facts relating to general paralysis that I have observed in Cuba. The population of Cuba is about 1,200,000, and this total is thus composed—viz., 700,000 negroes and creoles (of whom 400,000 are natives), 300,000 native whites, 150,000 European whites (mostly Spaniards), and 50,000 Chinese. Among the natives (including whites, negroes, and creoles) the proportion of the sexes is nearly

equal. Among the negroes imported from Africa there is a disproportion between the sexes, the women being to the men as one to two; but among the whites who come and settle in the country the disproportion is much more considerable, the men being to the women at least as four to one. As regards the Chinese, they are all of the male sex. From these facts it results, of course, that the women are much less numerous than the men in the whole population of the island. The numbers in the asylum at Havana (the only one for the island) were, on January 1st, 1865, as follows:—men 334, women 136—total 470. Of the men, 120 were native whites, 94 foreign whites (Spaniards and Canadians for the most part), 96 negroes and creoles, and 24 were Chinese, while of the negroes 24 were Africans. Of the women, 46 were whites (natives mostly), and 90 were negresses, of whom 34 came from Africa. The enormous difference existing between the number of male and female insane is explained, not only by the disproportion existing between the two sexes in the general population of the island, but also by the custom which obtains in the country of keeping insane women at home, the idea of placing such patients in a public hospital being opposed to the general feeling. It is also to be remarked—and this is still more curious—that the number of the white population insane is nearly one fourth of the whole larger than that of the black, the negro population of the island being nearly twice as large as that of the white; for the insane negroes are to the sane as 1 to 3500, whilst the insane whites are to the sane in the proportion of 1 in 1666.

"From these facts we may conclude that insanity is twice as common among the whites as it is among the blacks.

"Having established these facts, I shall now give the results of my observations relative to the frequency of general paralysis among these different people.

"In order to thoroughly understand the conclusions that I shall draw from this paper, I must remind the reader of the opinion held by some distinguished authors as to the intimate connection existing between the ordinary commencement of general paralysis and ambitious mania.

"I believe also that the majority of alienists now hold this opinion—viz., that general paralysis usually commences with marked exaltation of the faculties, delirium of a grand or ambitious character, embarrassed speech, tremor of the lips, inequality of the pupils, &c. This fact being established, we must admit that in the case of a patient in whom these symptoms are well marked, every physician must give an unfavorable prognosis, suspecting the probable existence of commencing general paralysis. We shall see, however, that this opinion may sometimes be quite wrong.

"This is what happened to me at an early period of my residence in Havana, and further experience at the asylum of which I have had charge has enabled me to confirm it. In June, 1862, I was summoned to a rich proprietor of Havana, a native of the country, and about forty-eight years of age, who was attacked, for the first time, with ambitious mania, hesitating speech, tremor of the lips, inequality of the pupils, and weakness of the legs. The disease had existed for more than a month, and did not seem in any way influenced by the different modes of treatment already adopted. In view of the symptoms presented by the patient, my prognosis was entirely unfavorable; and the friends, alarmed thereat, had recourse to another physician. I cannot say what treatment was adopted in this case; but of this I am sure, that in September, 1864, I saw this individual in a most satisfactory state. This is not the only case of this sort that I can mention, for in the same year (1863) I saw two other patients also attacked with ambitious mania, combined with some symptoms of general paralysis; the one aged thirty-eight and the other forty-two, both natives of Cuba, and neither having had a previous attack. I made the same prognosis as in the preceding case; and, to my great astonishment, I saw the former of these patients recover at the end of about three months, and this satisfactory state of health has continued; indeed, I saw him about eight months ago perfectly well. As regards the other patient, who was placed, like the former, under private care, his state improved at the end of four months' confinement; but the friends, whose means were rather restricted, determined to place him in the public asylum. He remained in the asylum about two months and a half, and, upon being thought well, was discharged. Eight months after, a second attack, of the same nature as the former one, came on, and he was brought back to the asylum. The simple dementia became confirmed in a short time; but no symptom of general paralysis showed itself until April, 1864, at which date the patient was attacked by internal inflammation, which carried him off.

"The autopsy showed us decided injection of the cerebral mass, a certain amount of serous effusion, and slight adhesion of the membranes. During the years 1863-64, I registered at the asylum eight cases, on the male side, of ambitious mania, accompanied by signs of paralysis, among the native whites. Three of these patients, admitted in 1863, left in good health after four or five months' residence in the asylum. They have not returned during 1864 and the first eight months of 1865. Of the five other patients, one died of acute delirium, which came on in the course of a paroxysm of mania; three remained in the hospital, although improved; the fifth fell into paralytic dementia, and, at the time of my leaving the island, was almost dying, with diarrhœa, extreme wasting, sloughing sores on the sacrum and thighs, &c. This is the only well-developed

case of paralytic dementia that has come under my observation, either in or out of the asylum, among the native whites, since I have practised in the island. I should mention here that these individuals are generally very sober, their only drink consisting of water, sometimes mixed with a little red wine, and that taken with the meals. In point of excesses, the only ones they indulge in are of a venereal nature—the climate predisposing to an increased animal temperature, which is a frequent cause of excitement of the genital organs. The repeated exposure to the sun (to which so many are liable in the island) may also have a certain influence in determining the attacks of mania, this form of insanity being that most commonly observed amongst those subjects; but I have met with several cases of general paralysis among the white natives of Europe and North America. Thus, I had the care of, at the asylum, two Frenchmen, who died in a state of paralytic dementia: the first of these was only six months in the hospital, the second succumbed after a year's residence, and both had, from the first, well-marked ambitious delirium, hesitating speech, tremor of the lips, &c. I have also seen two North Americans die at the asylum from general paralysis, the disease being prolonged for eight or ten months. These patients had, from the commencement of the disease, excessive excitement, ambitious delirium, and embarrassed speech. An Italian, fifty years of age, entered the asylum attacked with paralytic dementia. He had maniacal excitement, with incoherence and embarrassment of speech, tremor of the lips and also of the limbs, unsteady gait, unequal pupils, ambitious delirium, and excessive emaciation. He had had, at first, an attack of cerebral congestion. At the end of five weeks' residence in the asylum he became more calm, and boils then appeared on different parts of his body, on the back, the left arm and leg. These had the character of true carbuncles, and increased to the size of a five-franc piece. They ended in a free suppuration; and, as this proceeded, the symptoms, at first undecided, progressively diminished. The treatment followed in this case consisted in the use of repeated purgatives (aloetic pills), lemonade alternating with sarsaparilla, and, generally, warm baths during the paroxysm of excitement. The patient, after the fourth month of his residence, was evidently better; he had gained flesh, slept well, was more reasonable, and asked to see his son, the only relation he had in the country. I do not know what was the fate of this patient, having left him in this state on my departure from Havana. Among the native Spaniards that we received at the asylum during three years, I have noted about ten who were attacked with paralytic dementia; most of them presented at the commencement maniacal excitement, and in all of them, without exception, I have found, from the beginning, embarrassed speech and extreme ambitious delirium.

"Among the white women I have only had two cases of paralytic

dementia, and both these women were natives of the Canary Islands. The disease had commenced, in both cases, with an attack of ambitious mania and embarrassed speech. One of these women died at the end of ten months' residence in the asylum; the other was still there when I left Havana. I have also observed general paralysis among negroes, but much less frequently than among the native whites of the north. In a considerable number of coloured people that I have had to treat during my three years' residence at the Havana asylum, numbering about 300, I have noted nine cases of general paralysis—three men and six women. I should mention that these people are generally less sober than the whites; the drink that they generally take is tafia (spirit from the sugar-cane). On the other hand, they take little food, and commit excesses of all sorts. Paralytic dementia among the negroes presents constantly the same symptoms, progress, and termination as among the whites. In the three well-marked cases of this affection I have noticed among coloured men, there was from the first maniacal excitement, ambitious delirium, tremor of the lips, and embarrassed speech. The disease had lasted in one case eleven months, in another thirteen, and in another fifteen. If the sphincters have been paralysed early, the disease has always terminated with diarrhœa, marasmus, and gangrenous sores. In these three patients there was muscular contraction, the neck being bent forward, with permanent flexure of the legs on the thighs, and of the thighs on the pelvis. The autopsy revealed, in these three subjects, the same appearances as those mentioned by authors in ordinary paralytic dementia—viz., softening of the cortical layer of the brain, most distinct in the anterior lobes; adhesion of the membranes, abundant effusion of serum, granular state of the gray substance, and visible diminution in volume of the cerebral mass, &c. I should remark here, that among the native negroes, as well as among the native whites, I have observed ambitious mania, combined with tremor of the lips and embarrassed speech, and it has always terminated in paralytic dementia. I could cite two examples of this sort which occurred to me at the Havana asylum. It is common to find among the negroes grand delusions, not combined with excitement nor depression of the faculties, and without incoherence, preserving for years the same character, and terminating nevertheless by a weakness of the intellectual faculties. There is often to be observed in these cases a little lassitude in the movements, in great contrast to the natural excitement of character, which offers a certain analogy to that of epileptics. The patient becomes more violent, sullen, and sometimes ill-disposed. According to the figures which I have given above, it seems that, in the black race, contrary to what is observed in the white population, dementia is more common among women than men. I should also remark that, of the nine negro patients that I have noted, two thirds were natives of

Africa. From this observation, we may infer that among negroes, as among the whites, general paralysis is in Cuba much less frequent than among foreigners. I have observed in the case of two paralytic negresses, congestive phenomena, unusual at the commencement as well as in the course of the disease; a profound stupor, swelling and redness of the face, full and frequent pulse, and absolute mutism. These phenomena lasted some days, and then disappeared, to return later; but the symptoms of paralysis became more and more marked at the end of each attack. This form of congestion and paralysis, which is much more common in women, has been pointed out by M. Baillarger in his clinical lectures at the Salpêtrière. Of six cases of ambitious mania accompanied, from the beginning, by embarrassed speech, that I have observed in coloured people, two thirds were of the male sex. This fact seems to me the more curious, as I have proved the contrary to be the case in paralytic dementia. I think I can, for the present, make from this short paper, as far as regards paralytic dementia, the following conclusions :—

"1. That paralytic dementia is, in a general way, rare in the island of Cuba.

"2. That almost all the cases of this nature observed in this country occur in foreign whites, and in a much smaller proportion than that which has appeared to be the case in temperate climates.

"3. That among the natives this disease is rare.

"4. That we often find cases of ambitious mania which do not terminate in general paralysis.

"5. That paralytic dementia is more common among the negroes than the native whites, although it is more rare among them than it is with whites of temperate countries.

"6. That in the black race paralytic dementia is, contrary to what is observed in the white race, more frequent among women than men; while ambitious mania not followed by general paralysis is more frequent among the latter than the former."

PART II.—REVIEWS.

1. *On Consanguineous Marriages.* By Arthur Mitchell, M.D., Deputy-Commissioner in Lunacy for Scotland. ('Edinburgh Medical Journal,' March, April, June, 1865.)
2. *Consanguinity in Marriage.* By William Adam. ('The Fortnightly Review,' Nov. 1st and 15th, 1865.)
3. *Du Danger des Mariages consanguins sous le rapport sanitaire.* Par Francis Devay. Deuxième édition, refondue et augmentée. Paris, 1862.
4. *Etude sur les Mariages consanguins et sur les Croisements dans les Règnes Animal et Végétal.* Par Antony Chippault. Paris, 1863.
5. *Sur la Consanguinité.* Par Jules Falret. ('Archives Générales de Médecine,' Février, Mars, Avril, 1865.)

One might fairly suppose that a question so commonly arising and so often discussed as the influence of consanguine marriages would have been definitely settled by this time. Settled, indeed, it has been by the public long since, that such marriages are injurious; but the insufficiency of the grounds on which this opinion has been based is shown by the frequent appearance of opponents to this dogma. The question seems to have lost none of its attractions by age, and, indeed, the heretical side has displayed of late a fresh vitality, stimulated, perhaps, by the favour that scepticism on any subject has met with in recent times. All must admit that the influence of such marriages on the offspring has a grave social importance, but it is very doubtful whether, if it could be absolutely demonstrated to be as injurious as is alleged, the world would pay much heed to the conclusion. The large majority of marriages is determined merely by personal attraction or passion, neither prudence nor a regard for future consequences entering into the question at all, and possibly the moral results are as fortunate as if experience and age had a voice in the matter. In a few cases, and those among the rich or titled, as a rule, the interests of wealth and property are the main considerations; but probably the simple record that occurs in the sixth chapter of Genesis, "that the sons of

God saw the daughters of men that they were fair, and they took them wives of all which they chose," represents in this day, as it did six thousand years ago, at once the most natural and the truest explanation.

If it were needful to point out how little influence the most ordinary considerations of prudence have when weighed against inclination, even amongst the educated classes, it would suffice to refer to the statistics, either of phthisis or insanity, to show, that the most positive proof of the hereditary nature of these diseases, does not deter the heirs of these affections from transmitting the seeds of scrofula, madness, or many other evils, to not only one but any number of future generations. Be this, however, as it may, the problem of the influence of consanguine marriages is one which ought to be determined in the interests of science, and there are many, happily, who are content to work it out for its own sake, leaving the results as a legacy by which future generations may learn to benefit. One cannot but feel some surprise that the physiological aspects of matrimony are at the present time so entirely ignored, for it is extremely rare that anything save the immediate welfare of the contracting parties is taken into consideration; yet it is abundantly clear that the fate of the probable offspring is seriously involved. M. Devay, fully alive to the importance of this subject, commences his book by the following remarks:—

"There exists an almost universal blindness as regards what may be called the organic constitution of the family—that is to say, the health of future generations. Great efforts are made to transmit to them wealth, but little thought is given to place them under suitable conditions for enjoying it. Great importance is attached to the appearance of the surface, but very little to the real quality of the ground, that is to say, the blood. The observer must feel pained when he considers the almost constant violation of hygienic laws in marriage . . . ." This point, however, will be admitted by all; the difficulty is to apply the remedy, and the first step in this direction is to acquire more accurate knowledge bearing on the subject.

As the controversy on cousin-marriages has been revived very lately, we propose to give some account of the more recent views put forth on either side. It will be needful in the first place to settle what degree of consanguinity is allowable. Mr. Adam says in his paper—

"On the common assumption that the human race has sprung from one pair, all mankind, without exception, must be consanguineous either in the direct or in the collateral line; and if consanguinity is an absolute bar to marriage, then marriage as an institution must cease. If the abolition of that institution is a notion that can enter only into the reveries of fanaticism, then there must be some limit beyond which consanguinity shall be held to be inoperative as an objection to the marriage union, and the question is, where is that limit to be placed?"

Let us look first at the custom of various nations in different ages. Turning to the Old Testament history, it seems clear that "Cain and Seth, the sons of Adam, must each have married his own sister;" that Abram married his half-sister, and that "Moses and Aaron were the fruits of a union between Amram and Jochebed, the sister of Amram's father; that is, the nephew married the aunt."

The Levitical law, representing a different stage of civilisation, expressly prohibited the union of son with mother and of stepson with stepmother; of brother with sister, whether of whole or half-blood; and of nephew with aunt; the penalty of transgression being the excision of the disobedient from among the people. In profane history several writers refer to the customs prevalent among barbarous nations, as, for instance, Euripides, in the fifth century B.C., who affirmed "that amongst all barbarians the father married the daughter, the son the mother, and the sister the brother, and that no law forbad such connections." Ptolemy in the second, and St. Jerome in the fourth century, bring forward the same allegations, but it seems doubtful whether they were quite correct.

The Assyrians, of individual nations, are expressly accused of close consanguineous marriages, but the Persians were, it is agreed, the greatest offenders in this respect, some writers ascribing the practice in question to the Persians generally, others to the Magians or ruling class, and others to individual persons of rank and authority.

Coming down to more modern times, we find that "in Peru the succession to the throne of the Incas in the line of Manco Capac was sought to be secured by the authorised marriage of brother and sister among his descendants. Of existing savage tribes, amongst the Maories, in New Zealand, marriages between near relatives are said to be not infrequent, but they are not usual between brothers and sisters. Captain Speke relates that Mtesa, the King of Uganda, was attended at a levée by ladies 'who were at once his sisters and wives.'"

In China consanguineous marriages are prohibited *ad infinitum*, as in Roman law, and even two persons of the same surname are forbidden to marry.

"The Levitical law of the Jews is," continues Mr. Adam, "the basis of the ecclesiastical or canon law of Christian nations, and the Roman law contained in the institutes, code, and digest of Justinian, is the basis of modern civil law. In the computation of degrees of consanguinity there is a difference between these two systems of law. The canon law counts the degrees only up to the common ancestor, the civil law also down to the Propositus. Hence those who according to the canon law are in the first degree are placed by the civil law in the second degree, and those who according to the former are in the second degree are placed in the latter in the fourth degree. The substitution of the provisions of the civil law for those of the canon law was effected in England by the Marriage Act of

1549 in the reign of Henry VIII. The degrees prohibited by the canon law are all within the fourth degree of consanguinity, according to the computation of the civil law. All collaterals, therefore, in that degree or beyond it may marry. First cousins are in the fourth degree by the civil law, and, therefore, may marry. Nephew and great-aunt, or niece and great-uncle, are in the fourth degree, and may marry. For the same reason, as Burge quaintly remarks, though a man may not marry his grandmother, he may marry her sister. Such in brief is the existing law of England, Scotland, Ireland, and the British colonies, in regard to consanguineous marriages.

"According to the present law of France marriage is prohibited in the direct line between ancestors and their descendants, whether legitimate or illegitimate, to the remotest degree. In the collateral line marriage is prohibited between brothers and sisters, whether legitimate or illegitimate. Marriage is also prohibited between uncle and niece, aunt and nephew; but in these cases, as in regard to the age of marriage, Government possesses the power, on serious grounds of expediency, of dispensing with the prohibition.

"In Spain and Portugal the canon law is still in full force, prohibiting the intermarriage of those related to each other in the fourth degree, but for special reasons permitting dispensation from that prohibition."

In most of the United States of America marriage between an uncle and a niece is, we read, valid, but in Louisiana and Indiana the law is assimilated to the English.

This subject is one which, as involving the descent of property, has engaged the attention of jurists, some of whom have spoken very emphatically upon it. The opinion of Dr. Taylor, the author of 'Elements of the Civil Law,' is stated to be as follows:—

"With respect to marriages in the direct line, that is, in the line of ascendants and descendants, he says that though some limit the prohibition to the first degree, others to the third, the canon law to the fourth, and others again to the twentieth, yet in his judgment the voice of nature interposes absolutely and indeterminately, and such marriages are prohibited *in infinitum*. The principle of this rule he holds to be, that in such cases an exclusion is laid against those who are *parentum in numero*. Nature has set a perpetual bar to every such conjunction as shall damage or confound the consideration of parentage."

Mr. Burge, another great authority, thought the prohibition by the canon and civil law "prevents that confusion of civil duties which would be the necessary result of such marriages." And Chancellor Kent, of New York, considered such prohibitions to be "founded in the law of nature."

Mr. Adam, however, is by no means content to accept the theory of a natural law as sufficient ground for objection, remarking—

"The allegation of such a law is an unsupported assumption. Where, when, how, to whom, has nature thus spoken? In what language has nature declared that a man may not marry his grandmother, but has left him at liberty to marry his grandmother's sister? When nature speaks, she directs

her authority against possible evils. But who ever thought of marrying his grandmother, his great-grandmother, his great-great-grandmother, and so on, without limit? The thing is impossible; and the impossibility constitutes the all-sufficient reason for its not being done, without any added prohibition or penalty. Human laws often express human folly, but nature does not issue frivolous edicts against imaginary evils."

This writer thinks that consanguineous marriages must be unequivocally condemned, though not for the reasons usually held sufficient, and sums up the question in these words:—

"In the absence of any natural or revealed law against them, the legitimate inquiries will be—Do they embarrass the descent of property? Do they confuse our judgments of the relations of life? Do they vitiate our perceptions of domestic and social obligations? In reply to the first and second of these inquiries, the answer, as far as I am able to judge, must be that they do not embarrass the descent of property, and that they do not confuse our judgments of the relations of life. In reply to the third, the answer must be more doubtful. The marriage union between uncle and niece, between nephew and aunt, and between cousins, would seem to tend to lessen the purity and mutual confidence which for the happiness of families and the benefit of society should subsist between those near relations. There is, however, the utmost danger of pressing this consideration with too great rigour, for at every successive remove from the first degree in the direct and collateral lines the confusion of relation and duty becomes less, until at last it entirely disappears, and exists only in a morbid imagination."

The proofs of the evils resulting from consanguine marriages most generally relied on are those drawn from the records of disease, and it is on this ground that the battle of opinion has been so often fought. There are, moreover, certain morbid conditions which are supposed to result especially from these marriages, and so firmly established is this opinion in the public mind that it has become quite a tradition. Knowing this, authors are apt to commence with a foregone conclusion, and, assuming the point at issue, announce a triumph over all objections. Thus, M. Chippault opens his first chapter in these terms:—"Many authors have given their opinion in favour of the injurious nature of these marriages; some few only have taken the opposite view. Both have brought forward proofs in support of their opinion, but up to the present time *the anti-consanguinists alone have furnished convincing proofs!* According to these proofs it does not seem possible to me to deny the danger of these marriages, and still, to see the ardour with which some doctors set to work to defend them, one must needs believe that the problem is not settled." From such a horrible conclusion he endeavours to save his fellow-creatures by bringing up all the cases of disease which he can ascribe to such a cause. Mere denunciation such as this carries no weight as argument, and is enough to prejudice most people against the writer. The facts adduced by the anti-consanguinists are by no means numerous, many of them resting on very slight proof, and these have been quoted again and

again by every fresh writer till we begin to wonder whether a new idea on the subject is possible. Dr. Mitchell, though himself convinced of the evil effects of such marriages, discusses the question with the greatest fairness, and early in his pamphlet makes the following remarks:—

"Both general and professional opinions on this subject rest, in no small degree, on a peculiar and faulty kind of evidence. When we are presented with the question, "Does consanguinity in parentage appear to injure the offspring?" memory searches for instances of unions of kinship, from the history of which the answer is to be framed. Now, it is certain that all those cases which have been marked by misfortune will be first called up, while many of those which have exhibited no evil effect or no peculiarity of any sort will be passed over or forgotten. The attention, in all likelihood, has been frequently drawn to the first, while nothing may have occurred in the progress of the last to keep alive the recollection of relationship in the union. I need scarcely say that facts collected in this manner are almost sure to lead to inferences beyond the truth, yet it is from such data that conclusions on this subject have frequently, if not usually, been drawn. . . . . Startling illustrations of calamitous sequences to cousin-marriages have been detailed, and pointed at with a finger of warning, *the relation of cause and effect being assumed.* Such a *relation* may have existed, but it is equally possible that it may not, for it must always be remembered that a blood-alliance between the parents is far from being *the only cause* of defective offspring.

"Supposing the proof complete that it is *a cause*, it is still only one of many, and we cannot therefore point with confidence to a particular case, and say positively that the calamity there is due to consanguinity of parentage, for it may really be due to injuries in parturition, to hooping-cough, to a blow on the head, or to starvation in infancy. Consanguinity in the parents *may* very decidedly *tend* to injure the offspring, yet it by no means follows that every defect in the children born of blood-related parents is an expression of this tendency, for the general causes of defect will exist among them as among other children, and will give results at least equally disastrous. It is clear, therefore, that isolated cases cannot be used in this or in any similar question to indicate the measure of the evil which may be expected, nor even *to prove its existence.*"

It is often objected, that the defects so generally attributed to these marriages are in reality due to hereditary transmission, and not to mere consanguinity; but Dr. Mitchell justly observes that, if certain tendencies are liable to descend to the offspring from the first cause, the danger is still greater when both parents are related, and that for this reason such unions should be avoided by the prudent. He says—"If relations by blood are liable to possess the same morbid tendencies, and if, by pairing among themselves for procreation, they are likely to transmit these tendencies in a dangerously increased form to their children, then it is surely their duty to avoid such unions, and to seek among strangers alliances with individuals *more likely* to possess qualities calculated to modify or counteract the morbid predispositions in question. It may be that there is absolutely nothing whatever in the bare fact of consanguinity, and

that a marriage of kinship should be avoided on the same grounds as a marriage between any man and woman *both* predisposed say to insanity. In the case of cousins, though there may be nothing common to them of so marked a character as a declared tendency to insanity, still there may be common to them any one of a hundred transmissible peculiarities, which it would be very undesirable to send down to their children in an exaggerated form. Even a strong temperament common to both might thus be intensified into disease in their offspring."

