chloroform are acting, only part of the available oxygen will be rendered useless; in other terms, the blockade of the oxygen will be incomplete, and then the phagocytes are in the case of the experiments mentioned under 5, where partial removal of oxygen by nitrogen or hydrogen causes an acceleration of the phagocytosis. This acceleration gradually passes into a retardation in proportion as the store of oxygen of the cell becomes more exhausted—an exhaustion which sets in quickly when, for instance, by the administration of larger amounts of chloroform, the oxygen consumption has fallen to a minimum or has ceased altogether.

The Excitement Stage in Chloroform Narcosis.

If we let the various narcosis theories pass in review, it appears that no one has even attempted to give an explanation of the excitement stage.

In his article "Narkose" Verworn says: Für die Genese des Exzitastadiums fehlt bisher jede Analyse."

Our researches on phagocytosis and the agreement in the conduct of the respiratory centre and phagocytes may be useful to lighten the difficulty.

We need only to conceive that in the beginning of the narcosis, owing to a decrease in the amount of available oxygen, the sensibility of the higher nerve centres is heightened.

If the chloroform inhalation is continued, this sensibility will decrease, owing to a further decrease of the potential oxygen percentage, and finally narcosis sets in. Whether the state of complete narcosis is partly due to other factors—for instance, to a semi-coagulation of the protoplasm in the sense of Claude Bernard, or to a decrease of the dispersity of enzymes, etc.—need not be considered here. First, the higher centres, which are, as we know, very sensitive to oxygen withdrawal, are paralysed; then the spinal centres; and, after that, the respiratory centres.

We may add that in the first stage of narcosis not only the higher cortical centres and the spinal centres pass through an excitement stage; but, according to researches of Knoll and of Arloing, the respiratory centre is also in a state of heightened irritability.

Probably the increased sensitivity as a result of a partial oxygen withdrawal must be looked upon as a general phenomenon. The sensitivity of the vomiting centre, for instance, decreases, just like that of the respiratory centre and phagocytes, if more oxygen is supplied. Hence the inclination to vomit may be subdued to some extent by frequent and deep breathing, whilst it is stimulated by lack of oxygen.

The question which first suggests itself is the following: How is it that a decrease of the available oxygen percentage heightens the irritability of the phagocytes (and ganglion cells)?

The foregoing accounts of results and views, the fruit of some years' work with several collaborators (Hekma, De Haan, etc.),² being of necessity incomplete, I have attempted to select what may specially interest every medical man.

We are continuing our study of the biology of phagocytes, and each day we become more convinced of their excellence as a simple object for the study of problems of a general biochemical nature, and of some of practical interest as well.

It is a satisfaction to me that other workers have begun to cultivate this field of research and to follow our method of investigation.

REFERENCES.

¹ *Handbuch der Naturwissenschaften*, vol. vii, 1912. ² A full account of the researches down to the year 1912 can be found in my monograph, *Physiologisch-chemische Untersuchungen über Phagozyten. Ihre Bedeutung vom allgemein biologischen und pathologischen Gesichtspunkt*. (Wiesbaden: J. F. Bergmann, 1912.) Cf. also some articles in the *Proceedings of the Royal Society of the Netherlands* (Amsterdam)

MR. CLEMENT LUCAS left property of the value of £33,487, the net personalty being £20,976.

AT a meeting of the K.k. Gesellschaft der Aerzte in Vienna, Dr. A. v. Hauer, in giving an account of eight months' experience in the field, discussed the subject of self-mutilation; soldiers with wounds of the left hand were, he said, at once interrogated with this possibility in view. Inoculation against cholera was repeated every three months; active immunization against typhoid fever and small-pox was also undertaken.

An Address

ON THE

ABSENCE OF PROPER FACILITIES FOR THE TREATMENT OF MENTAL DISORDERS IN THEIR EARLY STAGES.

DELIVERED AT A MEETING OF THE YORKSHIRE BRANCH
OF THE BRITISH MEDICAL ASSOCIATION.

BY

BEDFORD PIERCE, M.D., F.R.C.P.LOND.,

MEDICAL SUPERINTENDENT, THE RETREAT, YORK;
PRESIDENT OF THE BRANCH.