It may happen, of course, that in the case of two cousins one may possess qualities the best suited to neutralize those peculiarities in the other which it would be undesirable to have transmitted to their children; but the chances are the other way, as the inherited qualities of relations must be in great measure derived from a common source.

The chief defects commonly held to result from consanguine marriages are insanity, idiocy, and deaf-mutism; at least, these are the most important, and it is to them we would direct our attention. It would be easy to collect a number of startling cases in proof of the ill consequences of these marriages, but such evidence is worth very little for a general conclusion. The fairest method of investigation seems to be, 1st, to take, as Dr. Mitchell proposes, a large number of cases of the defects ascribed to kin marriages, and determine in what proportion the parents were related; 2nd, to investigate the family history of every marriage in a given locality, comparing the results of those in which the parents were related with those in which there was no such kinship. In the first case the number examined must be very large in order to make the inquiry fair, and in the second the investigation should be carried over a large field, and with scrupulous exactness.

Dr. Mitchell's official position has enabled him to investigate the subject in both these methods, in a way that private individuals could hardly attain, and, though he modestly announces he has "succeeded in doing a little," other people will probably consider that he has done a great deal, and has at considerable cost of time and labour collected a mass of most valuable information. He says that, in visiting lunatics in private dwellings, the relationship of the parents has been generally inquired into, and that, during 1860 and 1861, he made careful inquiry *in every case* in nine counties, viz., in Aberdeen, Bute, Clackmannan, Fife, Kincardine, Kinross, Perth, Ross and Cromarty, and Wigtown. These districts include a large portion of Scotland, and represent a population of 716,210. The investigation was attended with great difficulties, it may be easily imagined, and the result is given as follows:

"The whole number of idiots examined was 711, including those in receipt as well as those not in receipt of parochial aid. Of these, 421 were ascer-

tained to be the children of parents not related by blood, and 98 were the offspring of parents between whom there was a more or less close kinship. In 84 instances the relationship was not known, and 108 of the whole number were born out of wedlock. In a tabular form the results stand thus:

(1)	Whole number of idiots and imbeciles examined		711
(2)	Of these—illegitimate	108	
	„ parentage not known	84	
			192
(3)	Total number whose parentage was known		519
	Of these—parents not related	421	
	„ parents related	98	
			519

"Taking the whole number of idiots examined, including both the illegitimate and those of whose parentage I could learn nothing, we have 13·6 per cent. of the entire number born of parents between whom there was a blood-relationship. In order, therefore, to believe that such relationship does not influence the amount of idiocy, marriages of kinship would require in these counties to be to other marriages in the ratio of 1 to 7, which they notoriously are not, though, unfortunately, no facts exist to show precisely their relative frequency. I think, however, that it may be regarded as certain that such a ratio is about ten times higher than the reality.

"But in order properly to test this influence of consanguinity, we must at least deduct the cases of whose parentage I could obtain no information. Those acquainted with the difficulties of such investigations will admit that the number of these is not great. This deduction then being made, the proportion rises at once to 15·6 per cent. This last may be regarded as referring to the whole community, since there is no reason for supposing that among the 84 of whose parentage nothing was ascertained a greatly different proportion would be found to be the offspring of blood-alliances.

"It may appear to some that a further deduction should be made. The paternity of the illegitimate is practically an unknown thing, and I have elsewhere shown that illegitimacy itself tends to produce defective children. The illegitimate idiots should, therefore, be deducted, *so that those idiots born in marriage of parents related by blood may be compared with those born in marriage of parents not so related.* If this be done it will be found that the former constitute 18·9 per cent. of the latter. Instead, therefore, of every seventh or eighth marriage in the community, we should require every fifth or sixth, to be between persons related by blood to each other, in order to show that consanguinity of parentage does not influence the amount of idiocy.

"Of the 98 idiots whose parents were related, the degree of relationship was as follows:

Cousins in	42 cases.
Second cousins in	35 „
Third cousins in	21 „
	98 „

"During the course of these investigations 64 cases came to my knowledge in which more than one idiot existed in the family. In all of these but 5 I obtained the history of the parents. In the remaining 59 no less than 26 instances of blood-relationship occurred, or 44 per cent. This is an instructive fact, showing that when we select cases in which the tendency to

idiocy appears with force, then kinship of parentage also presents itself with a marked increase of frequency. Thus, while it appears that in nearly 1 out of every 2 cases in which more than one idiot occurs in a family, consanguinity of parentage is found; in those cases, on the other hand, where only one idiot occurs, such relationship only exists in 1 out of 5 or 6 cases."

Of these 59 cases, the parents were related in twenty-six instances, giving 74 idiot children; while in 33 the parents were not related, and produced 76 idiots.

He adds:

"The idiocy of our country is not due to one but to a great many things, each of which contributes its share to make up the whole; one cause may be more powerful than another, but each influences the total amount. The facts which have been detailed render it very probable, if they do not prove, that a blood alliance between parents is one of these causes, influencing unfavorably the amount of idiocy in the land, but they do not exhibit definitely the measure of this influence, though they may aid us in estimating it.

"There are many causes of idiocy which are undoubtedly of greater power than kinship of parentage. Hooping-cough, scarlatina, and measles, for instance, produce a large amount of the idiocy of Scotland, as they do probably of other countries. Hooping-cough, in particular, is often followed by imbecility or idiocy. We are too apt to think of idiocy as a congenital condition. In point of fact, however, a large proportion of the idiocy of the country has an extra-uterine origin, and, strictly speaking, is acquired and not congenital."

Deaf-mutism is perhaps the most notorious consequence of such marriages, and the most easily traced out. According to M. Chippault,* there are about 250,000 deaf-mutes in Europe, and in France there were (at the census of 1858) 21,321, 12,101 being males, and 9,220 females. These statistics have been well analysed by French authors, who conclude that it is impossible to deny the fact that more deaf-mutes are born from related than from non-related parents, and M. Boudin is prepared to specify the proportion, viz., twelve to fifteen times greater in the former than in the latter.

Inquiry into the statistics of ten of the Scotch and English deaf and dumb institutions, showed a total of 544 pupils, representing 504 families, and among these the number of pupils whose parents were related was 28, from 24 families. Deducting 25 per cent. for cases of acquired deaf-mutism, we have about one in twenty resulting from consanguine marriages:

"It will be observed," says Dr. Mitchell, "that the 24 cousin-marriages yielded 28 deaf-mutes. Had the same proportion existed through the entire number of pupils, they ought to have been represented by 466 instead of 504 families. There is therefore a greater frequency of two defective members in one family when dealing with the offspring of blood-relations

* 'Étude sur les Mariages consanguins,' p. 17.

than when dealing with others. In the Irish returns (1851) this is still more evident. 154 cousin-marriages, in which deaf-mutism occurred, yielded no less than 235 mute members.

"Dr. Peet, in his thirty-fifth annual report, in analysing Wilde's 'Statics of Disease,' says, that it appears that 'of the Irish deaf and dumb, from birth, about 1 in 16 were the offspring of parents who were related within the degrees of first, second, or third cousins.' This does not differ greatly from the estimate which I have formed for Great Britain. Supposing cousin-marriages to be to others as 1 to 70, it will follow, Dr. Peet says, that congenital deafness appears at least four times, perhaps five times, as often from a marriage between cousins as from a marriage between persons not related.

"Of the 235 deaf-mutes in Ireland who were the offspring of cousins, only 7 were cases of acquired deafness. This is greatly below the proportion in the deaf-mute population of all Ireland, which shows 11 per cent. of acquired deafness and 7 per cent. uncertain. Instead of 7, therefore, there should have been 26 cases of acquired deafness. In other words, deaf-mutism, as it appears among the children of cousins, seems to be to a larger extent congenital than when it appears among the children of persons not related to each other by blood."

This gentleman goes on to relate the results of his inquiries into the history of the families in certain districts he visited, and the places chosen are particularly suited for the purpose, being isolated, and having but little communication with the general population. As an instance, we will take the island of Scalpay. It has been supposed that marriages of consanguinity were very prevalent in the western highlands and islands, but the official returns of Scalpay do not at all support the idea. Dr. Mitchell is of opinion that popular report exaggerates, and official returns understate, the facts. He reported on thirty-five cases of insanity in the island, and of these, thirty-one were idiots or imbeciles, while twelve of the whole were the offspring of parents related in different degrees. He remarks—

"On the supposition that this relationship has no influence on the production of idiocy, we should expect to find it in one third of all unions in the island. This, however, would greatly exaggerate the frequency of such marriages. So that, after deducting freely for other causes of idiocy, many of which are unusually strong in this island, there still remains a large measure of this calamity, which with good reason we may regard as due to consanguineous marriages.

"Bodily malformations are frequent in the Lewis. In the parish of Uig harelip is very common. Nine cases were brought to my own knowledge. In the Lewis, and the parishes opposite to it on the mainland, I saw five cases in which there were supernumerary little fingers, one in which there were two thumbs, and one in which the fingers and toes were webbed. Curvature of the spine, deformity, and lameness, were often seen in the island. Cases of congenital blindness and deaf-mutism are also numerous. I saw seven epileptics, several instances of chorea, and many of paralysis."

In another page he gives an account of the population of a small town on the north-east coast of Scotland, the details of which are very instructive :

"The fishing population is estimated at 779, and contains 119 married couples, and about 60 widows and widowers with or without families.

"Of the 119 married couples, in 11 cases the union is between full cousins, and in 16 between second cousins; or, in other words, in 27 instances there is a blood-relationship. This is in the proportion of 1 to 4·4 of all marriages. Of these 27 marriages, including 3 which are barren, 105 children have been born. Of these children, 38 are dead (35 having died in childhood), 4 are deaf-mute, 4 are imbecile, 4 are slightly silly ('want a cast'), 1 is paralytic, and 11 are scrofulous and weakly. In other words, 24 out of the 67 living children labour under defects of body or mind, while 1 in 17 is an avowed imbecile, and 1 in 8·4 is weak in mind. These facts are of such a character as to lead us to suspect that more than one of the causes of idiocy must be strong in this community.

"The children of those who are full cousins are described as being '*all* of them neither strong in mind nor in body,' and the fishers of this place, as a class, are said to be 'below par in intellect.' In this last opinion I am inclined to concur. It is true, I believe, not of this locality alone, but of nearly all the fishing villages which fringe the north-east coast of Scotland. There is a general lowering of the physical and mental strength in these communities, which is popularly attributed to this system of in-and-in breeding. When compared with the agricultural population, or with the tradespeople of the small towns in the neighbourhood, they are, as a race, inferior both in bodily vigour and intellectual capacity, while their thriftlessness and want of foresight are notorious. This opinion is founded on personal observation, as well as on the testimony of others."

The conclusions Dr. Mitchell has arrived at, as the result of his most laborious investigations, are as follows :—

"1. That consanguinity in parentage tends to injure the offspring. That this injury assumes various forms. That it may show itself in diminished viability at birth; in feeble constitutions, increasing the risk of danger from the invasion of strumous disease in after-life; in bodily defects and malformations; in deprivation or impairment of the senses, especially those of hearing and sight; and, more frequently than in any other way, in errors and disturbances of the nervous system, as in epilepsy, chorea, paralysis, imbecility, idiocy, and moral and intellectual insanity. That sterility or impaired reproductiveness is another result of consanguinity in marriage, but not one of such frequent occurrence as has been thought.

"2. That when the children seem to escape, the injury may show itself in the grandchildren; so that there may be given to the offspring by the kinship of their parents a potential defect which may become actual in their children, and thenceforward perhaps appear as an hereditary disease.

"3. That many isolated cases, and even groups of cases, present themselves in which no injurious result can be detected. That this may occur even when all other circumstances are of an unfavorable character.

"4. That, as regards mental disease, unions between blood relations influence idiocy and imbecility more than they do the

acquired forms of insanity, or those which show themselves after childhood.

"5. That the amount of idiocy in Scotland is to some extent increased by the prevalence of consanguine marriages, but that the frequency of these marriages does not appear to be so great as has been generally supposed."

There are other peculiarities besides the above recognised as due to the same influences; for instance, harelip, epilepsy, &c. M. Liebreich, of Berlin, too, has described a disease by the name of pigmentary retinitis, which he found among the deaf-mutes, and particularly among those whose parents were related, one half of the cases coming under the latter category. His observations have been carried on in Paris and other places, and always with the same results. But perhaps the most curious anomaly illustrating this subject is found in the pages of M. Devay;* it is as follows:—

"There is in the department of Isère, not far from the Côte-Saint-André et de Rives, quite a small village, called Izeaux, isolated and lost, as it were, in the midst of the uncultivated plain of Bièvre. The roads and means of communication in this unfertile spot were difficult, if not impracticable. The inhabitants of Izeaux, simple and almost abandoned to themselves, had very little to do with the surrounding population, and intermarried constantly and frequently within the limits of the same family. At the end of the last century, as a consequence of these marriages of relations, a singular abnormality arose, which some forty years ago affected nearly all the inhabitants. In this community, both men and women acquired a sixth digit, *i. e.* a supplementary one both on the feet and hands.

"'When, in 1829 and in 1836,' says M. Pottou, 'I observed this strange phenomenon, it only existed in a more or less rudimentary condition; with some it was only a large tubercle, in the centre of which was a hard bony substance, terminated by a nail more or less formed, and fixed to the outer side of the base of the thumb. The person who accompanied me, although non-medical, pointed out to me that a happy change was observable in this defect of growth since the habits of the people had been modified, since the roads had improved, and communication had become more frequent with other places, in a word, since the races had mixed more freely. In 1847 I saw a native of this locality, who had settled at Lyons. He had the peculiarity mentioned, but had four children who were without their father's defect. At the present time this anomaly has almost completely disappeared.'"

Another curious fact in connection with this subject is mentioned by M. Chippault (p. 76):—

"In a report addressed to the Minister of the Interior in 1861, M. de Watteville stated that the number of deaf-mutes varied in France according to the district, and that he found in twenty-two departments of a mountainous nature there was 1 deaf-mute in 1158 inhabitants, and in twenty-five departments in which the country was flat and cultivated there was 1 in every 2285. There were, then, twice as many deaf-mutes in the mountainous as there were in the flat country. The explanation is easy, for in the

* 'Du Danger des Mariages consanguins,' p. 95.

mountainous districts the inhabitants have, so to speak, no relations with the outer world; in certain places they even remain attached to their native place and never leave it. Under these conditions the marriage field is very restricted, and the evil results of consanguinity are very numerous."

M. Chippault is so impressed with this view of the subject that he urges that consanguine marriages should be prohibited by law.

M. Jules Falret, on the other hand, who has given a most able *résumé* of the recent views on this question, thinks that fresh researches are needed before the question can be considered as settled in a scientific point of view, and adds—

"To form a legitimate conclusion, by exclusion, on the real influence of consanguinity as a cause of particular infirmities or diseases in descendants, we must first have eliminated all other physical or moral causes which, either in parents or children, may account for the production of these diseases or anomalies of organisation."

Such is the present state of the question, and it seems to us the balance of evidence is certainly in favour of the popular notion, but the strict proof is far from being as complete as it is generally considered to be.

G. Mackenzie Bacon.

PART III.—QUARTERLY REPORT ON THE PROGRESS OF PSYCHOLOGICAL MEDICINE.

English Psychological Literature.

By S. W. D. Williams, M.D., L.R.C.P.L., Assistant Medical Officer of the Sussex Lunatic Asylum, Hayward's Heath.

On the Morbid Anatomy of the Nervous Centres in General Paralysis of the Insane. By J. Lockhart Clarke, F.R.S., &c.

('Lancet,' September 1st, 1866.)

We give this essay of Mr. Lockhart Clarke's on the Morbid Anatomy of the Brain in Paralytic Insanity in full. It does not admit of abbreviation.

"The principal morbid appearance (he writes) that has been

described by pathologists as constant in general paralysis, is to be found in the blood-vessels of the brain. It was first pointed out by Wedl and Rokitansky, and has since been more fully described by Drs. Salomon and Sankey. These observers have shown that many of the capillaries and smaller arteries become wavy, more or less tortuous, or convoluted into knots. 'There appears,' says Dr. Sankey, 'to be some amount of tortuosity in the capillaries of every case of general paresis. This tortuosity in places amounts to a simple sharp curve or twist; in places to a kinking of the vessel; in others, to a more complete twisting, until it forms, in fact, little knots of varicose vessels of very complicated kind.'* These appearances are well seen in preparations which Dr. Sankey was kind enough to show me, as well as in my own, and I have found them, to a certain extent, in the brain of every case of general paresis that I have examined; but they are much more striking in some cases than in others, and I agree with Dr. Sankey so far, that the amount of alteration is not always in proportion to the length of date, degree of imbecility, or of impaired motility. In an old woman who had been for a great many years an inmate of Hanwell Asylum, and whom I saw only two or three weeks before her death, I found the vessels of the cerebral hemispheres less altered in shape than in most other cases of much shorter duration.

"But the capillaries and small arteries which are thus thrown out of their usual course are also surrounded by a fibrous and cellular covering, or kind of sheath, which invests them somewhat loosely, and frequently contains grouped or isolated nuclei, fatty particles, and granules or grains of hæmatoidin, of a brown or yellowish tint. This secondary sheath is described by Rokitansky, Wedl, Sankey, and others, as an abnormal deposit of hypertrophied connective tissue, 'fitting, as it were, more or less closely to the vessel, in greater or less degree of transparency and extent, in some cases approaching a brownish hue, and marked by transverse lines like commencing contractions . . . . Whether this excess (of connective tissue fibres) is from what Rokitansky calls overgrowth of the original connective medium, or is thrown out by the capillaries, or is formed conjointly by both, is, and must probably remain, hypothetical.'†

"Rokitansky and Wedl believe that this investing substance is formed from a material thrown out by the capillaries, and that in the first stage the material is hyaline; that it afterwards contracts; that in contracting it throws the capillaries into bends or kinks; that as it goes on contracting it becomes less hyaline, more fibrous, and at length like a sheath.‡ They do not, however, consider it as

* 'Journal of Mental Science,' No. 48, 1864; and 'Lectures on Mental Diseases.'

† Sankey, loc. cit. ‡ Ibid.

peculiar to general paralysis, having observed it in other forms of cerebral disease; but still they describe it as an abnormal product, and as assuming the appearance of a sheath in morbid cases only.

"Now it is very important to be aware that in every healthy brain, or at least in every brain that on examination is usually considered healthy, a great number of the capillaries and small arteries are surrounded by secondary sheaths, precisely similar in all *essential* particulars to those which have been considered as morbid products in general paralysis and other cerebral affections. This anatomical fact was, I believe, first pointed out, about eleven years ago, by M. Robin of Paris, and was afterwards made the subject of a paper, with engravings, in the second volume of the 'Journal de Physiologie,' from which I extract the following passage:—

"On trouve normalement autour d'un certain nombre des capillaires du cerveau, de la moëlle, de l'épendyme, et de la pie-mère, une enveloppe épaisse de 1 à 2 millièmes de millimètre, composée d'une substance homogène ou à peine striée. Elle s'étend sous forme d'une tunique adventice, ou extérieure à bords nets, mais onduleux depuis les capillaires, qui ont 1 à 2 centièmes de millimètre, en dehors même de la tunique de tissu lamineux de ces derniers. Elle est distante de 1 à 3 centièmes de millimètre des parois propres du capillaire qu'elle enveloppe. Or, cet espace est tantôt rempli d'un liquide incolore mêlé de granulations moléculaires, tantôt de petits noyaux libres, sphériques, larges de 5 millièmes de millimètre. Ces noyaux sont tantôt rares, écartés, de manière à laisser voir les parois propres du capillaire, tantôt ils sont contigus, ou au moins assez rapprochés pour masquer les noyaux ovoïdes allongés de ces parois. Dans tous les cas,..... on trouve toujours, chez les sujets qui ont dépassé quarante à quarante-cinq ans, des amas de granulations graisseuses, ou des granulations graisseuses isolées, atteignant jusqu'à 2 centièmes de millimètre, qui sont dans cet espace entre les parois propres du capillaire et cette tunique transparente extérieure. Mais surtout on y trouve aussi, entre les petits noyaux ronds ci-dessus, une grande quantité de granulations et de grains très-gros d'hématosine amorphe. Ces grains d'hématosine peuvent atteindre jusqu'à 2 centièmes de millimètre, et sont isolés ou réunis plusieurs les uns à côté des autres. Ils ne sont jamais accompagnés de globules sanguins, et semblent provenir d'hématosine qui aurait exsudé des parois propres des capillaires, et se serait déposée entre ces parois et la tunique transparente à bords souvent onduleux, décrite ci-dessus."*

"The author goes on to say that he has not found this special sheath around the capillaries anywhere else than in the white and gray substances of the cerebro-spinal nervous centres; that it does not belong to all the vessels, and that he is unable to say precisely to what its presence or absence is due; but that he has found it in every cerebrum and cerebellum in which he has looked for it.†

"My own observations confirm the general correctness of this description and of the remaining statements of the author. I have found such sheaths around a variable number of blood-vessels in the

* Page 543. † Page 544.

brains of persons who have died without any apparent cerebral disorder; and one of these brains belonged to a fine, powerful, and healthy-looking young man, who was killed by an accident in the street.*

"Yet, on comparing vertical sections of the convolutions of a healthy brain with those of a brain from a person who has died of general paralysis, a striking difference between them is often observable even to the naked eye. In the latter case, a series of streaks or lines may frequently be seen radiating through the white and gray substances towards the surface; and in vertical sections of convolutions that have been hardened in chromic acid, it is very common to perceive, in the white substance especially, what seems at first sight to be a number of vertical fissures and oval slits, which, under the microscope, however, are found to contain blood-vessels surrounded by sheaths like those already described. But the sheaths in these cases are often less delicate; they are thicker, more conspicuous, and frequently darker than in the healthy brain; and sometimes, especially when the vessels are convoluted, they appear as fusiform dilatations along their course. Moreover, while in the healthy brain the granules or grains of hæmatoisin are commonly scanty, and frequently absent altogether, in general paralysis they mostly abound, being scattered in some places, and collected into groups in others. So much for the state of the cerebral blood-vessels in general paresis. In the nerve-cells of the convolutions I have frequently discovered certain structural changes, which, as far as I am aware, have not been mentioned by other observers. These changes consist of an increase in the number of the contained pigment-granules, which in some instances completely fill the cell. In other instances the cell loses its sharp contour, and looks like an irregular heap of particles ready to fall asunder.†

"A French writer, M. Joire, has stated that, during an experience of three years, he has always found in cases of general paralysis a peculiar alteration of structure in the fourth ventricle of the brain. This alteration consists of the formation of a considerable number of granulations resembling the elevations produced on the skin under the influence of cold. At an early stage of the disease the granulations are numerous and small, and suggest the idea of a surface

* It was this brain chiefly that I employed in my "Researches on the Minute Anatomy of the Cerebral Convolutions." ('Proceedings of the Royal Society,' vol. xii, No. 57.)

† These are not to be confounded with the "granule" or "exudation" cells of authors. The filling of the nerve-cells with pigment-granules, as an early stage of degeneration, I formerly pointed out in diseases of the spinal cord and of other parts. (Beale's 'Archives of Medicine,' No. xiii.) Dr. Hughes Bennett had also described fatty degeneration and consequent disintegration of nerve-cells of the nervous centres. This distinguished pathologist has repsesented the change in Fig. 405 of his great work on 'The Principles and Practice of Medicine,' fourth edition.

covered with grains of sand. In older cases the granules are larger, and afford a rough sensation to the touch. They are most remarkable at the point of the calamus scriptorius.*

"The appearance described by M. Joire is quite familiar to me, but I have not always found it in general paralysis; and it is certainly not peculiar to this disease, for I found it in cases of an entirely different nature. In Beale's 'Archives of Medicine' (No. ix, 1861) I recorded a remarkable case of muscular atrophy, in which, together with lesions of the cord, this granular appearance on the floor of the fourth ventricle was very strikingly manifested. I then showed that it was due to hypertrophy of the ordinary epithelium by which the ventricle is lined. It may be well to reproduce my description. 'The whole floor of the fourth ventricle presented a very peculiar and unnatural aspect. Instead of being smooth and shiny, as in the healthy state, it was entirely paved with a multitude of granulations or small rounded eminences, which were very closely aggregated, but differed from each other considerably in size. I removed some of them for examination, first by scraping them off from the surface, to which they adhered with considerable tenacity; and then by shaving off a section, together with a thin layer of the subjacent tissue. When examined by a sufficiently high magnifying power, the granulations or eminences were seen to consist of globular aggregations of the ordinary epithelial cells, which, in a natural or healthy state, are arranged side by side, and form a smooth or level surface on the floor of the ventricle. The tissue immediately subjacent, and which consists of exceedingly fine fibres proceeding from the tapering ends of the epithelial cells, and running in various directions, was more abundant than usual; and—as might be expected from the homologous relation of this part to that which surrounds the spinal canal—it was interspersed with *corpora amylacea*, but certainly not to a corresponding extent.'†

"In protracted cases of general paralysis the spinal cord is mostly, if not always, more or less affected. In some instances I have found it softened in certain parts to the consistence of cream. In other instances, in which there was little or no external appearance of softening, I have found numerous areas of granular and fluid disintegration within and around the gray substance."

* 'Gazette Médicale de Paris,' Aug., 1864.

† Beale's 'Archives of Medicine,' No. ix, Oct., 1861, p. 18.

Practical Observations on Insanity of Feeling and of Action.

By Henry Maudsley, M.D. Lond.

('Lancet,' June 23rd, 1866.)

Dr. Maudsley publishes in the 'Lancet' some observations on the vexed question of Moral Insanity. "It is well known (he says) that Dr. Prichard described, under the name of Moral Insanity, a variety of mental derangement which has been the occasion of angry and contemptuous reprobation by many who, without experience, but not without self-confidence, have not cared to recollect Dr. Prichard's great experience and high philosophical character. The name was perhaps ill chosen, and some of the examples which he brought forward in support of his opinion properly belonged to other recognised forms of mental disease; but when these admissions have been made, it still remains an unquestionable fact that there do occur in practice actual cases of mental disorder in which, without any illusion, hallucination, or delusion, the derangement is exhibited in a perverted state of what are called the active and moral powers of the mind—the feelings, affections, propensities, and conduct. Experience establishes, so far as experience can establish anything, the existence of such a variety of insanity, whatever name it may be thought best to give it. Moral insanity is an objectionable term, because it is not sufficiently exact, and because it lends some show of justice to the cavils of those who suspect the design of making out all sorts of vice and crime to be insanity. But Dr. Prichard never for a moment thought that a vicious act, or a crime, however extreme, was any proof of moral insanity; for he expressly insists upon tracing the disorder in each case to some recognised cause of disease. 'There is often,' he says, 'a strong hereditary tendency to insanity. The individual has previously suffered from an attack of madness of a decided character; there has been some great moral shock, as a loss of fortune; or there has been some severe physical shock, as an attack of paralysis or epilepsy, or some febrile or inflammatory disorder, which has produced a perceptible change in the habitual state of the constitution. In all these cases there has been an alteration in the temper and habits.'

"Now, if, after a cause that is known to be capable of producing every kind of insanity, a person in good social position, possessed of the feelings belonging to such social state, does undergo a great change of character, lose all good feelings, and, from being truthful, modest, and discreet, becomes a shameless liar, shamelessly vicious, and outrageously perverse, then it is surely impossible not to see the

effects of disease. Or, again, if a person of religious habit of mind, and hitherto without reproach in all the relations of life, does, under conditions known in many instances to lead to insanity, suddenly become desperately suicidal or homicidal, what avails it to point out that he or she knows the nature of the act, and thereupon to affirm that there is no insanity? It were neither more nor less true to assert that the man whose limbs are painfully convulsed is not suffering from disease because he is conscious of the wrong action of his limbs—because he knows that he is convulsed. But if the evidence drawn from its own nature and causation were insufficient, the fact that it is often the immediate forerunner of the severest forms of mental disease might suffice to teach the pathological interpretation of the condition commonly described as moral insanity, but which would be better called Affective Insanity."

Dr. Maudsley relates two cases which came under his care and observation, as examples of such mental derangement without positive intellectual alienation. In the first of them the attack was clearly traceable to a strong hereditary predisposition, in conjunction with physical and mental depression arising from the suckling of a child and from frequent and long absence from home of the husband.

A married lady, aged thirty-one, who had only one child, a few months old, was for months afflicted with the strongest and most persistent suicidal impulse, without any delusion or any disorder of the intellect. After some weeks of zealous attention and anxious care from her relatives, who were all most unwilling to send her from among them, it was found absolutely necessary to send her to an asylum, her suicidal attempts were so numerous, so cunningly devised, and so desperate. On admission she was most wretched because of her frightful impulse, and often wept bitterly, deploring piteously the great grief and trouble she was to her friends. She was quite rational, even in her horror and reprobation of the morbid propensity; and all the fault which could possibly be found with her intellect was that it was enlisted in the service of the morbid impulse. She had as complete a knowledge of the character of her insane acts as any indifferent bystander could have, but she was completely powerless to resist them. Her attempts at self-destruction were varied and unceasing. At times she would seem quite cheerful, so as to throw her attendants off their guard, and then would make with quick and sudden energy a preconcerted attempt. On one occasion she secretly tore her night-dress into strips while an attendant was close by, and was detected in the attempt to strangle herself with them. For some time she endeavoured to starve herself by refusing all food, and it was necessary to feed her by means of the stomach-pump. The anxiety which she caused was almost intolerable, but no one could grieve more over her miserable state than she did herself. Sometimes she would become cheerful and seem quite well for a day or two, but would then relapse into as bad a state as ever. After she had been in the asylum for four months she appeared to be undergoing a slow and steady improvement, and it was generally thought, as it was devoutly hoped, that one had seen the last of her suicidal attempts. Watchfulness was somewhat relaxed, when one night she suddenly slipped out of a door which had carelessly been left unlocked, climbed a high garden-wall with surprising agility, and ran off to a reservoir of water, into which she threw herself headlong.

She was got out before life was quite extinct, and after this all but successful attempt she never made another, but gradually regained her cheerfulness and her love of life. The family was strongly saturated with insanity.

In face of such an instance of uncontrollable impulse—and it is not very singular—what a cruel mockery to measure the lunatic's responsibility by his knowledge of right and wrong! In Dr. Maudsley's other case the morbid impulse, not less desperate, was homicidal.

An old lady, aged seventy-two, who had several members of her family insane, was afflicted with recurring paroxysms of convulsive excitement, in which she always made desperate attempts to strangle her daughter, who was very kind and attentive to her, and of whom she was very fond. Usually she sat quiet, depressed and moaning because of her condition, and apparently was so feeble as scarcely to be able to move. Suddenly she would jump up in great excitement, and, shrieking out that she must do it, make a rush upon her daughter that she might strangle her. During the paroxysms she was so strong and writhed so actively that one person cold not hold her; but after a few minutes she sank down, quite exhausted, and, panting, would exclaim, "There, there! I told you; you would not believe how bad I was." No one could detect any distinct delusion in her mind; the paroxysm had all the appearance of a mental convulsion; and had she unhappily succeeded in her frantic attempts, it would certainly have been impossible to say honestly that she did not know that it was wrong to strangle her daughter. In such event, therefore, she ought legally to have been hanged, though one may doubt whether the juridical farce could have been played out, so palpably insane and irresponsible was she.

"These cases are examples of uncontrollable impulse without manifest intellectual disorder; they properly belong to what might be described as the *impulsive* variety of affective insanity. It is not true, as some have said, that the morbid impulse is the entire disease; the patient's whole manner of feeling, the mode of his affection by events, is more or less perverted, and the springs of his action, therefore, are disordered; the morbid impulse is the outward symptom of a deeper lying disease of the affective life, which is truly more dangerous than disease of the intellectual life, because its tendency is to express itself, not as intellectual derangement does, in *words*, but in *actions*. Man *feels, thinks*, and *acts;* in other words, has *feeling, cognition*, and *volition*. The feelings mirror the real nature of the individual, and it is from their depths that the impulses of action come, while the function of the intellect is to guide and to control. Consequently, when there is perversion of the affective life there will be morbid feeling and morbid action, which the intellect acnnot check nor control, just as, when there is disease of the spinal cord, there may be convulsive movement, of which there is consciousness, but which the will cannot restrain. The existence of dangerous insanity of action and feeling, without marked intellectual derangement, is in strict accordance, not only with the physiology of the

nervous centres, but also with the first principles of a sound psychology; it is established also beyond all possibility of question by the observation of actual cases of insanity.

On the Functions of the Cerebellum.

Dr. Davey has addressed the following letter to the editor of the 'Lancet' on the Functions of the Cerebellum:—

"In your review of Professor Owen's 'Comparative Anatomy and Physiology' I find it stated that his views are adverse to the existence of any relation between the cerebellum and the sexual instinct as maintained by Dr. Gall, but in favour of its more or less intimate connection with locomotive power. With reference to this point, perhaps some of your readers may be interested to know that at the meeting of the British Association at Bath, in 1864, Mr. Prideaux, a warm advocate of the general soundness of Gall's views as to the special functions of different portions of the brain, read a paper on the 'Functions of the Cerebellum,' in which he adduced evidence to show that the central and lateral lobes had separate functions; the median lobe, or vermiform process, being the great ganglion of the nerves of muscular resistance, giving a perception of the position of the body and its relation to gravity, and being constantly developed in the ratio of the animal's locomotive power and capacity for balancing the body during rapid motion; the lateral lobes being the great ganglion of the nerves of cutaneous sensibility, and always developed in proportion to the development of the cuticular system of nerves.

"These views were sought to be enforced by a comparison of the nervous system and physiological manifestations of birds, cetaceans, and bats. The cetaceans were illustrations of the extreme development of the cuticular system of nerves, and equally so of the lateral lobes of the cerebellum. In the porpoise the size of the cerebellum, compared with the cerebrum, was as 1 to 2½, this unusual bulk being due to the enormous development of the lateral lobes, which equalled in absolute size those of man.

"In birds the development of the cuticular system was at a minimum, and equally so that of the lateral lobes of the cerebellum, which were, in fact, quite rudimentary, and consisted almost entirely of the root of the fifth pair of nerves; whilst the development of the median lobe bore the closest relation to the powers of flight, being as 1 to 13 in the slow gray owl, 1 to 11 in the crow, 1 to 6 in the swift hawk, and 1 to 4 in the agile swallow. The bat combined the acute tactile sensibility of the cetaceans with the agility of the bird; and, in conformity, united the large lateral lobes of the former with the large median lobe of the latter. In the common pipistrelle the weight of the cerebellum was ·96 of a grain to a cerebrum of 1·78, being in the proportion of 1 to 1·85.

"Gall's mistake in locating sexual feeling in the cerebellum Mr. Prideaux maintains to be rather an error of inference than observation, the convexity of the lower fossa of the occipital bone and their protrusion backwards and downwards being principally due to the development of the under surface of the posterior lobe of the cerebrum, in the same way as the prominence of the eye and pouching of the lower eyelid, indicative of philological talent, is caused by the development of certain convolutions of the under surface of the anterior lobe resting on the roof of the orbit. Gall's views on the functions of the cerebellum were greatly strengthened by several remarkable

cases of loss of sexual feeling occurring after sabre wounds of the cerebellum in French soldiers; and for these cases he was indebted to Baron Larrey. The juxtaposition of the parts, combined with the known effects of concussion of the cerebrum, render these symptoms perfectly compatible with the location of the sexual feeling on the under surface of the posterior lobe of the cerebrum."

Notes of Lectures on Insanity. Delivered at St. George's Hospital, by GEORGE FIELDING BLANDFORD, M.B. Oxon.

('Medical Times and Gazette.')

Dr. Blandford, the Lecturer on Psychology in the Medical School of St. George's Hospital, is publishing his lectures in the 'Medical Times and Gazette.' Four lectures have already appeared. The first is introductory, and in it he briefly speaks of the physiology of that nerve-life and "brain-life which constitute the mind of man."

There are two methods of studying the human mind, says Dr. Blandford, and we presume he refers to the subjective and the inductive methods. The latter, he believes, is the only true method.

DIAGRAM.

I.

Stimuli { External events stimulate *Cerebrum*.
Internal { Mental / Organic
1. With consciousness = FEELING — IDEAS — WILL... Voluntary Acts { Mental. / Bodily.
2. Without consciousness ..... Involuntary Acts { Mental (unconscious mental action). / Bodily.

II.

Stimuli { External / Internal stimulate *Sensory Centres*... Instinctive movements of man and higher animals. All acts of invertebrata and lower fishes.

III.

Stimuli { External / Internal stimulate *Spinal Centres*.... Reflex action.

This diagram is given to show "that the same thing happens in the lowest manifestation of nerve function as in the highest intellectual act of man; that each act is made up of a stimulus, a stimulated centre, and a resulting movement. No nerve action has less than this or more."

Dr. Blandford then proceeds to show how the functions of the three varieties of the cranio-spinal system are acted on by this theory, and concludes his remarks thus.

The stimulation of any centre may be excessive, disproportionate, exhausting. The centre itself may be disordered or disorganized by the stimulation, or through defect or disease it may be too much or too little stimulated. The conscious feeling aroused in the highest cerebral centres may be converted into an idea in no way adequate, which does not correspond to the feeling; or the idea, when stored up, may be wrongly joined to other ideas, making the whole train erroneous, a delusion; and so the will, basing its judgment on these

false ideas, may carry out acts accordingly, acts which are denominated those of a madman. Disorder may occur in any of these physiological processes. Sometimes we may be able clearly to point out the spot. Frequently it will elude us, but it is physiology, and physiology alone, that can help us to find it, not the examination of our own self-consciousness.

Dr. Blandford now broaches the question, "What is the pathology of insanity?" By vivisections, and by accidents and disease in man, we have arrived at the fact that the gray cerebral matter is the seat of mind. The microscope reveals to us that this gray matter is made up of minute cells and fibres, connective tissue and blood-vessels, and that the white substance is formed of fibres connecting these cells with distant nerve centres and other parts. All these parts are necessarily nourished and kept alive by the blood, and increase or diminution in the supply of which causes a proportionate excitation or diminution in their functions. "The chemist tells us that the brain is a highly complex organic structure," and that it is characterised by constant change in the arrangement of its atoms, "by rapid recomposition and decomposition."

Dr. Blandford then proceeds to justify his theory by the facts stated above, and thus writes:

"Now, what I have said concerning *structure* and *function* may be reconciled with the diagram of nerve physiology which I drew at my first lecture. If you recollect what I said about stimuli and the centres which are stimulated, you will understand, *first*, that where the stimulation of a centre is excessive, disorder, or even disorganization, of that centre may take place, with corresponding resulting action, either temporary or permanent; *secondly*, that change may from other causes take place in the centre itself, either from its inherent and inherited tendency to change, or from faulty nutrition, or injury, or other accidental circumstance, and so disordered action may result, permanent or otherwise, according to the persistence of the change. In one of these two ways insanity is, I believe, in every instance, brought about."

Then having briefly enumerated the principal appearances visible to the naked eye in the heads of the insane opened after death, he concludes this portion of his subject with the following words:

"We conclude, *à priori*, deductively, that the nerve-cells and the blood-vessels which supply them must of necessity be affected in cases of insanity, and our microscopic observations teach us that this is the fact. The *nerve-cells* undergo degenerative change, and appear in every stage of decay. Sometimes they have lost their transparency, their contents are altered into fat- and pigment-granules. Their outline is broken down, and they cease to be cells, appearing as dark collections of granules. These differ according to the form and duration of the attack. Much, however, still remains to be learnt on this head. More attention has hitherto been paid to the *cerebral blood-vessels*. Microscopical examination has shown a thickening of the walls of the capillary vessels going on to contraction and obliteration, with atheromatous or osseous degeneration. This may be due to deposit within

or without the vessel. Excess and hypertrophy of the connective tissue of the brain account, according to some, for this deposit on the vessels, and also for the obliteration by pressure of the nerve-cells. These changes have been observed in various forms of insanity, and even in other diseases of the brain. The study of them by means of the microscope is still in its infancy, beset with the difficulties I have already alluded to; yet every year will bring new results if we do but observe in the right way. The relation between insanity and the other organs of the body I shall speak of hereafter."

The subject of Dr. Blandford's *third lecture* is the "Causes of Insanity." He commences thus:

"The ancients used to vex their souls with metaphysical disquisitions upon the nature of causes. Everything, said they, must have a material, a formal, an efficient, and a final cause. Philosophers nowadays have given up the first three, though they still cling fondly to the last. In medicine you hear of 'predisposing' and 'exciting' causes; in books upon insanity they appear as 'moral' and 'physical.' Now, it must be clearly borne in mind that the cause of any given case of insanity is the assemblage of all the conditions which precede and contribute to it, whether they be *events* or *states*. We may talk of causes, or conditions, or antecedent states, or actual casual events, but it rarely happens that a case depends on one single state or event; almost invariably there is a concurrence of several, which concurrence or assemblage constitutes the cause. You will understand how little *events* have to do with the production of insanity when I enumerate among the most important causes that *state* which is termed hereditary predisposition, and such states as age, sex, and civilisation."

He would therefore seem to divide the causation of insanity into three classes—the predisposing, the moral, the physical.

The first includes hereditary predisposition, the states of age, sex, and civilisation, and is a most prolific cause. The second, the moral causes, are produced by abnormal stimulation of the nerve centre, and include domestic losses and troubles, grief, disappointed affections, jealousy, religious and political excitement, fright, overstudy.

"All these," writes Dr. Blandford, "except perhaps the last, are violent stimuli of the emotional centres, morbidly exciting the feeling of self, self-love, and self-interest. The balance of the relation which the individual bears to his fellow-men is upset, and he stands isolated and self-centred. Yet these events happen to men daily without driving them mad; therefore we must look upon them as only a part of the cause, the remainder depending on the constitutional defects of the patient. Often we hear that a man has had much trouble, or excitement, or disappointment, when in truth, being saturated with insanity, his own crazy brains have manufactured these so-called causes out of nothing at all, the excitement and worry being all along subjective, and having no real existence whatever."

The third, the physical causes, are produced by defect or disease in the nerve centre through the bodily health. They may be sudden or they may be protracted over years. They are very numerous, so much so, indeed, that one noted psychologist (Dr. Skae) bases his nosology entirely on the physical causes, denying all others.

Dr. Blandford does not attempt any classification of insanity, "the mind being too much a unit to admit of a classification according to its parts." He therefore falls back upon the old time-honoured system of symptomatology of Pinel, who gave but four—idiocy, mania, melancholia, and dementia.

In his fourth lecture Dr. Blandford treats of "Insanity without Delusions—Impulsive Insanity—Transitory Insanity—Insanity with Delusion."

The first of these, insanity without delusions, which he remarks is also called "moral insanity," "partial insanity," "impulsive insanity," "emotional insanity," he illustrates by a case:—"A city merchant, past middle age, grave and respectable, suddenly takes to drinking and low company, becomes extravagant, quarrelsome, gives up business, takes to horses and riding, of which he knows nothing; is, in fact, an altered man." At last his conduct becomes so outrageous that he is confined in an asylum, but, although excitable and rambling in argument, he has no delusion, no intellectual lesion. This case Dr. Blandford considers a good specimen of *manie sans délire*, or, as he calls it, the "*so-called moral insanity*" of Dr. Prichard. He does not give the termination of the case, which would be interesting, as the symptoms described closely resemble those so frequently observed in the premonitory stages of general paresis.

Dr. Blandford considers the term "moral insanity" misapplied; he does not think there can be such a state as insanity of the feelings and emotions without corresponding intellectual lesion, and he believes this proved by the fact that all such cases degenerate into cases of monomania. Dr. Blandford then refers to impulsive insanity, and writes—

"There is, however, another species of insanity at which the public sneers still more than at the last mentioned, and which, if wrongfully applied, might unquestionably be made to cover crime even more easily. This is the so-called 'impulsive' or 'instinctive' insanity. As described, it consists of a sudden insane impulse in a previously sane individual to commit a crime, which impulse ceases as soon as the deed is done, leaving the individual sane as before; consequently the crime stands out as the only evidence of the insanity. This is an exaggerated account of a form of mental disorder which really exists. A patient consciously, but involuntarily, in spite of every wish and the utmost efforts of his will, is hurried by an irresistible impulse to do some act of violence. The impulse in his brain-centres forces him straight to action, reason and will being powerless to check it. The act is as automatic and 'instinctive' as the acts of lower animals. Such cases occur, and are seen in asylums; they are not invented merely for legal purposes. The patients are often aware of their propensity, and beg to be guarded against it. They have no delusions, they do not justify their crimes; be the impulse to suicide or to homicide, they deplore it, and seek treatment and assistance. The diagnosis of such cases must necessarily be guarded. There is little evidence of insanity beyond the act itself. The patient's feelings are not perverted except at the moment, for he bewails his

state, and often attacks those he loves best. He assigns no motive, but rationally confesses his inability to resist. Such impulses have been explained by the theory of the 'reflex action' of the cerebrum, which operates in a manner analogous to the reflex convulsive action of the spinal centres. If this does not explain, it at any rate illustrates the disease. It is involuntary action coming from some morbid stimulation of a nerve centre, with consciousness, but in spite of every effort of reason and will. Inquiring into the history of such, we find generally a strong hereditary taint; possibly symptoms of head disorder may have been exhibited quite early in life, or there may have been epilepsy or a blow on the head. It is essential in such cases to try and discover a cause wherewith we may connect the manifestation of disorder.

* * * * * * * *

"To conclude, cases occur of a spasmodic or transitory mania, during which acts of great violence may be committed, there being for the time a visible change in the look and demeanour of the patient, and which may pass off in a few hours or days, leaving no trace of insanity. There is here also a morbid stimulation of the cerebral centre, resulting in morbid and irregular act, without the intervention of the mind proper. The act is not the result of diseased will, but is independent of will, involuntary, and often unconscious."