ONE hundred years ago, whilst the campaign in Belgium which ended at Waterloo was in progress, a Select Committee of the House of Commons was engaged in inquiring into the conditions of madhouses in England. Its report, presented in July, 1815, disclosed a terrible state of things, and did much to awaken the public conscience. Amongst those who gave evidence was William Tuke, the founder of the Retreat, then 83 years of age, and frequent reference is made to the *History of the Retreat*, published in 1812, which, largely owing to an article by Sidney Smith in the *Edinburgh Review*, entitled "Mad Quakers," had much influence in promoting improved treatment of the insane. Among the institutions reported upon were some spoken of in the highest terms, in particular Dr. Fox's house at Brislington near Bristol, and Dr. Finch's, Lavestock House, Salisbury, but in the main the state of affairs disclosed was horrible beyond description. One case investigated became notorious—namely, that of a man named Norris, who was restrained for fifteen years at Bethlem with a triple arrangement of bars and chains.

I do not wish, however, to discuss the abuses that existed at that time, and continued more or less for another thirty years, until the appointment of the Lunacy Commission finally put an end in this country to the era of straw and chains in the treatment of the insane.

My object in referring to the report of 1815 is to point out that, in spite of the grave condition of public affairs caused by Napoleon's escape from Elba and his success in raising an army of 250,000 men in less than three months, a committee of the English House of Commons week after week calmly listened to evidence dealing with the management of madhouses. The nation is again passing through a serious crisis in its history, but unless the British character during the past century has seriously altered, it will not be long before the country will be willing to give attention to social questions. To refer to a subject which involves the expenditure of public money at the present time would seem futile, yet it did not discourage our ancestors, exhausted and almost ruined by the Napoleonic wars. On the Friday before the battle of Waterloo the Select Committee considered designs for the construction of two asylums in London and Yorkshire respectively, estimated to cost together £36,596.

The lull of political controversy would seem to afford a singularly opportune time for considering whether any alteration in the law is required in the interests of persons threatened with mental disease. I therefore do not hesitate in bringing to your notice a subject which I believe to be of great importance—namely, the absence of proper facilities for treatment of nervous and mental disorders in their early stages. Its importance was long ago realized by the British Medical Association, which, with the Medico-Psychological Association and the Medico-Legal Society, repeatedly advocated a change in the law. Immediately before the outbreak of the war the Medico-Psychological Association adopted the report of a special committee advocating the establishment of clinics for the treatment of early cases. In the medical press recently the subject has again been discussed, and general public attention was called to the matter, when it was realized that, apart from certification, there was no legal method of treating soldiers temporarily disordered in mind: It was at once seen that the existing procedure was impossible for men temporarily broken down in the service of their country, yet a bill introduced into Parliament to meet the case failed to pass. Although the difficulty in respect to soldiers has to a large

extent been overcome, I would urge the British Medical Association to consider afresh whether some radical change in our procedure cannot be secured, so that all on the verge of mental collapse, as well as those whose breakdown is recent and may be considered temporary, can receive effective treatment in a properly equipped hospital without the necessity for certificates of insanity.

Let me state in a few words the defects of our present system. At present, broadly speaking, no person unable to pay its cost can receive adequate treatment until he is certified as of unsound mind. This practically means that no special treatment is possible until he has utterly broken down and is so seriously affected as to convince a magistrate that he is decidedly insane. No general hospital will receive such a patient; the public asylums are all closed to any one who begs for protection or treatment, for county asylums cannot receive voluntary boarders even when the cost of their maintenance is forthcoming.

Consequently there is no alternative but to apply to the Poor Law authorities, who, under certain circumstances, provide treatment for a period of two weeks in the workhouse infirmary. The whole system is radically wrong. When the wife of an artisan becomes depressed after confinement, surely it is cruel in the extreme to make her a pauper and send her to the workhouse infirmary, pending a decision as to whether she is insane or no. It is obvious in such a case that this course will not be adopted until the last possible moment, and consequently much valuable time is lost.

Every practitioner will be able to call to mind patients travelling steadily towards insanity in unfavourable surroundings. This question is brought even more prominently before consulting physicians, especially those interested in nervous and mental diseases.

Dr. Henry Maudsley's generous gift of £30,000 to the London County Council to establish a hospital for recent and undeveloped cases shows most plainly how the matter appears to one of the foremost thinkers of the day and a physician who has spent his life in the study of mental disorders. Dr. Maudsley's books are already classics, they are quoted, consciously or unconsciously, by all who have written on the subject of insanity in recent years, and it was a noble act on his part to assist in meeting the crying need of those threatened with or struggling against mental infirmity. As I write the hospital is nearly ready, but owing to the exigencies of the war it is, for the present, I understand, to be used exclusively for soldiers.