Dr. Blandford now considers insanity with delusions, and commences by defining the meaning of the three words, delusions, illusions, and hallucinations. *Hallucinations,* he says, are false or fancied perceptions of the senses, as, for instance, when the eye or ear fancies it sees or hears something when there is absolutely nothing to see or hear, when, perhaps, it is the time of the darkest and stillest midnight. *Illusions* also are false perceptions of the senses, with this difference, that there is a foundation for them. There is a noise or there is an object, but the patient thinks it some different noise or different object from that which it really is. Illusions may occur to every one. The *mirage* of the desert, the spectre of the Brocken, are illusions; but they differ from those of the insane in this, that a number of persons together will all see them, whereas the illusion of the insane appears real to him alone; his companions hear nothing and see nothing, or hear and see things as they really are, not as they appear to him. A *delusion* is a false belief of some fact, not a false perception of one of the senses; it is a categorical proposition, false by reason of the diseased brain of the person who believes it, and set down as false by others because it is contrary to common experience of the laws of nature, or to former experience of similar things, or is contrary to the knowledge of some or the evidence of the senses of the majority of mankind. There is no infallible test of delusions, and often when in signing a certificate you mention one you will be obliged to state how and why you know it to be a delusion, for many which have been so considered have turned out to be facts, and not fancies.

We shall renew our notice of Dr. Blandford's lectures as they appear. The above is a summary of the four already published.

PART IV.—NOTES AND NEWS.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

Proceedings at the Annual Meeting of the Association, held at the Rooms of the Royal Society, Edinburgh, on Tuesday, July 31st, 1866.

The Council met in the Royal Society Rooms at half-past eleven A.M.

The morning meeting of the Association was held at half-past twelve P.M.; the afternoon meeting, at three P.M.

Members present:—W. A. F. Browne, Commissioner in Lunacy (President); Sir James Coxe, M.D., Commissioner in Lunacy for Scotland; Robert Stewart, M.D.; John Dale Hewson, M.D.; C. L. Robertson, M.D.; H. Maudsley, M.D.; John Sibbald, M.D.; Stanley Haynes, M.D.; W. Wood, M.D.; Henry Monro, M.D.; W. L. Lindsay, M.D.; J. Murray Lindsay, M.D.; Ed. Hart Vinen, M.D.; J. F. Duncan, M.D.; W. H. White, M.D.; Thos. Aitken, M.D.; G. Gilchrist, M.D.; J. W. C. M'Intosh, M.D.; James Rorie, M.D.; J. Crichton Browne, M.D.; Alex. Robertson, M.D.; J. Bruce Thomson, L.R.C.S. Ed.; James Rae, M.D. (Deputy Inspector-General R.N.); Charles Henry Fox, M.D.; David Brodie, M.D.; J. T. Arlidge, M.D.; Robert Jamieson, M.D.; James Howden, M.D.; John Smith, M.D.; Andrew Smart, M.D.; David Skae, M.D.; John Burke, M.D.; Frederick W. A. Skae, M.D.; James Sherlock, M.D.; J. W. Eastwood, M.D.; Daniel Iles, M.R.C.S.; J. S. Alver, M.D.; J. Dickson, M.D.; Harrington Tuke, M.D.

Visitors:—Sir John D. Wauchope, Bart., Chairman of the Board of Lunacy, Scotland; Arthur Mitchell, M.D., Deputy Commissioner; George Patterson, M.D., Deputy Commissioner; J. F. Wingate, Esq., London; John S. Butler, M.D. (Retreat, Hartford, U.S. Amer.); J. H. B. Browne, Esq.; Ernst Salomon, M.D. (Medical Superintend. of Malmö Asylum in Sweden); Dr. Rutherford, Bo'ness; Dr. Wm. Seller, Edinburgh; Edward Malins, M.R.C.S.; John M'Grigor, M.D.; M. Munro, Esq.; Russell Reynolds, M.D.; Sir J. Y. Simpson, Bart., M.D.; John Webster, M.D.; J. Macbeth, Esq.; Rev. Edwin W. R. Pulling, M.A.; Archibald Hewins, Esq.; Rev. Henry M. Robertson; David Murray, M.D.; Edward C. Robertson, M.D.; W. H. Reed, Esq.

Dr. William Wood, the retiring President, said—

Gentlemen,—My race is run, and I am about to descend from the proud position in which you have placed me during last year, in favour of a much greater man—a man well known to you all—and who has so much to say to you, and in such eloquent terms, that I will not trespass upon your time. I will therefore simply introduce to you our valued friend Dr. Browne, who will take the presidency. (Applause.)

The President, on taking the chair, said—

Gentlemen,—I beg to thank you for the honour you have conferred upon me, in placing me in the Presidential Chair of the Medico-Psychological Association. I think, instead of dwelling on my feelings of gratitude, and

your feelings of kindness in so doing, I had better at once proceed to tell you what I think Medical Psychology is, and ought to be. (Applause.) The President then delivered the usual Address from the chair. (*See Part I, Original Articles.*)

Dr. Tuke.—I should not rise anywhere else to propose a vote of thanks to our able President for his address, but I feel that, as a stranger here, I may be excused for so doing. I feel I can hardly find words to thank our President as I ought to do, after listening to the eloquent tribute he has paid to the memory of my dear relative, our friend Dr. Conolly. (Applause.) I will content myself, therefore, with expressing my own gratitude and I am sure the gratitude of all of us, for the eloquent address which our President has just delivered. (Applause.)

Dr. Monro.—I beg to second the motion. I feel that it is a very great honour to this Association to have had Dr. Browne as our President on this occasion. We have all listened to his interesting address with a great deal of pleasure.

Dr. Tuke said—I have letters from several members expressing regret for their unavoidable absence; among others, from our distinguished French *confrères* M. Brierre de Boismont and Jules Falret, also a letter to the same effect from Dr. Wolff, of Nova Scotia, containing suggestions which have been laid before the Council. I have, lastly, another letter, a very important one, from our esteemed friend Baron Mundy, who writes to me to the following effect :—

"*To the Secretary of the British Medico-Psychological Association,*
DR. HARRINGTON TUKE, *in London.*"

"SIR,—Having for some years regularly attended the annual meetings of our Association, you will oblige me in excusing to the Society my absence from the present one.

"I deeply regret not being able to attend at a moment when our Association will undoubtedly celebrate the commemoration of its best member, the late Dr. John Conolly.

"For my part—I flatter myself you will agree with me—I could have not done better in following by deeds his often-repeated principles, than by entering the army of my native country as an honorary surgeon for the time of this terrible war. That may justify my absence.

"The bust of Dr. Conolly which I have sent to you is executed by one of the most renowned Roman sculptors—Cavaliere Benzoni. Be kind enough to present it to the Association as a humble gift of mine on this solemn occasion. I leave it to you and to my dear friend Dr. Maudsley to move, where—with the agreement of the Association—this memorial shall be placed.

"Believe me, Sir,
"Yours very sincerely,
"J. MUNDY,
"Regimental Surgeon."

"Pardubitz, in Bohemia;
7th July, 1866."

I can add nothing to this letter; it speaks for itself, and I leave its answer in your hands. The bust to which it refers is before you, Dr. Mundy having taken especial pains to have it sent from Rome in time for this meeting.

The President.—I deem it altogether unnecessary that I should make a formal motion that we accept, and accept gratefully, this most suitable gift and donation from Baron Mundy. As to its ultimate destination, I must leave that in the hands of the Council of the Association; and I think we ought to record, in some more than usual manner, our sense of

the appropriateness of the gift, our gratitude for it, and our hope that the presence of the bust of our friend may not only bring back to the older amongst us a recollection of all the good that he did and all the kindness that he displayed, but may in some sense and in some degree animate others to imitate the noble and glorious course which he so recently ended. I move that the bust be accepted, and that, in due form, the thanks of the Association be transmitted to Baron Mundy. (Applause.)

Dr. Wood.—It is scarcely necessary, but for form's sake, I second the motion.

Dr. Tuke.—Iwill take care that the thanks of this meeting and my own shall be transmitted to our friend for his munificent and thoughtful gift. I think, as this letter leaves it to Dr. Maudsley and to me to suggest the destination of this bust, with the agreement of the Association I may propose now a scheme for the consideration of this meeting. We would ask the permission of the Association to present the bust of Dr. Conolly to the Royal College of Physicians in London. I have seen the president, Sir Thomas Watson, who will cheerfully employ his influence with the Fellows to have the bust accepted as a gift from the Association. If this proposition meets the approval of the Association, the bust will probably be placed in the Library of the Royal College of Physicians in London, where the meetings of this Association, through the kindness of the President and Fellows, have been so frequently held.

Dr. Maudsley.—I second the motion.

Dr. Monro.—I was not aware that this bust of Dr. Conolly was about to be offered to the Association, but I came here intending to make a suggestion that a subscription should be inaugurated by this Association to raise a memorial to Dr. Conolly. I feel that, as we have had the honour of having so distinguished a man as Dr. Conolly amongst us, it will be one of the best means of perpetuating this Association to get up such a memorial. I do not exactly know what the memorial should be; but I have spoken to one or two of my friends, and I find that they are favorable to getting up some memorial of Dr. Conolly. I must advert to one or two peculiar reasons why I have taken the great liberty of coming forward to make this proposal. I believe I was Dr. Conolly's first pupil at Hanwell; and since that period I have been in the continual habit of meeting him in practice, and I have always received such great kindness from him that I cannot help feeling a most peculiar gratification in bringing forward this motion. I feel that it would be utterly beside the mark to enter here into a general panegyric of Dr. Conolly after the address to which we have just listened. We all of us appreciate the high character and great worth of our late friend, and there is no likelihood of his memory being forgotten by any of us. At the present moment I would suggest the idea of a subscription being commenced by this Association, which might become a more general subscription or not, as the gentlemen here may think right. I wish the question to be a little discussed, whether we should raise such a subscription; and if so, what the memorial should be? I am exceedingly glad to hear the proposal to present the bust to the Royal College of Physicians of London. That was the scene of the labours of Dr. Conolly. He used to be constantly at the meetings of the Fellows there.

The President.—Dr. Monro has permitted me to second his proposition, in which I most cordially concur, for the reasons he has stated, and even broader ones, on which I shall not dwell. I think it is desirable that some memorial, emanating from the Association itself, as an abiding memento of this great man, should be forthwith set about. As to its nature, and the mode in which the matter is to be set about, that may be for the discussion and deliberation of the Society now; and I shall be glad to hear any observations on the subject.

Dr. Lowe.—I imagine the suggestion has been made to elicit the opinions of those present; but I wish to suggest a doubt whether we are right and wise in alienating irrevocably the bust which has been presented to this Association. (Applause). I cannot imagine any more appropriate place than the College of Physicians as a temporary locality; but I think the time may come when we may value exceedingly for our own institution such a bust as that (Hear, hear), and I would like to ask whether something might not be introduced into the proposal which might recognise the possibility of the return of the bust to this Association.

Dr. Stewart.—I quite agree with the last speaker. I think it would be in a measure stultifying ourselves to give the bust of the individual whose memory will ever be respected by us permanently away from the Association. It struck me, when the proposal was made, as rather a singular one, that we should hand over to a different body a bust which was presented to ourselves, and which should be retained by us a memorial of him who has passed from amongst us. If Dr. Lowe moves an amendment to keep the bust, I will second it.

Dr. Lowe.—I feel reluctant to take any marked step against the proposal; but I am quite ready to do so if it is considered advisable,

Dr. Skae.—It may save discussion if Dr. Tuke would modify his proposition to this—that the bust should be placed in the guardianship of the College of Physicians till the Association has a hall of its own.

Dr. Tuke.—The reason why I suggested the Royal College of Physicians was, that, with great liberality, that body has always acknowledged the existence of our Society, and has invariably allowed us, since Dr. Watson was president, to meet in its rooms when the Association met in London. I thought it would be a suitable act of courtesy towards that body; and, at the same time, I think that the compliment to Dr. Conolly would be greater than in our keeping it for a problematic hall of our own.

Dr. Skae.—I think it would be courtesy to the giver that we do not alienate altogether his gift to the Society, but that we request that the College of Physicians will take the guardianship of the bust. If Dr. Tuke would modify his proposal to that effect, I think the Society would at once agree to it.

Dr. Wood.—I think the terms of this gift seem almost to imply that the giver intended that the Association should place the bust of Dr. Conolly in some suitable place. I almost doubt, although I have no authority whatever for the statement, whether we could with propriety ask the College of Physicians to keep the bust for us. Seeing we have received various acts of kindness from them, I think we would perhaps hardly be justified in asking them to accept the responsibility of keeping the bust for us. Of course, the feeling of the Association generally is to do the greatest possible honour to the memory of Dr. Conolly; and if there is any other place in which greater honour would be conferred on his memory than the Library of the College of Physicians in London, I would by all means vote that it should be placed there; but it does appear to me that, until we have a local habitation, it is a little inconvenient to have the charge of such a valuable bust—valuable as a very excellent likeness of a very great man, and also as the work of a very eminent artist, and as coming to us in peculiar circumstances. I feel assured that, as far as Baron Mundy is concerned, he would be well content that the discretion of the Association should be exercised in placing it wherever we think most suitable; and as it has been left in the hands of the two sons-in-law of Dr. Conolly to determine where it should be placed, I think the Association would be paying proper deference to the feelings of those two eminent psychologists to place it in the Library of the College of Physicians, as they suggest. The proposition of Dr. Monro seems

appropriate to this occasion, because in talking over the affair before the meeting, one of the various forms which were suggested for this memorial was a copy of that bust by one of the most skilled of our sculptors, which could be made at any time. For the present, however, it is of the greatest importance to place the bust where it will be well cared for, and at the same time that it confers honour on the College of Physicians to present it to that body, it would perpetuate the memory of a great man.

The President.—I shall be happy to hear any observations from any member on this subject. I may say, however, that in presenting this bust to the College of Physicians, not as guardians, but as possessors, we are placing it appropriately in the hall of that College of which Dr. Conolly was so distinguished a member.

Dr. Monro.—I omitted to mention what was on my mind formerly, that it had been suggested that a copy of this bust might be taken and retained for ourselves. In that way we should have the double satisfaction of presenting it to the College of Physicians, and thus having it placed in a position of great honour, and also of having a memorial of Dr. Conolly amongst ourselves.

Dr. Eastwood.—I would suggest whether it is not worthy of consideration, whether steps should not be taken for having a permanent place of meeting for this Association. If this was done, we might keep the bust, and the place might be called the Conolly Rooms, or the Conolly Institution.

Dr. Duncan.—The idea of a permanent hall at present is out of the question, although it may not be Utopian at some future period. Probably it might be advisable to ask the College of Physicians to take the guardianship of the bust, which practically would be a gift.

Dr. Sibbald.—Might it not be possible to ask the College to become permanent custodians of the gift? That would be practically presenting the bust to the College of Physicians, and at the same time continuing the connection between this Association and the bust which Baron Mundy has so handsomely presented.

Dr. Vinen.—I would suggest that a proper inscription be placed on the bust, with the name of the donor, and a statement of the circumstances in which it was presented to the College of Physicians. That would free us of all difficulties, and, at the same time, defer to the wishes of the two sons-in-law of Dr. Conolly. (Applause.)

Dr. Tuke.—In accepting the gift from us, I believe that the College of Physicians would not in the slightest degree object to an inscription being placed on the pedestal with the names and a statement of the circumstances under which it came into the possession of the College of Physicians. I now confess my own feeling of a great desire that the College of Physicians in London should possess the bust, and I hope the resolution will now be agreed to in the modified form suggested by Dr. Vinen. (Applause.)

The resolution was adopted unanimously, and it was agreed that the mode of presenting the bust should be left to the Secretary and Chairman.

Dr. Monro.—I beg now formally to move that a subscription be raised for a memorial to Dr. Conolly.

Dr. Sherlock.—I am anxious to see numerous copies of this elegant bust; but, perhaps, some other plan might be suggested of having a suitable tribute to the memory of Dr. Conolly.

Dr. Wood.—There is a receptacle for the effigies of our great men. There is a place called Westminster Abbey; and as Dr. Conolly was one of the greatest men of our day, I do not know whether it would be asking too much, if we could raise sufficient money to get a place for a statue in Westminster Abbey. As to the scheme of having a hall of our own, I am afraid the youngest of us will scarcely see that day. We number at present 200.

Suppose our number doubled, our expenses would leave us a small margin for keeping house; and if we are to have a local habitation, it must be something worthy of the position we assume. I doubt whether we shall ever be able to have a better place of meeting than the hall of the College of Physicians in London; and if we delay doing any honour to Dr. Conolly till we have a hall of our own, I am afraid we shall never live to see it.

Dr. Monro.—It will be better to refer the matter to a small committee of the Council, to report next year what subscriptions have been raised. (Applause.)

Dr. Tuke.—According to the rules of the Association, the place of meeting next year will be in London; and the Council would have proposed to-day the name of a most distinguished member of our body for the Presidency next year, which we feel sure would have been received with gratification, were it not that the illness of the gentleman in question prevents us having the great pleasure of electing him as our President. I refer to Professor Laycock, whose serious illness we much regret. In the circumstances, the Council have not named any one as President-Elect, and it is for the Association now to nominate a President.

Dr. Skae.—I have not had the opportunity of talking over the subject to any of my fellow-members to any extent; but I have very great pleasure in proposing as President for next year our esteemed friend Dr. Charles Lockhart Robertson. (Applause.) I have great pleasure in making the proposal. The interest which he has taken in the proceedings of the Society, and the energy and activity which he has shown in many respects, entitle him to be placed in the position of President at an early period. I therefore propose that he should be President.

Dr. Monro.—As an old friend of Dr. Robertson, I beg to second the motion.

The resolution was carried unanimously.

The President.—The next business is to elect Editors for the Journal; and I propose that the Editors, Dr. Lockhart Robertson and Dr. Maudsley, be re-elected Editors of the Journal.

The resolution was carried unanimously.

Dr. Paul was then re-elected Treasurer, and Dr. Harrington Tuke Honorary Secretary,

Dr. Tuke moved that Dr. Crichton Browne be appointed with Dr. Sheppard as Auditors, which was agreed to.

Dr. Wood proposed the re-election of Drs. Rorie and Stewart as the Honorary Secretaries for Scotland and Ireland, which was seconded by Dr. Maudsley and agreed to.

Dr. Robertson.—There are two vacancies in the Council: we propose to fill these up by the appointment of our Ex-President, Dr. Monro, and Dr. Campbell.

Dr. Skae seconded the resolution, which was agreed to.

In the unavoidable absence of Dr. Paul, Dr. Robertson presented the Treasurer's annual balance-sheet, which was unanimously adopted.

The Treasurer's Annual Balance Sheet, July, 1866.

RECEIPTS.

	£	*s.*	*d.*
By Balance, 1864-5	9	13	3
By Subscriptions received—	170	5	0
By Secretary for Ireland	27	4	0
By Secretary for Scotland	24	3	0
H. C. Bastian, Esq., for Printing Tables	3	0	0
	£234	5	3

EXPENDITURE.

	£	*s.*	*d.*
Annual Meeting	13	7	8
Editorial expenses (one year)	24	9	10
Printing and publishing four numbers of the Journal	149	4	2
Sundries—			
Treasurer	1	10	0
Secretary for Ireland	0	8	2
Secretary for Scotland	0	4	8
General Secretary	7	2	0
Balance in Treasurer's hands	37	18	9
	£234	5	3

(Signed) J. H. PAUL,
Treasurer.

Examined and found correct,

(Signed) JOHN SIBBALD, for *Auditors.*

ROYAL SOCIETY'S ROOMS, EDINBURGH;
31*st July*, 1866.

Dr. Tuke said that there had been proposed and seconded the following list of new Members, twenty-three in number; and he had much pleasure in stating that among them was the name of Dr. Wilks, the distinguished Physician of Guy's Hospital, the first who had joined the Association under our new rule of admitting any member of the profession interested in our special studies.

Thomas Howden, M.D., Haddington.
Edward Hall, Esq., Blacklands House, Chelsea.
J. H. Hughes, Esq., County Asylum, Morpeth.
G. R. Paterson, M.D., Deputy Commissioner of Lunacy, Scotland.
Evan Jones, M.D., Dare Villa, Aberdare.
Frederick Skae, M.D., Morningside.
W. B. Kesteven, F.R.C.S., 1, Manor Road, Upper Holloway.
F. Maccabe, M.D., District Asylum, County Waterford.
W. Smart, M.D., Allva Street, Edinburgh.
A. Robertson, M.D., City of Glasgow Asylum.
J. B. Thomson, Esq., General Prison, Perth.
Thompson Dickson, M.D., City of London Asylum, Dartford.
Arthur Mitchell, M.D., Deputy Commissioner of Lunacy, Scotland.
J. Shepherd, M.D., Eccles, near Manchester.
W. H. Reed, Esq., County Asylum, Derby.
H. L. Kempthorne, M.D., Bethlehem Hospital.
Ernst Salomon, M.D., Malmö Asylum, Sweden.
David Brodie, M.D., Institution for Imbecile Youth, Larpent, Stirling.
J. B. Tuke, M.D., Fife and Kinross District Asylum.
John Lorimer, M.D., Ticehurst, Sussex.
Samuel Wilks, M.D., St. Thomas' Street, Southwark.
James Rutherford, M.D., Bo'ness, Linlithgowshire.
J. Hughlings Jackson, M.D., 28, Bedford Place, Russell Square, W. C.

The twenty-three gentlemen were unanimously elected.

Dr. Tuke.—The following gentlemen have been proposed as Honorary Members:—The Hon. W. Spring Rice; Sir James Young Simpson, Bart., M.D.; William Seller, M.D.; W. Laehr, M.D., Berlin. Their names are well known to us all, and I need do no more than read the list, which has been made out and circulated in accordance with our rules.

The Honorary Members were elected unanimously.

Dr. Robertson proposed that Mr. Cleaton, one of the Commissioners of the Board of Lunacy, should be elected an Honorary Member.

Dr. Maudsley seconded the motion.

Dr. Tuke pointed out that the standing orders required notice to be given before any honorary member could be elected.

Dr. Robertson withdrew his motion, and, in compliance with the standing orders, converted it into a notice of motion for next meeting.

The Chairman.—There is a note from Mr. Blake, M.P., which has been under the consideration of the Council, suggesting that we should present an address to Her Majesty, praying for the appointment of a Royal Commission to inquire into the treatment pursued in lunatic asylums towards the insane.

Dr. Crichton Browne.—Mr. Blake proposes to devolve on a Royal Commission the functions already carried out by the General Board of Lunacy. I do not suppose this Association would wish that there should be any more inquiries into the subject that might appear to clash with the present Boards.

Dr. Monro.—I think this subject cannot be taken up without an exposition from Mr. Blake himself of his exact object in making the proposal.

It was agreed that Mr. Blake should be informed that the Association could not take up the subject without hearing his proposal from himself.

Dr. Tuke.—I have given notice of the following resolution for this meeting:

"That a diploma of membership should be lithographed for members and honorary members, to be presented to them on their election." I brought this to-day before the Council, who were to some extent adverse to it; and I have so far modified my original resolution, in consequence of the advice of our President, so as to make my motion read as follows:—"That the diploma of membership should only be granted to members after having been so for five years." The reason for that is, that a gentleman may be elected and take to another profession. I would propose, therefore, that the diploma should only be given after five years, and that no diploma should be given to any medical man who is not engaged in our speciality. At all events, whatever may be decided as to ourselves, I think this resolution should be carried in regard to honorary members. We have many honorary members, and I think we might follow the example of our Parisian friends, and send them a diploma. I have brought this sketch of a diploma, such as that which I would suggest for the adoption of the Association.

Dr. Robertson.—I second the motion.

Dr. Monro.—It is now proposed that the diploma should be given to those who have continued members of the Association for five years, and more especially to the honorary members. Now, I object a little to the whole idea of this diploma; but I certainly feel that the granting of a diploma to honorary members is the least objectionable part of this proposition. I agree with Dr. Tuke that there should be a printed form expressive of the special honour which is conferred upon the honorary members, but I should not be inclined to call it a diploma, because, although I believe the real meaning of the word diploma does not amount to very much, still we are in the habit of considering a diploma as being granted where special powers are granted, such as a diploma to practise, and so on. In associations similar to this, such as the Medical and Chirurgical Society, there is no idea of a diploma, and I do not see why we, a young and rather feeble Society, should have a diploma. It is rather grand, and we might have it quoted against us that we were bombastic in our treatment of the subject. I do not see any special reason why members for five years should get a diploma. I do not see what use they could make of this diploma. I presume no member of this Society would frame such a diploma.

Dr. Tuke.—I do not know why not.

Dr. Monro.—Well, I should rather think it *infra dig.* for them to do so. A five years' member may have only shown his ability to pay five guineas and his possession of a good moral character. I think it is far too grand a thing to give to any of our ordinary members. It is not advisable to have two sorts of members, some holding diplomas and some not holding diplomas. If there is any real honour in our diplomas it is a little invidious to make any selection, except in regard to the honorary members. It would be literally impossible to give a diploma to guinea subscribers, because, suppose a gentleman subscribed for one year and then gave up, he might use his diploma as a sort of certificate in applying for the superintendence of an asylum. I would move, as an amendment, "That it is expedient that a printed certificate of membership should be presented to honorary members on their election."

Dr. Maudsley seconded the amendment.

Dr. Wood.—I sympathise with Dr. Monro's view of this matter. It is usual, when anything new is proposed, to hear reasons for it. Now, I am not aware that Dr. Tuke has given us one reason why we should assume the importance of issuing a grand certificate of the kind he has exhibited when our illustrious friends the Royal Society of Edinburgh are content with such a modest paper as this. There is this objection to our issuing this diploma. In the first place, a diploma is to be given to men who have gone

through a certain amount of work, and have fitted themselves legally for a certain legal status. Now, this testimonial is to be given to men whom, perhaps, none of us have ever seen, who may be personally unknown to us, who may be known to just one or two from his official position, sufficient to enable him to get admission to our Association, and after five years he is to be considered eligible for this illustrious document. Now, it does appear to me that if our members are worthy of admission to the Association they are worthy of all we can do for them, and I cannot quite enter into the view that they must wait five years before they can be so distinguished as to receive this paper. Then there is this objection to issuing this official diploma. It has been mentioned that it is not the most worthy members of associations who think it worth while to frame and glaze evidence of their membership, and I can conceive the possibility of such a document as this being put to other than a most worthy purpose. It does appear to carry with it a sort of recognition of the individual's position (hear, hear), which, perhaps, he may be fairly entitled to. I confess I am more disposed to adopt the amendment than the resolution. It is reasonable that especially foreign honorary members should have some distinct evidence of their admission to honorary membership; but in regard to the ordinary members it appears to me at least unnecessary, and no good reason has been assigned why we should depart from the general custom in other associations. While we were discussing this question in the Council our esteemed friend Dr. Butler came into the room, and our friend Dr. Tuke referred to him whether it was not the practice to confer distinction in that form in the United States, and he was a little disappointed to hear that there was nothing of the sort there. I think that, for this year, we may be content with having an official notification given to the honorary members, but for the ordinary members there is something invidious in telling a man to wait five years for a diploma.

Dr. Tuke.—I have not the least objection to give it at once to all members. The proposal to limit it to members for five years was made out of deference to Dr. Browne's opinion on the subject.

The Chairman.—I think my recollection was that it should be ten years.

[A vote was then taken, when the amendment was declared carried. The original resolution was not pushed to a division.]

Dr Lockhart Robertson.—I beg to move "*That the Committee on Asylum Statistics be reappointed, with the view of furthering the adoption of a uniform system of statistics in the Annual Reports of the Public Asylums of Great Britain and Ireland, and of our Colonies.*" The Association is aware that I have for some years now been urging their attention to the important question of the adoption of a uniform system of statistics in the annual reports of public asylums. At our annual meeting for 1860 (held in London) I read a paper, "*Suggestions towards a Uniform System of Asylum Statistics,*" which was published in the 'Journal of Mental Science' for October, 1860. Again, at our annual meeting for 1864, held at the Royal College of Physicians, I moved for a committee to prepare a report on this question. This report was submitted at our last annual meeting (1865), and unanimously adopted. The report is printed in the 'Journal of Mental Science' for October, 1865. The committee on that occasion contented themselves with suggesting six tables which might serve as a basis for a uniform system of asylum medical statistics. These tables were, however, regarded by them "only in the light of a principal instalment of those which are desirable." I am glad to be able to report that these tables of the committee have already met with considerable success, and have this year been adopted in the reports of many of our county asylums. The labours of this committee have also been most favorably noticed by the Commissioners in Lunacy in their last Annual Report to

the Lord Chancellor. I take the liberty of reading to this meeting the observations there made:—

"The importance (observe the Commissioners) of adopting in all asylums a uniform system of statistical tables and registers has long been felt by us, and we are glad to find that the subject has recently been again under the consideration of the Medico-Psychological Association, at whose last meeting a committee to whom it had been referred submitted forms of tables which were adopted and recommended for general use. These tables, confined to medical statistics, are simple in form, and only include the main and most important facts required to constitute a basis for more elaborate and detailed information.

"The superintendents of most county asylums publish in their annual reports tables more or less elaborate, and containing a large amount of valuable information. While, however, the facts recorded may be identical in many if not most of the reports, the form in which they are recorded varies so greatly that it becomes impossible to tabulate them for the purpose of showing general results.

"In any future legislation it would no doubt be desirable, as suggested in the report alluded to, so to revise the present 'Registry of Admissions' as to include some of the more important particulars required, in order to obtain correct statistics of insanity. But in the mean time we trust that, with the view of facilitating statistical comparison, the visitors and superintendents of all institutions for the insane will not object to adopt the forms of tables recommended, which will be found in Appendix (I).

"Table I gives the numbers of admissions, readmissions, discharges, and deaths, with the average numbers resident during the year; the sexes being distinguished under each head.

"Table II gives the same results for the entire period the asylum has been in operation.

"Table III furnishes a history of the yearly results of treatment since the opening of the asylum.

"The table also embraces a column for the mean population, or average numbers resident in each year. In other columns are shown for each year the proportion of recoveries calculated on the admissions; and the mean annual mortality, or the proportion of deaths, calculated on the average numbers resident. It is of the first importance that these two principal results under asylum treatment, when given, should be calculated on a uniform plan, and according to the methods here pointed out.

"Table IV gives a history of each year's admissions; how many, for example, of the patients admitted, say in 1855, have been discharged as cured, how many have died, and how many remain in the asylum in 1865.

"The value of this table in regard to the vexed question of the increase of insanity is evident. The table is adopted from the Somerset Asylum Reports.

"Table V shows the causes of death classified under appropriate heads. This form is adopted from the Reports of the Commissioners in Lunacy for Scotland, with some addition and modification. It appears sufficiently detailed for statistical purposes.

"Table VI gives the length of residence in the asylum of those discharged recovered, and of those who died during the year.

"Uniformity in recording the ages of patients on admission, the duration of the existing attack, and the form of mental disorder under which they labour, is also very desirable; and it is to be hoped that the medical officers of asylums may see the great importance of coming to some agreement upon these points. How far the table of the causes of death may require modification or extension will be a matter for subsequent consideration."

In order to carry out the work thus begun, and here so favorably noticed, I beg to move the reappointment of the former Committee on Asylum Statistics.

Dr. Maudsley seconded the resolution, which was agreed to unanimously.

The meeting was then adjourned till Three o'clock.

Afternoon Meeting. *The President.*—The first paper on our list is by Dr. Webster.

Dr. Tuke said,—Sir, before the business of the meeting commences I am anxious to lay before you the following letter, which has just been put into my hands. Dr. Butler is now present.

"John S. Butler, M.D., of the Retreat for the Insane, Hartford, Conn., and Vice-President of the Association of Medical Superintendents of American Institutions for the Insane, is appointed a delegate from this Association to the Medico-Psychological Association of Great Britain, which holds its meeting in Edinburgh, July 31st, 1866.

"John Curwen, M.D.,
"*Secretary of the Association of Medical Superintendents of American Institutions for the Insane.*

"*To the President, Medico-Psychological Association.*
"*July*, 1866."

The President.—I am sure the meeting will receive the distinguished delegate of our sister Association with much pleasure, and I trust that he will join in our debates. We are glad to welcome him among us. (Applause.)

Dr. Butler shortly expressed his thanks, and the President then called on—

Dr. Webster, who read the paper of which notice had been given, "The Insane Colony of Gheel Revisited." *See Part I, Original Articles.*

The President—I shall be happy to hear any observations that may be made on Dr. Webster's paper on the present condition of Gheel.

Dr. Monro.—I would like to know if I clearly understood Dr. Webster to say that in about a thousand cases there were about five in hobbles, because I understand that Dr. Webster upholds Gheel as a pattern place.

Dr. Webster.—Not the hobbles.

Dr. Monro.—I was going to say that in Scotland or England we would hardly dare to acknowledge that we used hobbles for any of our patients. I am afraid that looks as if the Gheel system was something not so far advanced as the English system.

Dr. Webster.—You know that though they have hobbles on they can walk wherever they like.

Dr. Monro.—I do not know, exactly, what hobbles are.

Dr. Webster.—They are a band round the ankle, so that the patients cannot take a long step, but they can take a short step.

The President.—There was another point where I failed exactly to catch the meaning of Dr. Webster. I think he spoke of the ratio of cures being 69 per cent. I presume that must have been recent cases and selected cases, because if such be the per-centage in Gheel it is indeed a pattern place.

Dr. Webster.—This return of 69 per cent. refers to the last ten years' patients, and only to those considered likely to be curable, excluding paralytic patients.

Dr. Monro.—I should not call 69 per cent. a remarkable proportion if you only take curable cases.

The President.—Not if you exclude all epileptic and paralytic cases—in fact, if you exclude all incurable cases.

Dr. Monro.—We have had 68 per cent. of that class of patients cured at St. Luke's, but not just lately.

Dr. Sibbald.—I have listened with a great deal of interest to Dr. Webster's paper, and I do not like to let it pass without making one or two remarks upon it. I visited Gheel twice myself, and I saw a great deal there that I

thought was very instructive. I think that the principal lesson which may be learned from Gheel is, that there are a large number of lunatics who may be treated in private houses outside the walls of asylums, who previous to recent times were supposed to require the restraint of an asylum. But I saw at Gheel a great many symptoms of restraint which were certainly worse than anything you will find in an asylum. I think that such things as these hobbles, and a great many other forms of restraint which I thought exceedingly objectionable, and some of them most cruel, ought to be abandoned. I think it is a great pity that, at the present time, Dr. Webster has not been able to report that these things are now done away with in Gheel. Those patients who are under restraint should not be in Gheel, and they would not require restraint, and would be much more suitably treated in an asylum.

Dr. Webster.—I state, in my paper, that the number of patients who have hobbles were much fewer than on my previous visit. I saw no strait-waistcoats, which I am sorry to say I saw in many foreign asylums. It must be kept in view that on the Continent many medical men have not the same objection to force being used as we have in England, though in many parts of France I found a great improvement in this respect. Those persons who had the hobbles can walk about, though they cannot go a great distance. I consider that I have seen worse forms of restraint than those I saw in Gheel, where the system has greatly improved during the past ten years, and I have no doubt that ten years hence it will be still further improved.

Dr. Tuke.—I think it is much to be regretted that Dr. Webster did not take up the question whether the Gheel system should not be more generally followed than it is in England. I think we do not advance the matter by merely describing Gheel as it is, unless we get some opinion as to whether the Gheel system is or is not a right system; and Dr. Webster has carefully avoided giving such an opinion. I think that the Gheel system is not a right one, and I say so with some hesitation, because I find that the opponents of Gheel are described by those who advocate it as the opposers of all liberal movements. Gheel is called—very improperly, I think—a free-air, liberal system. All that is precisely begging the question. I deny that altogether, and it is for the advocates of the system to show that it is so, and that it is successful. Dr. Webster seems to me to have entirely failed in doing that. He gives too few figures to justify any safe conclusion from them; but he says that there were about 1500 patients, and that 290 were excluded as being paralytic or epileptic. I made a note at the time that the cures amounted, taking the whole cases, to something like 27 per cent. Now, a proportion of cures of 27 per cent. in a place like Gheel is excessively bad. The Report of the Commissioners of Lunacy is very imperfect in statistics of this sort, but I find that the average number of patients received into small asylums—which I take to be the nearest resemblance we can show to Gheel—show a proportion of cures of 33 per cent., very much more than that of Gheel. I do not produce this, of course, as proving anything; I only say that, if the figures were the criterion, our figures show that the Gheel system is inferior to the best form of a really more liberal, free-air system which we have adopted in England. There can be no question that the proper object of asylum treatment is to give as much liberty as is consistent with safety to the patient and to the public. The question about Gheel resolves itself into this—Is the treatment for the pauper poor at all to be compared with the treatment of patients of a higher rank? Do the advocates of the Gheel system wish to treat the two classes together? If they do, I tell them that the scheme of Gheel is absolutely and entirely impossible. It is impossible to take people of rank and high social position and send them

to a village like Gheel; and for this reason, that not only would there be the danger of these doing some damage to themselves, but there would be a risk of their injuring the reputation of their families by some act of folly. That is one reason why the Gheel system cannot be carried out. But the question has two sides: the one is, that private asylums can be very much improved; and the other is, that Gheel may be very much improved. The system of restraint at Gheel stands lamentably in need of improvement; and then there is the question of medical treatment, which is the most important of all. The whole question of the treatment of the insane ought to be primarily a medical question, and it seems to me that if you scatter about 1500 patients, say in 700 houses, they cannot have proper medical treatment, and without proper medical treatment I look upon the whole treatment of insanity as merely a question of board and lodging; and in my opinion, if there is not proper medical treatment it is equally bad whether the patient is boarded and lodged in a cottage by himself or in a larger house. My advice to the advocates of Gheel would be to get up a whole colony of small asylums, and give the charge of each asylum to a medical man. They would then find the ratio of cures increasing, and they might some day attain to the rate of cures to which we have attained in our private asylums in Scotland and England.

Dr. Monro.—Dr. Webster will, perhaps, be so kind as to answer the question whether he looks upon Gheel as an example for England, or whether he looks upon it as at all equal to the English treatment, because certainly his account would give the impression that it was very far behind.

Dr. Webster.—Dr. Tuke has alluded to the medical treatment of patients. Gheel is divided into four sections, each of which has a physician who sees the patients and attends to their medical treatment. If any serious illness affects any of them they can be more frequently seen, or they can be sent to the central hospice. The medical treatment at Gheel is pretty much the same as elsewhere. These four medical gentlemen are men of experience; and in addition to the four physicians there is one surgeon who attends to surgical cases, and a medical superintendent. There are six medical men in the place, therefore I do not think the medical treatment is at all defective. It has been asked whether, in my opinion, such an establishment should be set up in this country. I have no hesitation in saying that it might, but that there are difficulties to be encountered. You must get proper attendants, people that are accustomed to it, and there are few places in this country where it could be carried out to any extent. When I had the pleasure of visiting the new asylum at Inverness I understood from Dr. Aitken that they intended to have a system of that kind there—small cottages for the patients upon the system of Gheel, though, of course, in a less extensive form. Gheel is not at all adapted for ladies and gentlemen, to a certain extent; but it is adapted for a larger proportion of lunatics, and in such a place as that they are more likely to spend the rest of their days comfortably. I do not wish to be a strong advocate of the Gheel system. My eyes are open to the difficulties and objections that may be urged against it; but I hold that a similar system is very desirable. It is talked of in Belgium that they are to have another establishment of the same kind to the westward. There is one, I think, near Lyons. I have no hesitation in saying that I think there are strong reasons why such an establishment may be set up in this country, as elsewhere, but of course there are certain cases for which it might not be adapted. As to the cases, I may say that I mentioned that the average cures at Gheel, excluding general paralysis, amounted to upwards of 30 per cent.

The President.—Thirty per cent.? To what, then, did your 69 per cent. apply?

Dr. Webster.—I said that of 1417 cases the per-centage of cures was 30·69 per cent., excluding general paralysis.

Dr. Tuke.—What is the entire number of patients without any exclusion?

Dr. Webster.—The patients of every description admitted for the last ten years was 1696, and the cures were 434. Subtracting the cases of general paralysis and epilepsy, of which none were cured, the average cures of every form of insanity were about 30¾ or 30½ per cent.

Dr. Monro.—I would ask Dr. Webster whether he does not think that is a very small per-centage of cures, considering that paralytic and epileptic cases are excluded?

The President.—It is equal to the general per-centage of the county asylums.

Dr. Webster.—It is even greater. It is greater than it was in Hanwell a number of years ago.

Dr. Monro.—In Hanwell all cases are included.

Sir James Coxe.—A great proportion of the patients at Gheel are already incurable when they are sent there.

Dr. Wood.—Gheel is more strictly an asylum than any of our asylums. In our asylums we have a considerable proportion of recent cases, greater than at Gheel. I think Dr. Tuke under-estimated the medical care at Gheel, because, if he compares what is expected in the way of supervision from our own medical officers, he will find that the patients are amply provided for at Gheel. Indeed, taking the number of patients and the number of doctors, I think it is at least equal to what we have in any of our asylums; and if we compare it to a population extending over any considerable area, we shall find that it is in excess of what we in England provide for the sick poor. Therefore, it does not appear to me that the proportion of doctors to patients is so small as Dr. Tuke would seem to fancy.

Dr. Tuke.—It appears to me that it will be 250 patients for one doctor, or four to 1000, scattered about in separate houses.

Dr. Webster.—The superintendent is five and the surgeon six.

Dr. Tuke.—Well, take six, and assume that they are all there, I contend that it is not enough. The system there is, perhaps, the best we can afford for the poor; but the question is, not what we can afford, but what is best. Now the Gheel system is not the best. It is of the most vital consequence, if you want to cure the insane, that the moral influences of the trained, educated mind of the medical superintendent should be brought as much as possible to bear upon the wounded and diseased mind. I should think that Dr. Browne's recent report of the state of the poor in the Scotch cottages ought to have settled the whole system of Gheel for years to come. But still, if it is to be considered proper treatment, let us have it clearly stated, whether it is for poor or rich, for curable or incurable patients. There can be no question that if an insane tailor could be boarded with a sane tailor and his wife, and he could be put gradually to work, that would be infinitely better than to put him to work with many insane tailors in an asylum, containing a thousand patients. But is that what can be done? It appears to me that you should be careful to decide that question before you destroy our public asylums, because the advocates of Gheel would in reality destroy our public asylums (cries of "No, no.") Pardon me, I am talking of what I know to be true. If a man says that a certain system is a better one than that now in use, then, if it be a better one, the better ought to be adopted. We have had it in our own *Journal* put distinctly to us that it would be much better that all these incurable, and paralytic, and foolish, and demented cases should be taken out of our asylums and put in separate places. Now, there can be no doubt whatever, I think, that that is very absurd.

Dr. Maudsley.—It is not a question of entirely overthrowing our county

asylums, because it is well known that many of them are at present overcrowded, that a second asylum had been found necessary in many counties, and that in many cases new asylums are proposed for boroughs. It therefore becomes a serious and important question whether you are to go on extending asylums in the way you are doing, or whether you cannot in some mode relieve existing asylums. Now, there is one question that has not been considered here for a moment. What right have you to deprive a man not dangerous to himself or others of his liberty by sending him to an asylum? So long as he is not dangerous to himself and others, and proper medical care is exercised over him, why deprive him entirely of his liberty? Why not, if possible, put him in a cottage with his own friends, or with others who are willing to take charge of him for a suitable payment? If he is a pauper, he will be kept with his own friends at small expense. But it is not entirely a question of expense either. If the man is hopelessly incurable, so long as he is not dangerous to himself or others, that man has a right to the greatest amount of comfort he can have. If he can have that in a cottage, then, though it costs a little more there than in a county asylum, we ought to give it to him. No one would speak of setting up in England the Gheel system exactly. The population is too crowded in this country, the land too valuable, and it would be practically impossible to do so. But the practical question is whether, with so many asylums overcrowded, we cannot find any other system; and whether this cottage system may not afford us the required outlet for a certain class of incurable but harmless patients.

Dr. Crichton Browne.—How can Dr. Maudsley arrive at the fact that a lunatic is not dangerous? Any day a lunatic may be liable to commit serious acts of violence. We have had lamentable instances of this recently in this country; and it is not very long since a case of that kind occurred in this city. So far as I know, there is no test by which we can arrive at the knowledge as to whether a lunatic is dangerous or harmless. As to medical treatment, that objection is scarcely fair, because if you go to large county asylums you will find a large number of patients not subject to medical treatment of any kind. Sometimes patients in these asylums are not seen by the medical men because they are working out, and are not subject to medical treatment. Of course, in the case of patients whose disease has been chronic for ten years, it would be absurd to place them under medical treatment. There are no means known by which we can combat chronic insanity in that stage, except by those general moral principles that regulate an asylum. These are, of course, of great value; but I am not sure that the moral agencies brought to bear in some homes and private cottages are not still more valuable. I have not visited Gheel, and had no intention of discussing it here. I would just mention an experiment I made during the past winter. I had a small asylum of 120 patients. I selected ten patients from the quietest, the most harmless, and the most inoffensive, and determined to give them as much of the free and open-air system as possible. I allowed them to go out every day on parole to their friends, and they had perfect freedom to go in every direction within certain restricted bounds. Well, within a month I had to withdraw that liberty in four instances. They were the best patients I had, and yet I had to withdraw that liberty because they grossly abused it, and complaints were made to me of their conduct. Now, that certainly suggested itself to my mind that, if these very best patients gave way when they were still subjected to a certain amount of discipline, and knew that their conduct was watched, and that their privilege would be withdrawn if they gave way, it was not at all a satisfactory state of things, and did not tend to give one confidence in the Gheel system.

Dr. Wood.—I heard with some surprise the doctrine which Dr. Maudsley has mooted, which is one directly opposed to the teaching of our great Dr.

Conolly. He will remember a very remarkable case that was some years ago tried in the Court of Exchequer in London, when the Chief Baron held the doctrine which Dr. Maudsley seems now to hold. That doctrine was considered to be so opposed to the experience of all those who practised in London that Dr. Conolly took it upon himself to publish a pamphlet on the subject. The Lord Chief Baron held, as Dr. Maudsley appears to hold now, that we were not justified in curtailing the liberty of an insane person if he is not dangerous to himself and society. Now, I think there cannot be a more dangerous doctrine. I thoroughly agree with what Dr. Crichton Brown has said on that subject. We never know when an insane person is dangerous, or at what moment he will become so; and I think it must be clear to Dr. Maudsley's experience that many patients conduct themselves with great propriety in an asylum and yet when at large become dangerous lunatics. He shuts out of view some most important points. What is to become of a patient who, though not dangerous in the ordinary sense of the word, is so far dangerous in a moral sense that he may ruin himself, his family, and all belonging to him. Insanity is a disease which requires treatment in all cases, and that treatment, I maintain, can only be properly carried out by placing him under control. I apprehend there is a danger even greater than that which results from physical violence; and, in considering this question, we are apt to overlook one of the most important considerations of all. It is this, that a man who is in the prime of life and is begetting children is in a condition where he may propagate an insane race; and, I think, in such circumstances it behoves us, as philosophers, seriously to consider whether we are justified in placing a man who is avowedly in a condition of disease in circumstances that will enable him to propagate a diseased race. That has often struck me as one of the most important considerations in withholding liberty from patients who otherwise might be trusted. And I must say that in my own personal experience it has often influenced me in recommending the friends of patients to retain them, though they might not appear to be dangerous to society in the common sense of the word.

Dr. Maudsley.—Dr. Wood has been speaking to some extent under a misunderstanding of my meaning. It was no intention of mine to advocate the sending of patients out of asylums without any control. The system I advocated was that of sending patients to reside in cottages.