If it were possible, instead of a separate hospital it might have been better to establish separate pavilions for nervous and mental diseases in direct association with general hospitals. At La Charité hospital in Berlin the visitor enters a small park, and Dr. Ziehen's clinic is but one of many detached buildings devoted to special diseases. It is as easy and simple for the patient suffering in mind to get advice there as for another with eye or with lung trouble. In most cities in England, however, any such arrangement is impossible, for general hospitals cannot be rebuilt or reconstituted in this way.

In order to give some idea of the extremely valuable work done at special hospitals of the kind advocated, I will briefly allude to the Psychopathic Hospital at Boston, Massachusetts. I have before me the notes of the first and the second annual conferences of the medical and social work at this hospital.¹ The hospital was built by the State expressly to deal with recent acute cases. No fewer than 1,523 patients were received in its first year, and of these 590 were received under a temporary care law which provides for a week's detention only; large numbers were also received on a voluntary basis, so that during the year 48 per cent. of all patients escaped the usual lunacy procedure.

On reading the reports of work done, one is struck with the enthusiasm of the medical staff and the vast field of research undertaken. During the two years eighteen medical men describe their work covering almost every department of psychiatry: Juvenile crime, tests for feeble-mindedness, incidence of syphilis, alcoholism, hydropathy in its influence on red blood cells, treatment of delirium, prophylaxis, analysis of genetic factors, salvarsan treatment, tests of cerebro-spinal fluid, errors in diagnosis, and last, but not least, the value of out-patients' departments and after-care. There is a special social service department for the purpose of following up cases in their homes,

and it was found that of every 100 admissions 20 needed supervision on discharge, 24 needed advice, 3 required assistance in arranging their discharge, and 10 showed a need for prophylactic work in their families.

This bald statement of the activities of the Boston State Hospital shows plainly what an important service it renders in providing treatment apart from ordinary asylum associations. It shows how it is possible at such a hospital to organize a medical service which covers all departments of psychiatry; and, further, that when the mental symptoms clear up, a patient need not be thrown back into old associations without help or supervision.

This hospital at Boston is but one of many that have been established in the United States in recent years. Some of the others are due to private munificence; in particular, reference may be made to the Henry Phipps Psychiatric Clinic at Baltimore, the medical staff of which consists of a director, assistant director, a resident physician, two assistants, and five internes. In addition to these are the heads of three research laboratories, dealing (1) with clinical pathology and bio-chemical investigation, (2) with neurological research, and (3) with psycho-pathology.

It would give a wrong impression to conclude that nothing whatever has been done in this country, seeing that the city of Glasgow has provided excellent hospital accommodation for the temporary care of doubtful and recent cases in association with the Poor Law infirmaries; and in London, Liverpool, and elsewhere the hospitals under the control of the guardians are well equipped and very efficient institutions. I think, however, that I am justified in stating that even in these localities the facilities fall far short of what is really needed, whilst the medical staff is relatively very small. Besides this the association with the Poor Law is a serious drawback. In the words of the report of the Medico-Psychological Association:

The present system, which compels all persons, except those able to pay adequately for their maintenance, to apply to the Poor Law authorities in order to secure treatment, is unsatisfactory and unjust. In doubtful and undeveloped cases temporary care can be given only in workhouses or Poor Law infirmaries, which, with very few exceptions, lack proper facilities for treatment.

A system which artificially creates paupers in order to obtain medical treatment necessarily acts as a deterrent, so that too frequently there is serious and even disastrous delay.

There is, however, one hospital specially devoted to the care of mental and nervous diseases free from these objections, though I fear the small financial support it receives greatly limits its usefulness. This pioneer institution is the Lady Chichester Hospital, Hove, Brighton, for cases of nervous breakdown, established chiefly through the efforts of Dr. Helen Boyle. In a small way it represents the ideal, as it is affiliated with a hospital for medical and surgical cases, and it is free from Poor Law associations. From the annual report I extract the following, referring to the patients admitted:

Many such are entirely dependent upon their own exertions, and the knowledge that no refuge existed for them would render them a more easy prey to disease. Others are wives and mothers of families whose circumstances make it impossible for them to get rest or relief so long as they remain in their own homes. The only chance is to take them away from the daily strain and constant succession of unavoidable worries. Failing this they may only too easily cross the narrow line which divides the borderline case from that which is actually certifiable as mental. At present this is the only hospital in the United Kingdom which deals with such cases of early nervous breakdown in poor people; it has therefore the strongest claim possible to the support of those who realize the danger and the expense to the community entailed by failure to give help soon enough. It is needless to say that the 33 beds provided in this hospital are wholly insufficient to meet the demands, patients having to wait months for admission sometimes, and it cannot be too often repeated that treatment of this kind is one of the most pressing requirements of the present time.

The value of special hospitals for nervous and mental disorders has been demonstrated in a remarkable manner by the conversion of the State Hospital, recently equipped by the Board of Control under the superintendence of Dr. Rees Thomas, into a Red Cross hospital for soldiers suffering from shock and other psychoses. It is singularly fitting that the organization and management of this hospital since Dr. Thomas left for active service should fall upon Dr., now Major, Rows, who perhaps more than

any other person has laboured for the establishment of clinics and special hospitals of this kind.

The Moss Side Hospital, Maghull, accommodates some 280 patients housed in six pavilions. They suffer from all kinds of nervous maladies arising in the course of active service. Two-thirds of the patients are nursed entirely by women nurses. As the patients are soldiers, and have been drafted from Netley in the ordinary way, no difficulties arise as to legal status.

It is satisfactory to find that the medical staff is relatively strong, exceeding that of almost any similar institution. For the 280 patients there are seven whole-time medical officers, most of whom are men with great experience in this department of medicine. This is not the place to refer to the enthusiastic work of these gentlemen; no doubt in due course reports will be published. Yet I may be permitted to say that a recent visit to this hospital yielded me great satisfaction in two directions. First, that our soldiers shaken or disturbed in mind in the course of their duty are receiving the best and most skilful treatment that modern psychiatry can provide; and secondly, that a hospital already is in being which illustrates what might and should be done throughout the country for those threatened with mental failure and on the verge of insanity.

When we consider the problem of securing effective treatment for those in a position to pay for it the difficulties are not greatly reduced. No doubt patients whose conduct is not disorderly and who are not actively dangerous to themselves and others can obtain treatment in a number of different ways. Nursing homes, private lodgings, doctors' houses, special arrangements in their own homes, hydropathics, are open to them, as well as foreign travel and health resorts of all kinds. All these are of value in certain cases, but it will be generally admitted that there is a large residuum of cases which cannot be nursed to the best advantage outside a special hospital. Under the existing state of the law only institutions available are the recognized institutions for the insane, and these are not considered until almost everything else has been tried. It is consequently not far wrong to assert that the richer the patient the less likely is treatment in a special hospital to be adopted early in the course of the malady. Two deeply rooted prejudices cannot be ignored. There is, firstly, the dread of asylums and of any association with the insane, and, secondly, the objection to certificates. It is useless to say that these prejudices are due to ignorance, and need not be seriously considered, for they are strongly entrenched in all grades of society, medical practitioners and others with personal knowledge of the subject not exempted. This dread does not seem to arise merely from the thought that insanity brings a stigma upon a family through the disclosure of hereditary weakness, although no doubt the incidence of insanity is feared from this point of view. Nor do I think that it is due to an idea that mental disorder is specially terrible owing to the possibility that the higher and nobler qualities of mankind may be lost. I have met persons otherwise level-headed who cannot be persuaded to enter the grounds of an asylum. Not infrequently all sorts of excuses are made to escape the duty of visiting a relative who is under care, and so real is the danger of neglect that the State has decreed that no order for reception shall be granted without an undertaking that the patient shall be visited at least every six months.

It seems clear to me that these prejudices are independent of any reasoned explanation and are due to traditional beliefs. That our lives are greatly influenced by these is not open to doubt. Superstitious notions are implanted in our minds from our earliest years. Old wives' tales are repeated by servants and casual visitors, and are eagerly listened to by the young, and it takes many years to destroy their influence, and, indeed, in many of us beliefs so acquired form a permanent part of our mental furniture. The origin of many such notions may be lost entirely, but I think in the present case these prejudices about insanity are directly descended from mediæval beliefs about evil spirits and demoniacal possession. The thought that madness is due to a possession is, moreover, strengthened by the way in which Scripture is taught. "He hath a devil and is mad" indicates plainly the current view of insanity at the beginning of the Christian era, which view exists to this

day in the East and has certainly not died out in our own country. I would therefore suggest that the unreasoning prejudice against the insane, the supposed stigma that attaches to insanity, really at bottom depends upon a survival of the superstition that mental disease is due to evil spirits. In other words, there is thought to be something uncanny, mysterious, and supernatural about disorders of the mind, and this gives rise to unreasoning dread of any association with insane persons.