Dr. Wood.—But you raised that question as to control.

Dr. Maudsley.—Yes. I raised that question, and I think it is important. If you get an incurable patient, and see that he is incurable, and neither dangerous to himself nor others, my question was, why should you shut him up in a county asylum for the rest of his life? Put him in a cottage and allow his friends 5s. or 6s. a week to support him and take care of him, and arrange for the doctor and the Commissioners of Lunacy to visit him: see that he has proper superintendence. That would relieve your overcrowded asylums, but I never contemplated allowing insane persons to be left entirely without control.

Dr. Wood.—I was speaking of a proposal to leave persons without control. I have not the slightest objection to putting them in cottages if it can be arranged that they shall be under control.

Dr. Alexander Robertson (Glasgow).—I may state as a fact, which is of some importance in such a discussion as the present, that in the city parochial board a certain portion of selected patients whom I judged to be harmless were sent to cottages in the country to reside there, and have now been residing there for four years, and at our last inspection we were altogether well pleased with their condition. The question was put to almost the whole of them if they desired to get back to the asylum, and

not one of them had such a desire. It is right to say that six months ago we had to bring one back who had been found to be improperly cared for, but the person into whose care he had first been given had died. We are so much pleased with that system in Glasgow that we are disposed to extend it. I think that fact is of importance.

Dr. Crichton Browne.—I would ask Dr. Robertson if the Glasgow asylum is not an aged structure of a rather dismal description—whether it is such a building as that few persons would desire to return to it?

Dr. Alexander Robertson.—Certainly we cannot contrast our building favorably with the new institutions; but with the aid of the Commissioners it is now brought to a pretty good condition. The patients are boarded out with cotters. There are several men and women. They reside there and work on the farm. They come to have an affection for their guardians, and the guardians have the same for them, and this proves that such patients can be selected and trusted there without anything wrong occurring. We have nine out of the small number of 150. In addition to that, I have selected some six more to be sent to houses selected by myself.

Dr. Monro.—I have not had any prejudice one way or another as regards this subject, because I am afraid I do not know sufficient about it to form a very strong opinion; but when I heard Dr. Webster read his paper I presumed he was reading a paper about something which he esteemed a pattern and example for others to follow. The few things that especially caught my attention were matters such as that about the hobbles. I do not want to make too much of that. But certainly the cures seemed to be an exceedingly small per-centage. I should say that fact after fact in Dr. Webster's paper seemed to intimate to me, who call myself an unprejudiced person, that the asylum was not succeeding, and yet I presume Dr. Webster read the paper in favour of that system. Then Dr. Maudsley spoke exceedingly strongly as to letting every chronic insane person who is not actually dangerous have all the enjoyments of life.

Dr. Maudsley.—As many of the Chancery patients have.

Dr. Monro.—Now comes a very important question, which I think should have been settled some time ago. Is it a more enjoyable thing for an insane patient to be in the hands of a farmer or poor cottager than in one of our county asylums? I think that that system of boarding out of workhouses, to which this system is very like, was looked upon as a thing quite exploded. I do not say the Gheel system is not a great deal better than that one, but still that is a point that was gone into before asylums were built to meet the great evils which existed then. Dr. Maudsley speaks of the comforts of those poor people. Of course, those of them who happen to fall into the hands of kind cottagers or kind farmers, and who are not obliged to hobble or to wear strait-waistcoats may be exceedingly comfortable, more so than in asylums. But I cannot conceive how a system which has a certain per-centage of things which we have utterly given up because we look upon them as cruel can be considered a system which is kind to the poor and allows the chronic insane to have the ordinary enjoyments of life.

Dr. Howden.—We are all, no doubt, aware that a certain number of insane people may live in cottages; but before putting very much value on the liberty enjoyed by those who live in those cottages, one would require to know more about the condition of these people. The cases referred to by Dr. Robertson have additional interest on account of their having been drafted from an asylum, though, in regard to what Dr. Maudsley has referred to, taking the question in the abstract, as to whether we have a right to deprive an insane person of his liberty unless he were dangerous to himself or others, it appears to me that we deprive him of his liberty as much by putting him in a cottage as in an asylum, and that the question is simply whether he is

better managed in an asylum or a cottage. In the asylum with which I am connected I have five cottages in which I occasionally board patients. There are always four or five patients boarded in these cottages, and they are under my own supervision, on the farm connected with the asylum. In some cases I have the greatest satisfaction in having the patients boarded there. In cases of convalescent insanity, in particular, I think the system of placing the patients in cottages, under a sort of supervision, before they are discharged altogether, is a very desirable one. At the same time, I must state that I have always great difficulty in getting patients to go to these cottages out of the asylum. I do not like to put imbecile patients, totally unable to take care of themselves, into cottages. I think they are better in an asylum, and I must say that I have always had difficulty in getting the other patients to go into those cottages who would be most likely to benefit by being in them. Generally speaking, they prefer being in the asylum. That must be because they find themselves more comfortable in the asylum. I think that we will all agree that we ought to put the patient where he is best, and I agree with Dr. Maudsley to this extent, that if the patient is better in a private house by all means have him there; but if not, have him in an asylum.

Dr. Sibbald.—I think we cannot lose sight of the lesson which we are taught by Gheel, that there are many patients who can be very properly placed in cottages, although there are many imperfections in the way in which Gheel is managed at present, and although there are many patients there who, I believe, none of us would approve of being there. With regard to the remarks which have been made as to the difficulty of deciding what patients are not dangerous either to themselves or others, there is, I think, no more difficulty in that than there is in deciding that a patient is dangerous to himself or others, which every medical man has to do when he signs a certificate for confining a patient in an asylum. The one question is just as easy of decision as the other. And in the public asylums, which are growing larger and larger every year, there can be very little doubt, I think, that there is a large number of cases which, if they were not in asylums at the present time, would not now be placed in asylums; but from the fact that they are in asylums at present the superintendent does not like to take the responsibility of saying, "This case may be put out." He says, "Keep them in." I think if some means could be adopted whereby these patients might be experimented upon—as is the case to a considerable extent in Scotland at present—such a course would be productive of good both to the patients and to the country generally.

Dr. Arlidge.—The great question of the day is what to do with the lunatics. They keep growing on our hands. They grow by accumulation in every asylum, especially pauper lunatics, and therefore it becomes a grave question what we shall do with many of them. Those who belong to asylums know that a large number of the inmates are doubtful inhabitants of asylums; they have been put in many years ago, and they remain there, because they have been once placed in an asylum; and the great question of the day is, whether we shall go on constructing county asylums at an enormous expense, as heretofore, or whether we shall adopt a new scheme in providing for a certain class of pauper patients? With reference to providing for a certain class of patients, Gheel is of value in showing what might be done. We cannot commend Gheel as a model to be actually followed, but the proper course is to take out of Gheel what is valuable and adapt it to the wants of this country. Dr. Webster has properly pointed out that Gheel has been an insane colony for some hundreds of years. The whole population of that little commune has grown up acquainted with the habits of lunatics; but we have no place in England which has the seclusion of Gheel, or which

has a population adapted to take charge of lunatics. We know that in this country the great body of the population has numerous prejudices and fears in regard to lunatics, and we could not possibly intrust even the most harmless of our lunatics to them. The main importance of a discussion in reference to Gheel is that it may lead us to the discovery of what is valuable in the Gheel system and adapt it to our wants. It has occurred to me that we might in some way adapt it by relieving some of our asylums of a proportion of their patients, and placing them in cottages, under the supervision of the attendant of the asylum. At the same time let these cottagers, if practicable, be old asylum attendants, or others who may take their discharge from the asylum and settle themselves in the neighbourhood. That would allow a colony gradually to grow up. The example of Gheel has been of weight on the Continent, and there is a strong tendency to reproduce Gheel in some form or other elsewhere. Dr. Webster has mentioned that the Belgian Government is about to institute another similar colony, and in France there is a great disposition to imitate it. In France we have experiments going on, showing what can be done in the way of dealing in cottages on detached farms with lunatics for whom accommodation used to be provided in asylums. Remarks have been made as to the proportion of cures. As Dr. Monro rightly says, if you exclude all epileptics and general paralytics, 30½ is certainly a small per-centage. During the time I was superintendent of St. Luke's Hospital we exceeded 70 per cent. of cures.

Dr. Monro.—And it was 68 per cent. for many years running.

Dr. Arlidge.—If you read the reports of the American asylums they will tell you that they can cure 90 per cent.; but that is partly accounted for by their receiving cases of delirium tremens, and turning them out cured, so that we cannot compare their cases with our own. As to curable cases, I think there is a great defect in Gheel in not making special provision for curable cases. Boarding out is not so well adapted for cases of recent occurrence. These cases ought to be brought to an infirmary in the town, and that plan is to be carried out.

Dr. Webster.—It is being carried out.

Dr. Arlidge.—The restraint that exists at Gheel is of small moment indeed. We must remember that on the Continent medical men have strong prejudices in favour of using restraint. Those men who put on hobbles would say—"It is much better to allow these men to walk about in hobbles than to shut them up within the walls of an asylum." Now, I do not advocate restraint; but there is a measure of truth in that view, and it must not be lost sight of. If there is restraint at Gheel you must put it down to the habits of thought of medical men on the Continent. If medical men were transplanted from England to Gheel, I dare say they could see how to do away with the hobbles and with all restraint.

This closed the discussion.

Owing to the lateness of the hour, the other papers on the programme were held as read.

Dr. Tuke.—I beg to move that we tender our best thanks to the Royal Society of Edinburgh for the use of this hall.

The President.—May I suggest that our thanks should likewise be tendered to the Royal College of Physicians, who offered their Library for our meetings.

The motions were unanimously adopted.

On the motion of Dr. Monro, the following gentlemen were appointed as a committee for promoting a memorial to Dr. Conolly:—The President and council, and the past Presidents, with power to add to their number.

Dr. Tuke.—I beg to move a vote of thanks to our esteemed President, who has presided over this long *sederunt* with so much kindness and courtesy,

and who has given up so much time in attending to the private affairs of this Society.

Dr. Webster seconded the motion, which was carried by acclamation.

The proceedings then terminated.

Annual Dinner.—The annual dinner was held in the evening, at the Douglas Hotel, St. Andrew's Square. There was a large attendance, and the quality and style of the dinner and wines were of the very best. Among the guests of the evening were :—Sir J. D. Wauchope, Bart., Chairman of the Scotch Lunacy Board; Sir James Y. Simpson, Bart., M.D.; Dr. Seller; the President of the College of Surgeons; the President of the College of Physicians; Dr. Russell Reynolds; Dr. Gillespie; Dr. Argyll Robertson; Dr. Webster; Dr. Butler (U.S.); Dr. E. C. Robertson; Rev. H. M. Robertson. Sir James Coxe was also present in his right as a Member of the Association.

In consequence of the very severe and serious illness of Professor Laycock, the Medico-Pyschological Class connected with the University of Edinburgh was conducted, for the greater part of the Summer Session, by Commissioner Browne. By a happy coincidence the course was concluded and the prizes awarded upon the eve of the meeting of the Medico-Psychological Society, so that a number of its members and nearly all its officers were enabled to be present.

After a Lecture on "Hereditary Tendency to Mental Disease" had been delivered, and strong commendation bestowed upon the diligence and interest displayed by the class—amounting, we understand, to about thirty—and upon the ability and industry of those who had especially distinguished themselves, as attested by Drs. Seller and W. Robertson, assessors to the University, to whom the competitive clinical papers, essays, &c., had been submitted, the prizes were delivered by Sir John Don Wauchope, Bart., Chairman of the Board of Lunacy, Commissioner Sir James Coxe, Professor Balfour, &c.

Sir J. D. Wauchope, in presenting the prizes, expressed the satisfaction which he experienced in being present on this occasion; his desire to encourage such means of instruction in the study of mental disease as were afforded by this class; and his conviction that holding the position which he did he was performing a public duty in sanctioning all efforts to diffuse knowledge which was calculated to diminish the numbers of the insane and to ameliorate their condition.

The members of the class were then invited to attend the meeting of the Association on the following day; a privilege of which they availed themselves.

PRIZE LIST.

Class of Medical Psychology and Mental Diseases.

For Excellence in Clinical Examination (Dr. Gilchrist's Prize).

1. Carlo Malan.

For Excellence in Written Examinations (University Medal and Dr. Browne's Prize).

1. John Macbeth.

Best Essay on "Le Pitit Mal" (additional Prize from Dr. Browne).

1. Thomas Lauder Brunton.

For Excellence in both Clinical and Written Examinations
(Certificates of Honour).

1. JOHN MACBETH.
2. CARLO MALAN.
3. THOMAS LAUDER BRUNTON.
4. WILLIAM J. WILLIAMS.
5. WILLIAM MUNRO.
6. ALEXANDER R. HAUGHEY.

T. LAYCOCK.

The Honorary Secretary has received the following letters, which he desires to communicate to the members of the Association.

"1, HARRINGTON SQUARE, LONDON, N.W.;
"19*th July*, 1865.

"MY DEAR SIR,—I beg to acknowledge the honour conferred on me by the Medico-Psychological Association, in electing me one of their honorary members; and if at any time it should be in my power to forward the interests of the Society I shall be pleased to avail myself of the opportunity.

"Accept my best thanks for your kind personal expression of good-will.

"Believe me, yours faithfully,
"W. H. WYATT."

"Dr. TUKE."

"2, SAVILE ROW, BURLINGTON GARDENS;
"28*th September*, 1865.

"DEAR SIR,—On arriving from Italy a few days ago I had the honour of receiving your esteemed communication of the 12th inst., informing me that the Medico-Psychological Association had conferred on me the distinction of an honorary membership; I feel, I assure you, very proud of this honour, and beg you will take the first opportunity of conveying to your Association my warmest thanks for their kindness.

"It is a great satisfaction to me to find my very humble efforts to ameliorate the condition of the insane approved of by such a body as yours, and will be an encouragement to me to do all I can to forward the noble and humane objects of the Association. I have just been visiting some of the Continental asylums, with a view of obtaining additional information to assist me in forming some legislative measures relative to public lunatic asylums next session.

"I beg you will accept for yourself my best thanks for the kind courtesy with which you conveyed the resolution of the Association to me.

"I remain, dear Sir,
"Yours very truly,
"JOHN A. BLAKE."

"HARRINGTON TUKE, Esq., M.D."

"STABILIMENTO SANITARIO IN MILANO PRESSO ST. CELSO;
14*th February*, 1866.

"MOST HONORABLE SIR,—I am very sensible to the honour that the eminent Medico-Psychological Association of England has done to name me between their honorary members. Whilst I tried, as I could, to demonstrate to my countrymen the elevated scientific merits of the honorable English

alienist physicians, I have, too, experienced their great kindness and goodness for me.

"I beg you, Sir, with all my thanks, to tell my feelings to the eminent Association of which you are the noble general secretary.

"Heartily and respectfully,
"Your most obedient servant,
"Dr. Biffi."

"Vienna; 18*th February*, 1866.

"Dear Sir,—By your letter of January 1st, which I have received on the 10th instant, you kindly informed me that the last meeting held at the Royal College of Physicians did me the honour to select me an honorary member of the Medico-Psychological Association.

"I am desirous of expressing my grateful sense and high appreciation of this honour, and pray have the kindness to transmit my sentiment of warmest gratitude to the Association.

"I am, Sir, truly yours,
"Dr. L. Schlager,
"*Professor of Psychiatrie at the University of Vienna.*"

"Gheel, *le* 22 *Février*, 1866.

"Monsieur et très-honoré Confrères, — J'ai l'honneur de vous accuser réception de la lettre par laquelle vous m'annoncez mon agrégation comme membre honoraire de l'Association Médico-Psychologique de Londres.

"Cette marque de haute distinction m'honore et m'encouragera dans l'accomplissement de la mission humanitaire qui m'est dévolue. Par mon dévouement, je tacherai toujours de me rendre digne de votre savante et philantropique Association.

"Monsieur, et très-honoré Confrères, veuillez à ce sujet agréer personnellement et exprimer à vos estimables collègues mes sincères remerciments. Veuillez croire à la parfaite estime et à la haute considération, etc.

"Votre dévoué Confrère,
"Dr. Bulckens."

"Monsieur Harrington Tuke,
"*Docteur en Médecine, etc., Londres.*"

The Want of Education in Physical Science.

To every man abhorrent of waste, the thought that thousands of his fellow-countrymen have received no useful training must prove a source of frequent and deep regret. It is a trite remark, that while we devote our utmost energies to the improvement of bullocks and sheep, we leave God's last and greatest work—man—too often untended and uncared for. The stimulus to improve the breed of cattle lies in the immediate gain to the owner; but the benefit to be derived from the improvement of the human race seems to lie too remote from individual interests to excite the necessary sympathy, unless exceptionally, in the breasts of philanthropists. Yet we are not an inhumane people. We spare no cost to provide hospitals, asylums, poor-houses, and jails, for the care and recovery of our less fortunate brethren; and we appoint inspectors and commissioners to watch over and report on the manner in which these establishments are conducted. So far, so well. But, in spite of all this labour, a fear, strengthened by a consideration of the

results, will nevertheless intrude that our exertions are in the main unsuccessful, and that our work of reform has been begun at the wrong end. What should we think of a railway company which, instead of doing its best to secure locomotives of the best material and most durable construction, was to accept them from the maker, however indifferent in quality, and be satisfied with fitting up a variety of workshops for their repair? No man would have any difficulty in perceiving that this procedure was at once short-sighted and ruinous. But it never seems to occur to our legislators that sickness, insanity, pauperism, and crime are far more likely to be successfully met and counteracted by measures calculated to ensure at starting a healthy mental and bodily constitution, than by endeavours to restore this condition after it has been destroyed by neglect. Every one, in the abstract, admits the value of training. A trained dog, a trained horse, a trained servant, a trained mechanic, a trained soldier, a trained physician, are all valuable in their individual capacities through their training, and their services are estimated accordingly. But the training to an art is special in its nature, and is a very different thing from that general training to which the whole population should be subjected. A man may be a good ploughman, a good watchmaker, or a good lawyer, and yet lack that knowledge which will protect him from falling into sickness, insanity, or crime. The general standard by which a man's education is estimated, is his capacity to read and write; and, accordingly, in our Parliamentary blue-books, criminals, or soldiers, or sailors, are classified as well- or ill-educated, according to this test. But a man may be able to read and write with the utmost ease, and yet be destitute of all knowledge of the simplest facts of science, and know no more of the manner in which he ought to live in order to secure his mental and bodily health than the babe which was born yesterday. Beyond a doubt, a man who can read and write is armed with a very powerful weapon for the acquisition of knowledge; but *per se* reading and writing are merely extensions of the means of communication—facilities for holding intercourse with those who are absent. To what extent they are practically useful will depend upon circumstances. One man has leisure and inclination to read; another has neither the one nor the other. To the latter, accordingly, the talent is of little use; and in neither does it constitute an exact test of knowledge. Who does not look back on his schoolboy days, and grieve over the little useful knowledge he then acquired, and wonder that a system which aimed principally at imparting a knowledge of dead languages, of superseded religions, and of the manners and customs of extinct peoples, should still successfully struggle against the general introduction of the study of living languages, of existing faiths, and of the laws and customs of modern nations? How few boys are there among those who have completed the curriculum of even our best schools, who have any knowledge of physical science and of the laws of health; who can tell why they breathe, or on what circumstances the normal performance of the function of respiration depends; who can give reasons for the necessity of ventilation; who have, in short, even the rudimental knowledge necessary for the preservation of their own health! How few are there who are acquainted with the political and social constitution of their own country, who have any clear ideas on the subjects of municipal government, church establishments, the support of the poor, or the punishment of crime! How few who know anything of the past history of the earth, and of the wonders revealed by the stones on which they tread; how few who can read the book which nature displays in the wood or in the meadow, on the mountain or on the shore! A consideration of facts like these must show to every thinking man how limited, how scanty, and how unsatisfactory must be our present system of education.

And if such be the results even among the so-called educated classes, what state of matters can we expect to find among those who have been allowed to grow up in ignorance, and too frequently in vice? Who can walk through the poorer districts of our large cities without a feeling of indescribable sadness over the wasted lives and energies of the miserable creatures he sees on every side, who are reduced to a state of degradation such as is seen in no other European country? But alarm as well as pity may well be felt, for the question cannot fail to present itself whether, with so large a mass of the population so steeped in ignorance, so deficient in moral and intellectual culture, so little acquainted with the duties and responsibilities of a loyal and a Christian people, and with so little to lose in the event of civil strife or convulsion, we are not sleeping on the brink of a volcano which, although at present in repose, may at any moment break out in a fearful and devastating eruption? From time to time we hear of endeavours to provide for the general education of the people; but opposition arises, and nothing is done because we cannot agree on the religious tenets that should be taught by the State. True, the proposal has repeatedly been made, that secular knowledge alone should be imparted at the public expense; but hitherto it has always been suppressed in a shout of horror against godless and infidel training. And so it happens that year after year nothing is done, and a population is left to grow up around us which fears not God and respects not man. Every Sunday the clergy in their pulpits pray for blessings on this corner of the Lord's vineyard, and return thanks that their lot has been cast among a loyal, a happy, and a religious people. Are they in reality proud of the condition of those portions of the Lord's vineyard which are comprised in the Cowgate and Canongate of Edinburgh, or the Salt Market and High Street of Glasgow? Do they ever ask themselves how many heathens are living in this Christian land—not the quiet, respectable heathen of a pagan country, but the neglected outcasts of our boasted civilisation? Shall this state of matters be allowed to continue until some fearful convulsion shall shake the foundations of society and expose the rottenness of our social fabric, even as we have seen the rottenness of the social and military system of Austria brought to light? Wherein lies the secret of the success of Prussia in the recent contest? In the needle-gun? Yes, to a certain extent; but the needle-gun, be it remembered, was placed in the hands of educated and intelligent men, whose triumph was the triumph of knowledge, and of the loyalty and national spirit which knowledge imparts. That national spirit exists among us, the volunteer movement has sufficiently proved; but this movement has not reached, and cannot reach, the lowest strata of the people. In Prussia, education is compulsory. Every man is brought under its influence; and herein lies a mighty instrument for imparting national sentiment and national virtue, and a power of co-operation in circumstances of difficulty and danger. In the Northern States of America we have recently seen an equal exhibition of national power springing from similar sources; and we have all heard how strongly national sentiment, although too often exclusive and bigoted, is fostered in these States by the lessons of the school.

Every man in the narrow sphere of his business and of his home can appreciate the value of education and training in his assistants and his servants. Skilled labour everywhere commands a higher price than that which is unskilled. The trained man is more valuable than the untrained, and an educated people must thus necessarily be possessed of sources of wealth and power and strength far beyond those of a people who is untrained and ignorant. Every year immense sums are spent in improving our ships and our guns, which are merely the inanimate instruments of our defence, and will certainly fail us in the hour of need, unless used with judgment,

zeal, and loyalty. But what caring can a man who has been drafted into the army from the back slums of Edinburgh, Glasgow, or Aberdeen, be expected to have in the honour and interests of his country? The chances are that he was driven to enlist to save himself from starvation, which stared him in the face through want of education, vice, or intellectual deficiency. When a man is fit for nothing else, he is still considered good enough to defend his country's honour. He may, indeed, fill a pit as well as another; but a soldier, even of the kind we have, is too costly an article to be expended in this fashion. Besides, we do not want him to fill a pit himself, but, if need be, to fill pits with the bodies of the enemy.—*The Scotsman*, September 15th.

The Medico-Psychological Association.

Definition is dangerous, and never more so than when it seeks to ensnare Psyche in its net. From the dawn of speculation to the present day, the intelligence of mankind has been continually prying into the laws of its own processes, and into the relation of these with the physical organism, through which alone it becomes cognisant of them. In proportion, however, as speculation has grown scientific, it has desisted from seeking its object by what Coleridge called "the high *priori* road," and any progress it has made towards the solution of its inquiries has been effected on the narrow and humble pathway of inductive research.

Hitherto psychological investigation has had mainly a speculative interest; and considering the method which it pursued, it could scarcely have had any deeper one. Now, however, by the almost unanimous consent of its votaries, it has been content to range itself among the inductive sciences; and, as a reward for this condescension, it has received a large reinforcement of followers, who have given it a much more practical, not to say human, interest. The psychologist no longer sneers at the low and grovelling pursuits of the physiologist. The physiologist no longer turns away in contempt from the purblind gropings of the psychologist. They have united their forces in an offensive and defensive alliance for the attainment of a common end.

"Alterius sic
Altera poscit opem res et conjurat amice."

At no former meeting of the Medico-Psychological Association has this fusion of the two sciences been more distinctly recognised than at the recent one in Edinburgh, presided over with such ability by Dr. Browne. Medico-psychology now claims a definite place among the inductive sciences, and if asked to show its credentials it points to the field which it cultivates, to the method by which it proceeds, and to the results which it has already achieved. The field is surely a sufficiently palpable one, and by no means likely in these days to have its area diminished. The very fact that, in spite of the much more normal mode of life pursued by the great body of the public, the phenomena of lunacy have betrayed no tendency to decrease, is enough to prove that there are forces working through our modern civilisation which are directly injurious to mental health. The annual reports of Her Majesty's Commissioners in Lunacy for England, Scotland, and Ireland furnish a direct answer to all who would question the significance of the medico-psychologist's department.

Again, the method by which the medico-psychologist proceeds is one with which the most rigid votary of science has, now at least, no right to quarrel.

True, the time is not very far distant when the subject was treated in a style which could only irritate the inductive inquirer. Crude theories of psychology, theories not less crude of physiology, were freely accepted and made the groundwork of the most confident generalisations. A treatise on lunacy was almost invariably a portentous cross-birth between bad metaphysics and premature physiology. The subject which, from the obscurity and almost evanescent fineness of its phenomena, required a rigidly accurate and consistent use of terms, was handled in the most loose and declamatory style. Where a calm and clear exposition was wanted, the reader was generally entertained with the inflated discourse of a little Bethel revivalist. Now, however, such contributions to the literature of medico-psychology are no longer tolerated, and a more rational, intelligible, not to say honest, method of treating the subject is adopted. We are mainly indebted to Continental writers for the happy change, and Germany has, according to her wont, supplied us with the most original and really valuable additions to the medico-psychologist's library.

Not that we have had no able and effective workers in the same field at home. The late Dr. Prichard, so justly held in honour by the profession for his high attainments in philology and in all that pertains to the history and development of mankind, was one of these. The late Dr. Conolly was another—an enlightened physician whom Dr. Browne claims, in eloquent language, as "a philosophical advocate of medico-psychology founded upon induction." The late Sir Benjamin Brodie was yet another; while the names of living cultivators of the same difficult field will at once suggest themselves to our readers. The journalism of medical psychology is fairly entitled, for its ability, for its originality, and for the scientific value of its contributions, to rank with the journalism of any other department of medicine. Nay, in the very city where the last meeting of the Association was held—a city which justly boasts of having founded a distinct school of philosophy—a lectureship of medical psychology has been instituted under the enlightened auspices of Professor Laycock, and, with the congenial assistance of Sir James Coxe and of Dr. Browne himself, has already done much to bring the philosophical studies of the place into harmonious relation with those of the purely medical curriculum. Much as has been done for the more accurate investigation of the phenomena of lunacy, we are entitled to expect a great deal more; and the science of medico-psychology will have nothing to fear if tested by the standard adopted by Mr. Lowe for Government schools—"results."

Even at present the medico-psychologist can appeal with justice to much valuable service done in the treatment of mental disease. If asked for specimens of successful labourers in his peculiar field, Dr. Browne might well have pointed to his numerous audience and said, "*Circumspice!*" There was never a time when so many accomplished physicians made it the business of their lives to investigate and treat the phenomena of lunacy; and who will say that the labours of all these men have been without result? From the treatment of the imbecile and idiotic at such asylums as Earlswood, and Larbert in Scotland, to the treatment of even such apparently hopeless manifestations of mental disease as chronic mania and general paralysis, medico-psychology can point, in the language of Bacon, to many an *instantia prærogativa* which may well sustain her votaries in the prosecution of their beneficent work. Certainly it would be a hard dispensation for the followers of any science if success refused to crown exertions carried on in the spirit, at once scientific and philanthropic, of such physicians as Prichard and Conolly.—*The Lancet*, August 15th.

*Recent Contributions to Mental Philosophy.**

What is the original meaning of *salad* or *salade?* In the oldest use of the word it means a kind of helmet-cap worn by soldiers, both in French and Norman-English. We venture, though not without hesitation,—especially remembering that some derive it from *salted*,—a surmise that the mixture of herbs and dressing got its name, just as a comfortable dose before going to bed came to be called a nightcap; as a good kind of thing for the head. Be this as it may, we have before us a salad, in either sense: a mixture of various esculents, and a stiff kind of wear over the brain; not without salt either, though there might have been more. But this was not the way we came to use the word. It was our own considering-cap we thought of. Our readers know that of late years we have been obliged to put books of mental philosophy together in a heap, and make one job of them: how can we do otherwise when the nature of things, in its totality, is presented to us for consideration once a fortnight? On the present occasion, when we saw that we had a budget ready, there came into our minds, in a whimsical way, two lines of the satire on Wolsey—

> "Aryse up, Jacke, and putt on thy salatt,
> For the tyme is come of bagge and walatt."

And so we were reminded to ask for the connection between the two meanings of *salad*, and to refer the question to the Philological Society.

We are by no means sorry that mental philosophy is exciting so much attention; but we should be in despair if it were necessary to give a discussion every time we open a book on the subject. It is not desirable to examine the works whenever we are asked the time of day. We pro-

* 1. 'Spiritual Philosophy: founded on the Teaching of the late Samuel Taylor Coleridge. By the late Joseph Henry Green. Edited, with a Memoir, by John Simon. (Macmillan and Co.)

2. 'An Examination of J. S. Mill's Philosophy, being a Defence of Fundamental Truth. By James M'Cosh, LL.D. (Macmillan and Co.)

3. 'Mill and Carlyle: an Examination of Mr. J. S. Mill's Doctrine of Causation in relation to Moral Freedom. With an occasional Discourse on Sauerteig, by Smelfungus.' By P. P. Alexander, A.M. (Edinburgh, Nimmo.)

4. 'Three Essays on Philosophical Subjects.' By T. Shedden, M.A. (Longmans and Co.)

5. 'The Battle of the Two Philosophies.' By an Enquirer. (Longmans and Co.)

6. 'The Philosophy of the Unconditioned.' By Alexander Robertson. (Longmans and Co.)

7. 'An Essay on the Platonic Idea.' By Thomas Maguire, A.M. (Longmans and Co.)

8. 'The Harmonies of Nature, or the Unity of Creation.' By Dr. G. Hartwig. (Longmans and Co.

9. 'The Philosophy of Ethics: an Analytical Essay.' By S. S. Laurie. (Edinburgh, Edmonston and Douglas.)

10. 'E pur si muove.' By N. A. Nicholson, M.A. (Trübner and Co.)

11. 'A Manual of Human Culture.' By M. A. Garvey. (Bell and Daldy.)

12. 'Odd Bricks from a Tumble-down Private Building.' By a Retired Constructor. (Newby.)

13. 'Discourses.' By [the late] Alexander J. Scott, M.A. (Macmillan and Co.)

ceed to a short notice of the several writings before us, which will be of more use to our readers than any detached reviews.

1. Joseph Henry Green, so well known as a surgeon, died December, 1863, as his biographer ought to have told us, but forgot it. It is not very widely known that he was all his life a diligent student of philosophy, a pupil of Tieck, the intimate friend of Coleridge, whose literary executor he was. The posthumous works which have appeared under Green's editorship have been very little thought of in connection with their editor. The present work is not Coleridge, but Green founded on Coleridge. Its subdivisions are, "On the Intellectual Faculties," "On First Principles in Philosophy," "On the Truths of Religion," "On the Idea of Christianity in relation to Controversial Theology." The reading will repay those who have a strong appetite for such subjects; and it will give information, of a general kind, to those who want to know something of Coleridge, subject to the difficulty of separation incident to the writings of teachers who found their own instructions upon those of the master. With those who come between these two classes, we do not think these volumes will find much acceptance; in fact, Green is not Coleridge.

2. Dr. M'Cosh's work involves no fewer than nine points: the nature of things, Hamilton, J. S. Mill, the relations of each to the other, Dr. M'Cosh's relation to either, and Dr. M'Cosh's relation to the way in which either looks at the other. In this subject nothing but a very long article would allow us to go into detail. Though, by title, we should suppose that only Mill is examined, yet this is far too brief a description of the work. There are twenty-one chapters, running through as much difference of matter as could be brought in under the general subject. Dr. M'Cosh holds his ground fairly, and will be useful to all readers of the psychology of the day. In such points as his attack on Mr. Mill's notion of intuition and necessity, he will have the voice of mankind with him; in things which are more like matters of opinion, there are many who will find him useful in attaining perception of the point at issue. In the matter of Hamilton and his impugners and defenders, we shall soon want a digested index, if we are to avoid utter confusion. Dr. M'Cosh has given two pages of reference to the places of his own writings which concern the matter; and it may fairly be said that these are two of his most useful pages.

3. We shall not enter on freedom and necessity. Mr. Alexander writes in a style of a "little vivacity of expression," for which he apologises: this so far as Mr. Mill is concerned. If the reader should ask which are the vivacities, he will get from us no other answer except that given to the little boy who asked which was Wellington in the peep-show—"Whichever you please, my little fellow! You pays your money and you takes your choice." As to the article on Mr. Carlyle, there is internal evidence that it was intended for wit from beginning to end. The author "entirely honours" Carlyle, and considers him "simply our greatest man of letters living." Accordingly, he invests him with the name of *Sauerteig*, which the German dictionary makes to be *sour dough*, and gives him more than forty pages, of which the following is a specimen:—"Sauerteig indeed, nothing doubting, girt with his cook-aprons, infinitely manipulating with his hero-gridirons, and due 'inimitable *sauce piquante*,' cooks busily, with vigour even unusual in him. 'Right stuff of properest hero-porkhood here,' iterates the singular Sauerteig-Soyer, cooking . . . ." Surely this must be wit!

4. Mr. Shedden's three essays are on the Infinite, on Arabic Peripateticism, and on the controversy between Mr. Mill and the school of

Hamilton. In the third he ranges himself rather on the side of Mill, but not wholly. In his last sentence he expresses, but in other words, that he has much more agreement with Mr. Mill than with Hamilton, except as to the value of formal logic, which he holds Mr. Mill grievously to underrate.

5. The inquirer into the battle of the two philosophies takes the other side: he assails Mill and defends Hamilton on various points. With a bias which is not uncommon,—that of having a grand field of opponents,—he informs us, that while Mill's work against Hamilton was "hot from the press, it was pronounced by the writing public to be a complete success." We really were not aware of this. There are individuals who will decide between two such opponents at a glance; but they are neither the whole writing public nor the whole reading public.

6. Mr. Robertson's philosophy of the unconditioned is strong *à priori* theism: the existence of God is to be finally reduced to a logical axiom. He attacks both Hamilton and Mill, and criticises many others. There is a great deal of vagarious thought, in less than a hundred pages.

7. Mr. Maguire informs us that his essay is the result of an independent study of Plato; and of this there is good appearance. His first "conviction that mental science was not mere verbiage," was derived from the chapter on Socrates in Grote's history: and his essay was complete before Grote's 'Plato' appeared; on this his criticisms, &c., are added in notes. Plato, under nine heads, in one hundred and fifty pages, is of a concentration which we cannot separate; but many readers who have the first smattering will find this short treatise both enlarge and bind their knowledge.

8. Dr. Hartwig's book at first looks like a system of natural history: it swarms with woodcuts of zoology and comparative anatomy. But it properly belongs to general psychology: for its object is comparison and deduction, and a view of the chain of being, which, in a rough way, may be described, like a rod and line, as having a fly at one end and a fool at the other. After some general cosmogony, this book begins at the lowest phases of vegetable life and ends with man. How little the collection of harmonies can pretend to be a system of zoology is manifest from the very small space taken up by the mammals when compared with that given to low creatures with hard names. One great object seems to be to illustrate the way in which all living things are the destroyers of their inferiors and the destroyed of their superiors. This is carried the length of saying that it is the "business" of the Deirodon snake to restrain the undue increase of the smaller birds by devouring their eggs. It is just as much the business of the smaller birds to produce eggs enough, over and above what are wanted for hatching, to nourish the Deirodon family. There is one great omission. When man is arrived at, it is not pointed out that, for want of a higher race to destroy him, he is furnished with a wish to do the job for his fellow-creatures, and with inventive power to find out means. A treatise on weapons of all kinds, from the club to the needle-gun, would have been the proper ending. There should have been a double frontispiece: on one side a Deirodon robbing a nest; on the other two high-minded gentlemen snapping pistols at one another for their mutual satisfaction; and both performing the function assigned to them in the order of things, as seen from the standpoint of a naturalist. This book is very interesting, and fills a very useful place.

9. Mr. Laurie's system of ethics places first manifestation of the moral sense in a feeling of being pleased or displeased (complacence or displacence), and, denying that right is discriminated by a special inner

sense, finds all the rest in promotion of "felicity," either that of the agent himself or of others. There is power of analysis shown in this work: all other judgment we leave to the reader.

10. What is it that moves? This the author does not explain, and we cannot find out. There are chapters on Truth, Experience, Space, Time, &c. We do not think much of them. The author desires for his jury those who think calmly and examine closely: we doubt if they would need to retire. We cannot approve of the division of the cardinal virtue, justice, into justice towards one's own self, and justice towards other people: it is a perversion of terms quite parallel with the division of murder into suicide and slaughter of others. We hardly know whether the author is in joke or in earnest when he reconciles freewill and foreknowledge by the hypothesis that God foresees what he pleases, and doos not choose to foresee the acts of his creatures. The old chapter from Volney, the meeting of the religions, to prove that there can be no revelatiou because men advance and defend opposite revelations in much the same way, is really behind the age. Most opponents of revelation would now say, each for himself, Well! I know I do not believe; but I trust I know a better defence of my unbelief than that comes to! The only chapter of which we can almost unreservedly approve is that on Space. There is in it a little reiteration, but no fallacy. It consists of four pages, no one of which contains anything but the head-line and the number of the page. Some more of the paper might have been advantageously treated in the same way.

11. Mr. Garvey's work begins, as a barrister's work will often begin, with a sound and sufficient table of contents. It goes through a large number of points connected with the education of the reason and of the feelings, and abounds in just remarks. At the end of each chapter is a supplement, headed "Practical," containing suggestions of books to rsad or courses to take. The whole is rather too much spun out: condensation is wanted. But those who make education a study should consult this book.

12. The odd bricks are piled into as much of system as is seen in some of the buildings. They are in dialogue, brought out by a loan of Mill upon Hamilton.

13. The late Alexander Scott—it will set him up with many to say that he was a bosom friend of Julius Hare—was a man of remarkable life, thoughts, and words. When he used to deliver Sunday evening discourses at we forget what institution, he collected around him a small audience who thought his sermons—so to call them—among the most remarkable things of the day. In the work before us the greater part has been printed before; but some discourses appear for the first time.

Having thus looked through a considerable number of psychological essays, a thought comes into our minds which has intruded itself on former occasions. It is this: Do our writers mean the same things by the same words? Certainly, it will be answered, in some cases at least; for they explain their words in exactly the same way. We know they do, is our reply: but *Quis custodiet ipsos custodes?* Do the words in which they explain carry the same sense in all the minds? On this point we crave leave to doubt; but we by no means despair of a final settlement. Once more, to authors of all amounts of knowledge, and of all grades of reputation, we recommend curtailment of prolixity. We suspect that the streams of words which go to very fundamental points indicate that the writers have no very brief enunciation which *themselves would understand;* that is, that their fundamental words are not well settled in their own minds.—*The Athenæum*, July 28.

*Visions of Heaven and Hell.**

From the time when these words were written, in the 32nd chapter of Deuteronomy, "a fire is kindled in mine anger, and shall burn unto the lowest hell," the human mind has exercised itself, not unnaturally, in endeavours to penetrate the mystery. They are words which refer to a temporal punishment, but they also mention a locality which is not further defined. Men have variously speculated as to the whereabout of of that dread place; and after ages of vain speculation, the 'Catechism of the Diocese of Bruges' has definitely settled the dispute, as may be seen in the reply to the query, "Where is Hell?"—namely, "Hell is situated at the centre of the earth, and is exactly fifteen hundred leagues from this place." Before this Catechism, however, was compiled, the Jesuit Hardouin had detected the position, though he had not made out the distance; but he did something more,—he declared that the rotary motion of the earth was caused by the efforts of the damned to escape from Hell by climbing up the inward crust of the globe. As squirrels set their cylindrical cages spinning, so the condemned souls keep the world moving!

Cruel humanity has chosen, from various motives, to make a revelation of that which more merciful divinity has shrouded in terrible mystery. The Hindoo priests describe twenty-one hells. In Scandinavia, where fire was a luxury, the priesthood despatched sinners to a hell of frosts. In Thibet, where heat and cold alternate, the faithful were taught that punishment for errors would be carried out in a hell of sixteen circles, in eight of which they would be roasted in one half the year, and in the other eight frozen during the remaining six months!

Some of the worthiest of men have dishonoured Divine mercy by their savage and reckless assertions on this most awful subject. "What," asked a sincere inquirer of St. Augustine—"What was God doing before he created the world?"—"He was making Hell!" was the blasphemous reply of the mistaken saint. How much more to the honour and glory of God was the Talmudist reply to the same question,—namely, "He was creating repentance!"

St. Augustine would not have it so, and most of the Fathers were of his opinion,—that sinners suffered eternal physical pains; that they burned for ever and were never consumed; that they became saturated with fire, and always with increase of torment! St. Thomas Aquinas, good man as he was, went even further than St. Augustine. He believed that one of the chief joys of the blessed would be in contemplating the tortures of the damned! Berridge, unwilling to allow a gleam of hope that Divine vindictiveness could pause for a moment in its exercise, assures his readers, in the 'Christian World Unmasked,' that "the shortest punishment is eternal, and the coldest place in Hell will prove a hot one!"

On the other hand, worthy men, whom the unco-righteous take for heretics in this matter, have asserted opinions more consonant with the spirit of Mercy. The Rabbins could not comprehend eternal punishment; the utmost they allowed was that at the last day the sun would

* 'The Book of Visions; or Heaven and Hell described by those who have seen them'—['Le Livre des Visions; ou, l'Enfer et le Ciel décrits par ceux qui les ont vus.' Par Octave Delepierre]. (Trübner and Co.)

burn up, once and for all, those who had sinned, and warm into eternal happiness those who had merited salvation. Origen disbelieved the local part of the subject, and held that Hell was in the fire of God's anger which lit up man's remorse. Eternal punishment he vehemently denied; and to this day it is matter of dispute whether this kindly-natured man is, or is not, undergoing what he denied as being possible. But Duns Scotus professed the same sentiments, on this one point, as Origen; yet he has not been assailed for it. In later days M. Petitpierre, all Calvinist as he was, denounced the idea which the sterner Calvin most cherished, that of the Divine anger never being appeased, inasmuch as that they who had incurred it never ceased to endure extreme torture. The beauty of mercy and the glory of Heaven were much better comprehended by Origen and others, who believed that the divine glory and mercy would be made manifest at last, by restoring to their vacant seats in Heaven even those angels who had fallen from them through their rebellion.

This subject, in short, took such possession of the minds of men, that they passed from ideas to sensations, and these minds being more or less diseased, when the body was stricken by epilepsy or buried in an unnaturally profound sleep, hurried abroad, like the soul of Hermotimus, plunged into Hell, scaled Heaven, and came back to Earth to pour into the ears of greedy listeners all their terrible or joyous experiences.

These visions form the staple of the very singular volumes which M. Delepierre has contributed to mystical literature. There exist numerous accounts of the secrets and secret places in Heaven and Hell, invented by writers skilled in depicting imaginary horrors and delights. These M. Delepierre discards altogether, confining himself to the relations of monks and others who, having dreamed their dreams, accepted them as realities, and perhaps exaggerated and poetized what their active brains had been deluded to believe.

In studying these remarkable records it is impossible to avoid the conviction that priestcraft, kingcraft, and common human impulses have been concerned in the building of them up. Godefroed warned his hearers by the information that he saw in the lower regions the very men whom he least expected to find there, and others in purgatory whom Christian men had certainly assigned to hell. Charles Martel, tossed on a sea of fire for robbing the Church, is an example *in terrorem* to all princes who disregard the rights of the Church. Charlemagne, undergoing unimaginable, certainly indescribable, tortures in return for his loose gallantry in this world, is a monition to monarchs who love their neighbours' wives better than their own. Charles the Bald, after his visionary foretaste of the future, probably laughed, at least in his sleeve, as he looked in the faces of his household officers, while he told them of the diabolical anguish inflicted by demons on the dishonest predecessors of these officers. The bitter touch of on old bitter family quarrel is to be detected in this prince's vision, when he saw his own old father, Louis, in hell, sitting up to the hips in a tub of ever-boiling water! The readers of Odericus Vitalis need not be reminded how priests could keep their womenkind in order by telling them how their pastors had seen the disorderly and irregular tormented in the realm below.

The imagination runs wild riot in these visions, and the memory of the reader toils in vain to collect a thousandth part of what is imagined. We remember that souls, always retaining bodily form, are shadowless, and the eyelids fixed in, if we may so say, eternal unwinkingness. South says that some men's souls only keep their bodies from putrefaction, but beyond the barrier of the nether world soul and body suffer this process

as the least of the punishments due to them. Misers toss in coppers of molten gold, from which they are dragged by red-hot grapnels to be plunged in freezing liquid lead, after which they are hardened in fire, forged into fresh shape on a red-hot anvil, whence they are taken to have bushels of gold coins poured down their throats, and these they are made to disgorge by the consequences of the rapid revolutions of a spiked wheel to which they are bound. And this for ever!—and for ever!

The most singular delight is taken by these visionaries in showing that sinners are always punished in the members whereby they have most sinned. The miser, as above. The slanderer hangs by his tongue over horrible flames, from amid which demons prod at him with their forks! Some demons are busy in converting, by hideous process, the souls of sinners into essences that are to animate beasts; while the grossest offenders of all undergo a penalty, the details of which (kept in the original rough Latin) almost induce us to believe that the visionary delights in his subject, and loves to dwell upon it. It is refreshing to get away from these peculiar offenders and their sufferings to others who suffer by a sort of *lex talionis*. M. Delepierre might have lighted some of the most lurid of his pages by showing how unskilful physicians are engaged, *in domo Diaboli*, in eternally being subjected to the most horrible cathartics and emetics. We remember that an old German idea states that all foolish mortal writers will in the next world be condemned to everlastingly setting up their own works with red-hot types, for having abused the critics in this! A more terrible penalty awaits the preachers of dull sermons, who are condemned to be for ever reading, from pages that burn their eyes out as they gaze and their fingers off as they hold them, *all* the bad discourses that have been preached upon earth!

"He that is hanged is accursed of God," says the lawgiver, and that decree probably gave rise to the long-preserved tradition that, as the soul of a hanged man could only escape from the body in one way, and that Satan always placed himself where he could receive it, for such soul there was neither purification nor redemption. This idea, however, suggests that for other souls in Tartarus, such merciful boons *were* possible.