I know of no remedy for these erroneous and cruel views but the gradual enlightenment of the public. I incline to think our asylums and hospitals are too much cut off from the world at large, and that too little is known of their patients and their doings.

Unfortunately the general practitioner is generally not in a position to assist in this enlightenment. Very few of them have lived in asylums, and the teaching of medical students is hardly calculated to give them much knowledge of the insane, though they may learn something of insanity. The situation is aggravated by asylum practice being divorced from general medicine to a large extent, and it is quite common for an experienced medical man to say without apology that he knows nothing whatever about lunacy. When the special hospitals already referred to are established we may confidently assume that they will become centres of education in all matters relating to insanity, and at the same time provide vastly better facilities for the instruction of medical students than exist at present.

Apart from the prejudices in relation to asylums, we must not forget that there is a widespread belief that association with other patients is itself injurious. No doubt there are some patients who do better in single care under domestic surroundings away from doctors and nurses and other patients, and it is quite true that in the best arranged institutions an observant and sensitive patient cannot but see much that is painful; nevertheless, I have never found any real hurt from this, and sometimes it is positively helpful to find that others are suffering in a similar way. Experience shows quite clearly that the association of patients is, broadly speaking, helpful rather than the reverse, so long as the size or the resources of the institution admit of satisfactory classification.

The other prejudice, the objection to certificates, is in many cases not without justification. I do not wish to defend those who resent certificates because they state an unpleasant and unwelcome truth, and who would close their eyes to the facts of the case. Such persons fail to see the immense value of the lunacy laws, and that to conceal the existence of insanity is to deprive persons unable to look after themselves of the protection of the King or the representatives of the Crown.

I therefore admit at once that persons who break down mentally cannot be treated in exactly the same way as those suffering from an ordinary ailment. Indeed, I am not sure that the law is strict enough in reference to established insanity, seeing that so many persons are treated privately without proper supervision. However this may be, it seems to be unjust in the extreme that persons with ill-defined or very temporary attacks of mental disorder should be unable to obtain effective treatment without being certified as of unsound mind.

Voluntary treatment can, it is true, be obtained in hospitals and licensed houses, and this is of the utmost value in many cases, and should be possible in all asylums. Yet experience shows that treatment on this basis is insufficient, for the reason that many patients most needing temporary care are unable to decide for themselves what treatment should be adopted.

Let me briefly illustrate the difficulties. Some years ago the managing director of a flourishing business was attacked by melancholia, and tried to throw himself out of a train. He was certified and sent to a hospital for the insane, but recovered in a week. On his discharge at the end of a month he found that another had been appointed to his post, and to this no exception could be taken, as the articles of association of his company contained the usual clause that a director who becomes insane is at once disqualified. Again, a medical man in large practice suddenly became seriously depressed with delusions of persecution. It was clear that special care was imperative, and he was certified and sent to a licensed house, where he recovered very quickly. In default of

any other procedure nothing else could have been done, and yet I could not but sympathize with his conviction that such a step ought to have been avoided.

Certificates are also objected to on account of the attendant disturbance of business affairs. A professional man holding several appointments suddenly lost his memory of recent events, although retaining his general intelligence. His affairs were managed by his son, who was his partner, to the satisfaction of every one. Unfortunately, as so frequently happens, the old gentleman became restless at night, and care in an institution was advised. He was quite willing to go away voluntarily, but owing to his defective memory he could hardly remain as a voluntary patient, not being able to remember his position. When certificates were proposed it transpired that they would mean a loss of £400 a year, as his appointments would have to be given up; and, moreover, the power of attorney given to his son would become invalid, so that his whole business affairs would be disorganized. In such a case in all probability a receiver would soon become necessary; yet it seems altogether wrong that such a man should at once be exposed to these disabilities when he breaks down mentally, seeing that he might be away from business for six months, and incapacitated in body and mind, by typhoid fever without any difficulties of this kind.

I have not forgotten a favourite legal maxim, "Hard cases make bad law"—an excuse for injustice which is not very convincing. But the difficulties I have mentioned are not exceptional. It is no exaggeration to say that in at least one quarter of the cases I see in consultation the impossibility of securing effective temporary care, apart from certificates, is a serious matter. One of my case-books contains 239 consecutive cases seen in consultation, and of these 79, or 33 per cent., needed the special care referred to. In a recent acute case it is obviously desirable that asylum care should not be hastily undertaken, and indeed it is only fair to the patient that it should be delayed until the real nature of the case can be made out, and yet at present for rich and poor alike there are no properly equipped homes or sanatoriums where treatment can be given temporarily under favourable conditions.