One other feature of this remarkable work is worthy of notice, namely, that when the ladies throw themselves into the ecstatic condition they become more unbridled in imagination and expression than the men. St. Christine, St. Catherine of Sienna, St. Theresa, St. Hildegarda, and other well-meaning women, helplessly uncontrolled as to judgment and expression, fancied themselves the true and lawful wives of the Saviour; and they narrate their visionary experiences in proof thereof in such terms as might have astonished even the persons of the not too fastidious times to whom they were uttered. In comparison with these, Engelbrecht's idea of marriage in heaven is a religious pastoral, and Swedenborg's familiarity with Moses and angels and archangels, as he met them in Cheapside, an amusing hallucination.

That Dante was acquainted with some of the earlier visions noticed in this book is more than possible; it is almost certain. They formed the materials which Genius only knows how to select, appreciate, and employ.

A more curious question is that of the condition of blood and of brain in the visionaries who pondered over these subjects, waking, till their sensations connected therewith possessed them as ideas, in sleep, when the deranged body and rudderless memory carried them into realms which no ordinary or healthy imagination can reach. Even waking spectral illusions take the form of whatever has long and entirely pos-

sessed the mind; those of the hours of uneasy sleep seize and play with those forms in wilder fancies still. Sleeping or waking, we can remember but one man whose mind protested against the vision that haunted it. M. Delepierre, indeed, says that many of the early visionaries retracted more or less of the first editions of their wondrous narratives; but Mr. White, the Assessor of the Westminster Assembly, resisted the visions. Satan (on whose works he had been long meditating) one night came to the Assessor's bedside, as the latter had just lain down, seated himself, and looked at the astounded gentleman in a way to banish sleep for a month. The Assessor rubbed his eyes, muttered "This will never do," and then, gazing full in the face of the Prince of Darkness, quietly remarked, "I'll tell thee what it is. If thou hast nothing better to do, I have! I am going to sleep." After this wholesome exercise of mind, the Assessor was never more troubled by visionary visitors. His story might well find place in a second edition of M. Delepierre's collection of narratives. But among the many singularities of what we may well call this rare book is, that the author does not contemplate a second edition, and has printed only *twenty-five copies* of that which, as we may notice, is well illustrated, and which will doubtless meet fitting audience, though, it may be, few.—*The Athenæum*, June 30.

Mr. Carlyle on the Education of the Future.

I confess it seems to me there is in it a shadow of what will one day be; will and must, unless the world is to come to a conclusion that is altogether frightful: some kind of scheme of education analogous to that; presided over by the wisest and most sacred men that can be got in the world, and watching from a distance: a training in practicality at every turn; no speech in it except speech that is to be followed by action, for that ought to be the rule as nearly as possible among men. Not very often or much, rarely rather, should a man speak at all, unless it is for the sake of something that is to be done; this spoken, let him go and do his part in it, and say no more about it.

I will only add that it is possible,—all this fine theorem of Goethe's, or something similar! Consider what we have already; and what 'difficulties' we have overcome. I should say there is nothing in the world you can conceive so difficult, *primâ facie*, as that of getting a set of men gathered together as soldiers. Rough, rude, ignorant, disobedient people; you gather them together, promise them a shilling a day; rank them up, give them very severe and sharp drill; and by bullying and drilling and compelling (the word *drilling*, if you go to the original, means 'beating,' 'steadily *tormenting*' to the due pitch), they do learn what it is necessary to learn; and there is your man in red coat, a trained soldier; piece of an animated machine incomparably the most potent in this world; a wonder of wonders to look at. He will go where bidden; obeys one man, will walk into the cannon's mouth for him; does punctually whatever is commanded by his general officer. And, I believe, all manner of things of this kind could be accomplished, if there were the same attention bestowed. Very many things could be regimented, organised into this mute system;—and perhaps in some of the mechanical, commercial, and manufacturing departments, some faint incipiences may be attempted before very long. For the saving of human labour, and the avoidance of human misery, the effects would be incalculable, were it set about and begun even in part.

Alas, it is painful to think how very far away it all is, any real fulfilment of such things! For I need not hide from you, young gentlemen,—and it is one of the last things I am going to tell you,—that you have got into a very troublous epoch of the world; and I don't think you will find your path in it to be smoother than ours has been, though you have many advantages which we had not. You have careers open to you, by public examinations and so on, which is a thing much to be approved of, and which we hope to see perfected more and more. All that was entirely unknown in my time, and you have many things to recognise as advantages. But you will find the ways of the world, I think, more anarchical than ever. Look where one will, revolution has come upon us. We have got into the age of revolutions. All kinds of things are coming to be subjected to fire, as it were: hotter and hotter blows the element round everything. Curious to see how, in Oxford and other places that used to seem as lying at anchor in the stream of time, regardless of all changes, they are getting into the highest humour of mutation, and all sorts of new ideas are afloat. It is evident that whatever is not inconsumable, made of *asbestos*, will have to be burnt, in this world. Nothing other will stand the heat it is getting exposed to.

And in saying that, I am but saying in other words that we are in an epoch of anarchy. Anarchy *plus* a constable! (Laughter.) There is nobody that picks one's pocket without some policeman being ready to take him up. (Renewed laughter.) But in every other point, man is becoming more and more the son, not of Cosmos, but of Chaos. He is a disobedient, discontented, reckless, and altogether waste kind of object (the commonplace man is, in these epochs); and the wiser kind of man,—the select few, of whom I hope you will be part,—has more and more to see to this, to look vigilantly forward; and will require to move with double wisdom. Will find, in short, that the crooked things he has got to pull straight in his own life all round him, wherever he may go, are manifold, and will task all his strength, however great it be.

But why should I complain of that either? For that is the thing a man is born to, in all epochs. He is born to expend every particle of strength that God Almighty has given him, in doing the work he finds he is fit for; to stand up to it to the last breath of life, and do his best. We are called upon to do that; and the reward we all get,—which we are perfectly sure of if we have merited it,—is that we have got the work done, or at least that we have tried to do the work. For that is a great blessing in itself; and I should say, there is not very much more reward than that going in this world. If the man gets meat and clothes, what matters it whether he buy those necessaries with seven thousand a year, or with seven million, could that be, or with seventy pounds a year? He can get meat and clothes for that; and he will find intrinsically, if he is a wise man, wonderfully little real difference. (Laughter.)

On the whole, avoid what is called ambition; that is not a fine principle to go upon,—and it has in it all degrees of *vulgarity* if that is a consideration. "Seekest thou great things, seek them not:" I warmly second that advice of the wisest of men. Don't be ambitious; don't too much need success; be loyal and modest. Cut down the proud towering thoughts that get into you, or see that they be pure as well as high. There is a nobler ambition than the gaining of all California would be, or the getting of all the suffrages that are on the Planet just now. (Loud and prolonged cheers.)

Finally, gentlemen, I have one advice to give you, which is practically of very great importance, though a very humble one. In the midst of your zeal and ardour,—for such, I foresee, will rise high enough, in spite

of all the counsels to moderate it that I can give you,—remember the care of health. I have no doubt you have among you young souls ardently bent to consider life cheap, for the purpose of getting forward in what they are aiming at of high; but you are to consider throughout, much more than is done at present, and what it would have been a very great thing for me if I had been able to consider, that health is a thing to be attended to continually; that you are to regard that as the very highest of all temporal things for you. (Applause.) There is no kind of achievement you could make in the world that is equal to perfect health. What to it are nuggets and millions? The French financier said, "Why, is there no sleep to be sold!" Sleep was not in the market at any quotation. (Laughter and applause.)

It is a curious thing, which I remarked long ago, and have often turned in my head, that the old word for 'holy' in the Teutonic languages, *heilig*, also means 'healthy.' Thus *Heilbronn* means indifferently 'holy-well,' or 'health-well.' We have, in the Scotch too, 'hale,' and its derivatives; and, I suppose, our English word 'whole' (with a 'w'), all of one piece, without any *hole* in it, is the same word. I find that you could not get any better definition of what 'holy' really is than 'healthy.' Completely healthy; *mens sana in corpore sano.* (Applause.) A man all lucid, and in equilibrium. His intellect a clear mirror geometrically plane, brilliantly sensitive to all objects and impressions made on it, and imaging all things in their correct proportions; not twisted up into convex or concave, and distorting everything, so that he cannot see the truth of the matter without endless groping and manipulation: healthy, clear, and free, and discerning truly all round him. We never can attain that at all. In fact, the operations we have got into are destructive of it. You cannot, if you are going to do any decisive intellectual operation that will last a long while; if, for instance, you are going to write a book,—you cannot manage it (at least, I never could) without getting decidedly made ill by it: and really one nevertheless must; if it is your business, you are obliged to follow out what you are at, and to do it, if even at the expense of health. Only remember, at all times, to get back as fast as possible out of it into health; and regard that as the real equilibrium and centre of things. You should always look at the *heilig*, which means 'holy' as well as 'healthy.'

And that old etymology—what a lesson it is against certain gloomy, austere, ascetic people, who have gone about as if this world were all a dismal prison-house. It has indeed got all the ugly things in it which I have been alluding to; but there is an eternal sky over it; and the blessed sunshine, the green of prophetic spring, and rich *harvests* coming,—all this is in it, too. Piety does not mean that a man should make a sour face about things, and refuse to enjoy wisely what his Maker has given. Neither do you find it to have been so with the best sort,—with old Knox, in particular. No; if you look into Knox you will find a beautiful Scotch humour in him, as well as the grimmest and sternest truth when necessary, and a great deal of laughter. We find really some of the sunniest glimpses of things come out of Knox that I have seen in any man; for instance, in his 'History of the Reformation,'—which is a book I hope every one of you will read (Applause), a glorious old book.

On the whole, I would bid you stand up to your work, whatever it may be, and not be afraid of it; not in sorrows or contradictions to yield, but to push on towards the goal. And don't suppose that people are hostile to you or have you at ill-will, in the world. In general, you will rarely find anybody designedly doing you ill. You may feel often as if

the whole world were obstructing you, setting itself against you: but you will find that to mean only, that the world is travelling in a different way from you, and, rushing on its own path, heedlessly treads on you. That is mostly all: to you no specific ill-will;—only each has an extremely good-will to himself, which he has a right to have, and is rushing on towards his object. Keep out of literature, I should say also, as a general rule (Laughter),—though that is by-the-by. If you find many people who are hard and indifferent to you, in a world which you consider to be inhospitable and cruel, as often indeed happens to a tender-hearted, striving young creature, you will also find there are noble hearts who will look kindly on you; and their help will be precious to you beyond price. You will get good and evil as you go on, and have the success that has been appointed you.

I will wind up with a small bit of verse which is from Goethe also, and has often gone through my mind. To me, it has something of a modern psalm in it, in some measure. It is deep as the foundations, deep and high, and it is true and clear:—no clearer man, or nobler and grander intellect, has lived in the world, I believe, since Shakspeare left it. This is what the poet sings;—a kind of road-melody or marching-music of mankind:

"The Future hides in it
Gladness and sorrow;
We press still thorow,
Nought that abides in it
Daunting us,—onward.

"And solemn before us,
Veiled, the dark Portal
Goal of all mortal:—
Stars silent rest o'er us,
Graves under us silent.

"While earnest thou gazest,
Comes boding of terror,
Comes phantasm and error;
Perplexes the bravest
With doubt and misgiving.

"But heard are the Voices,
Heard are the Sages,
The Worlds and the Ages:
'Choose well, your choice is
Brief, and yet endless.

"'Here eyes do regard you,
In Eternity's stillness;
Here is all fulness,
Ye brave, to reward you;
Work, and despair not.'"

Work, and despair not: *Wir heissen euch hoffen*, "We bid you be of hope!"—let that be my last word. Gentlemen, I thank you for your great patience in hearing me; and, with many most kind wishes, say Adieu for this time.—*Inaugural Address at Edinburgh*, 1866.

Publications Received, 1866.

(*Continued from the 'Journal of Mental Science' for July.*)

'Lunacy. Twentieth Report of the Commssioners in Lunacy to the Lord Chancellor.' (Ordered by the House of Commons to be printed, June 4th, 1866.)

'Eighth Annual Report of the General Board of Commissioners in Lunacy for Scotland.' (Presented to both Houses of Parliament by command of Her Majesty.) Edinburgh, 1866.

'Lunatic Asylums, Ireland. The Fifteenth Report of the District Criminal and Private Lunatic Asylums in Ireland.' (Presented to both Houses of Parliament by command of Her Majesty.) Dublin, 1866.

We shall review these three Official Reports in our next number (*January*, 1867).

'Vorträge über die Erkenntniss und Behandlung der Geistesstörungen und über das Vorgehen bei Forensischen Begutachtungen Psychischer Zustände.' Von Dr. Ludwig Schlager, Landesgerichtsarzt und K. K. a. ö. Professor der Psychiatrie an der Universität zu Wien. 1 Lieferung, Wien, 1865.

We are glad to have received the first part of Dr. Ludwig Schlager's able 'Lectures on Mental Diseases.' They are marked by a great breadth of view and a careful working out of detail.

'Shakspeare's Delineations of Insanity, Imbecility, and Suicide.' By A. O. Kellogg, M.D., Assistant Physician, State Lunatic Asylum, Utica, N.Y. New York, 1866, pp. 204.

These Essays were published in the 'American Journal of Insanity,' at various intervals between 1859 *and* 1864. *The writer of these Essays, oddly enough, makes no mention whatever of Dr. Bucknill's papers published in the pages of this Journal (and subsequently also published on a separate form) in the 'Psychology of Shakspeare.' Yet any fair critic who read, for example, Dr. Kellogg's paper on 'Ophelia,' and then read Dr. Bucknill's, would be constrained to observe how nearly Dr. Kellogg's thoughts and views were moulded on the pattern of Dr. Bucknill's earlier and far abler Essays on the same subjects.*

'A Holiday in North Uist; a Lecture delivered in the Perth District Asylum, Murthly, Nov. 17, 1865.'

"*I have collected*" (*writes Dr. Mackintosh, addressing his patients*) "*a few scattered notes, made during my absence from you in summer, and strung them together by aid of recollection to form the following lecture, which consists of such general topics as might interest and amuse you, with the assistance of the accompanying specimens, coloured sketches, and drawings. I acted on the principle, specially applicable to our case, that those who have opportunities of visiting interesting places at a distance should, if possible, be mindful of those at home who, perhaps, in this respect, are placed in less favoured circumstances. You will thus have the advantage of going over the same ground in imagination, if not in reality, of seeing* some *things in their most pleasant aspects, and of being saved all the discomforts of travelling to and sojourning in such a land.*"

'The Medical Mirror,' September, 1866. (Exchange Copy.)

"*The 'Journal of Mental Science'* (*says the Editor of the 'Medical Mirror'*) "*is one of those medical magazines where one is sure of finding interesting and instructive matter by picked authors. Not mere hurried dissertations and scribblings on crude and visionary theories, but sound essays in cultivated and*

often talented language, fill its pages, and we much regret that want of space often precludes us from making long extracts from it. The Lunatic department of Great Britain is happily managed by the magistrates of the kingdom. The salaries of the medical officers are rising and sufficient, and the special journal of this great scientific branch of the profession shows a comfortable condition by its scientific and refined literature. But what time for study and self-improvement can a jaded Poor-law doctor have? Until the poor of the kingdom are controlled by the magistrates and not by petty tradesmen, we have no hope of any measure of Reform. The Union medical men should combine together to demand their true position. Resignation or Reform should be their watch-words. The profession would not be niggardly in subscribing to a just cause like this."

'Researches on the Daily Excretion of Urea in Typhus Fever, with Remarks.' By Keith Anderson, M.D. Edin.

(*Reprint from 'Edinburgh Medical Journal.'*)

Clinical Inquiries into the Influence of the Nervous System and of Diathetic Tissue-Changes on the production and treatment of Dropsies.' By Thomas Laycock, M.D., &c. &c.

(*Reprint from 'Edinburgh Medical Journal.'*)

The following Reports of County and District Asylums for the year 1865 *have been received since the last notice* (1866).

40. Twenty-sixth Annual Report of the Crichton Royal Institution and Southern Counties' Asylum. (Medical Superintendent, James Gilchrist, M.D.)

41. Thirteenth Annual Report of the Committee of Visitors of the Joint Lunatic Asylum at Abergavenny. (D. M. M'Cullough, M.D., Superintendent; T. Algernon Chapman, M.D., Assistant Medical Officer.)

42. Report of the Committee of Visitors of the Lunatic Asylum for the North Riding of Yorkshire. (Samuel Hill, Esq., Medical Superintendent.)

43. Report of the Sligo and Leitrim Hospital for the Insane. (John M'Munn, M.D., Medical Superintendent.)

44. First Annual Report of the Perth District Asylum, Murthly. (W. C. M'Intosh, M.D., Medical Superintendent; Edward Rutherford, M.D., Assistant Physician.)

45. Report of the Armagh District Lunatic Asylum. (Resident Physician, Robert M'Kinstrey, M.D.)

46. Report of the Cork District Lunatic Asylum. By Thomas Power, M.D., Medical Superintendent.

47. Annual Report of the Royal Edinburgh Asylum for the Insane. (Dr. Skae, Resident Physician; Dr. F. Skae and Dr. Spence, Medical Assistants.)

48. Eighteenth Annual Report of the Somerset County Pauper Lunatic Asylum. (Robert Boyd, M.D., Medical Superintendent.)

49. First Annual Report of the Inverness District Lunatic Asylum. (Medical Superintendent, Thomas Aitken, M.D.)

50. Thirty-sixth Annual Report of the Belfast District Hospital for the Insane. (Robert Stewart, M.D., Medical Superintendent.)

51. Third Annual Report of the Argyll District Asylum for the Insane (two copies). (John Sibbald, M.D., Medical Superintendent.)

52. Dorset County Lunatic Asylum. Annual Report. (T. G. Symes, Esq., Medical Superintendent.)

53. Sussex County Lunatic Asylum, Hayward's Heath. (C. L. Robertson, M.D., Medical Superintendent.)

54. Three Counties' Asylum, Arlesey. Annual Report. (W. Denne, Esq., Medical Superintendent.)

55. Medical Report of the Royal Lunatic Asylum of Aberdeen. (Robert Jamieson, M.D., Physician and Superintendent.)

56. Lunatic Hospital, The Coppice, near Nottingham. Tenth Annual Report. (W. B. Tate, Medical Superintendent.)

57. Report of the Royal Lunatic Asylum of Montrose. (Medical Superintendent, James C. Howden, M.D.)

58. The Twenty-first Report of the Committee of Visitors of the County Lunatic Asylum at Hanwell, January Quarter Sessions, 1866.

American Reports.

Sixth Annual Report of the Board of Directors and Offiecrs of the Longview Asylum, Ohio. (O. M. Langdon, M.D., Superintendent and Physician.)

Appointments.

Browne, J. C., M.D. Edin., has been elected Medical Superintendent of the West Riding of Yorkshire Lunatic Asylum at Wakefield.

P. J. Simpson, M.R.C.S.E., L.S.A., late Resident Medical Officer of the Westminster General Dispensary, has been elected Apothecary to the Colney Hatch Asylum.

W. Watkins, J. P., M.R.C.S.E., L.S.A., has been appointed Resident Surgeon to the Lunatic Asylum and General Hospital, Berbice, British Guiana.

Stewart, Hugh Grainger, M.D., F.R.C.P., Edin., has been appointed Medical Superintendent to the Newcastle-on-Tyne Borough Lunatic Asylum.

Obituary.

The late Sir Charles Hastings, M.D., D.C.L., Oxon.

At the first General Meeting for 1866 of the British Medical Association, held at Chester, the following resolution moved by Dr. Jeaffreson, the retiring President, and seconded by Mr. Carden, of Worcester, was unanimously adopted:

"*That the British Medical Association, assembled at the general meeting at Chester, desires to express its deep sorrow at the loss the Association has sustained in the death of its much-loved and highly esteemed founder, President of Council, and Treasurer, Sir Charles Hastings, who, from the period of its establishment to the present time. has, with singular courtesy and fidelity, exerted his highest powers for the promotion of the best interests of the Association; and that a copy of this resolution be forwarded by the President to the family of the late Sir Charles Hastings, with the condolence of the Association on the bereavement they have sustained.*"

We cordially concur in the above resolution. Sir Charles Hastings was President of the Medico-Psychological Association in 1859, and he took great interest in the advancement of Mental Psychology.

The late Right Reverend Bishop Willson.

The late Bishop Willson, of Hobart Town, an honorary member of the Medico-Psychological Association since its foundation, died at Nottingham on the 30th June last, aged 71. He was consecrated Roman Catholic Bishop of

Hobart Town in 1842. Bishop Willson was an active and energetic advocate of colonial asylum reform, and he worthily represented in Australia the opinions and teaching of this Association.

Dr. Greenup, formerly of Salisbury, for the last fourteen years Superintendent of the Parramatta (New South Wales) Lunatic Asylum, holding also the offices of Medical Adviser to the Government and Examiner of Sydney University, has been stabbed by one of the patients in the Asylum, and died in two days after much suffering. His last words were, "No one is to blame for it." He fell a victim to his humane disposition, which led him to be too trustful even of men confined in the criminal division of the Asylum.—'*Sydney Morning Herald*,' *quoted in* '*Medical Times*,' *Sept.* 22.

Notice to Correspondents.

English books for review, pamphlets, exchange journals, &c., to be sent either by book-post to Dr. Robertson, Hayward's Heath, Sussex; or to the care of the publishers of the Journal, Messrs. Churchill and Sons, New Burlington Street. French, German, and American publications may be forwarded to Dr. Robertson, by foreign book-post, or to Messrs. Williams and Norgate, Henrietta Street, Covent Garden, to the care of their German, French, and American agents, Mr. Hartmann, Leipzig; M. Borrari, 9, Rue de St. Pères, Paris; Messrs. Westermann and Co., Broadway, New York.

Authors of Original Papers wishing *Reprints* for private circulation can have them on application to the Printer of the Journal, Mr. Adlard, Bartholomew Close, E.C., at a fixed charge of 30*s.* per sheet per 100 copies, including a coloured wrapper and title-page.

The copies of *The Journal of Mental Science* are regularly sent *by Book post* (*prepaid*) to the ordinary Members of the Association, and to our Home and Foreign Correspondents, and we shall be glad to be informed of any irregularity in their receipt or overcharge in the Postage.

The following *EXCHANGE JOURNALS* have been regularly received since our last publication:

The *Annales Médico-Psychologiques;* the *Zeitschrift für Psychiatrie;* the *Correspondenz Blatt der deutschen Gesellschaft für Psychyatrie; Archiv für Psychiatrie;* the *Irren Freund; Journal de Médecine Mentale; Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali; Medicinische Ahrenlese; Medizinische Jahrbücher* (*Zeitschrift der K. K. Gesellschaft der Aerzte in Wien*); the *Edinburgh Medical Journal;* the *American Journal of Insanity;* the *British and Foreign Medico-Chirurgical Review;* the *Dublin Quarterly Journal;* the *Medical Mirror;* the *Social Science Review;* the *Ophthalmic Review—a Quarterly Journal of Ophthalmic Surgery and Science;* the *British Medical Journal;* the *Medical Circular;* and the *Journal of the Society of Arts;* also the *Morningside Mirror;* the *York Star and Excelsior;* the *Murray Royal Institution Literary Gazette.*

We are compelled to defer to our next number the publication of the third and fourth papers read at the Annual Meeting of the Medico-Psychological Association, viz.:

"The Pathology of Aphasia." By Alexander Robertson, M.D.
"Asylum Architecture" (with plans). By C. Lockhart Robertson, M.D.

THE

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Notice of any alteration required in the above List to be sent to the Honorary Secretary, 37, Albemarle Street, W.