Directly we begin to consider the possibility of establishing any such hospital we are beset with difficulties. The hospital which I picture in my mind is affiliated to the general hospital of the district; it has a large garden, in which are several pavilions. There is both a resident and a non-resident medical staff, which collectively is able to attack mental disease from all sides. The patients would for the most part be received on a voluntary basis, though, if needful, detention for defined periods would be possible, whilst the equipment would include all appliances likely to assist in diagnosis and treatment.

Such public hospitals would usually, as in Boston and Munich, be municipal institutions, and in the long run they would prove to be a good investment of public money, owing to the large amount of insanity they would prevent.

The establishment of similar institutions for paying patients presents even greater difficulties, unless there is some change in the law. In existing circumstances there would be constant risk of prosecution under the 315th Section of the Lunacy Act, as it would be impossible to prevent patients stepping over the border, and the utility of such a home or sanatorium would be lost if such persons could not temporarily be detained. Hitherto proposals to enlarge existing powers of compulsory detention have been viewed with suspicion by a large section of the public, and several bills designed to meet these difficulties have been rejected by Parliament.

The legal profession views with grave concern any interference with the liberty of the subject, although a lawyer friend of mine, in discussing this matter in relation to the present state of public affairs, cynically remarked that "if there are any liberties left in England, now's the time to remove them."

This problem will not be solved until it is clearly recognized that there is no defined line between sanity and insanity, but rather a vague intermediate zone, and that those who enter this region urgently need the best possible treatment. I would therefore plead for legal recognition of this intermediate borderland state, and, as some power of detention in certain cases is required, safeguards must be provided that will disarm criticism.

The greatest of all safeguards is the absence of any concealment, and at once we find that in this matter public and private interests clash. It is only reasonable that families should not wish the state of an afflicted member to be generally known, and patients temporarily suffering from mania, or indeed any form of insanity, are entitled to privacy. Consequently the wards of the psychiatric hospital cannot be open to the public in quite the same way as those of a general hospital.

The suggestion has been made that the law should recognize a new class of patient suffering from undeveloped insanity, who under certain conditions might be detained for a stated period. How long this should be is a matter for discussion; probably a month in the first place would be sufficient, to be extended with the approval of the supervising authority for a further period of not more than five months. The names of all such patients would doubtless be notified to the Board of Control, and they might be styled "notified" patients, as distinct from voluntary boarders on the one hand and certified patients on the other.

Keeping in view the chief safeguard—absence of concealment—I would suggest that periodic reports of every case should be sent to the Board of Control, and that it should be obligatory to keep records for inspection by visiting members of the Board. I see no reason why the correspondence of "notified" patients should be interfered with. Further, no patient should be detained under this provision except in homes or institutions approved by the Board of Control.

All such approved homes should be inspected regularly by visitors nominated by the Board of Control, or possibly by county councils; if these visitors reported unfavourably in any individual case, the patient would have to be discharged or certified.

I see, moreover, no reason why notified patients should not be received in any recognized institution of the insane, or into special departments of such which the Board of Control might consider suitable for the purpose.

This amendment of the law would prevent evasion and the illegal detention of patients in lodgings or in private care that is now notorious. What has been termed the "back-parlour treatment" of the insane would be abandoned as far as recent incipient cases are concerned, and it is these that are of the most consequence. Special hospitals, such as the Maudsley Hospital, and psychiatric clinics generally, would be able to treat to recovery a large number of patients who must now be certified.

These two recommendations—the establishment of special hospitals or sanatoriums for the treatment of medical disorders in their early stages, and the modification of the law required to render such treatment effective—are, in my opinion, matters of the utmost importance. Not only will they do much to prevent declared insanity, but these special hospitals will become centres of enlightenment, and so disperse the unhappy prejudices and errors that surround the subject, whilst the larger clinics associated with universities will afford students opportunities of studying practical psychiatry which they do not now possess.

REFERENCE.

¹ *Boston Medical and Surgical Journal*, September, 1913.

PERIPHERAL SHOCK AND ITS CENTRAL EFFECTS.

By J. LYNN THOMAS, C.B., F.R.C.S.,

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THE admirable paper in the *BRITISH MEDICAL JOURNAL* of December 11th, 1915, by Dr. F. W. Mott, on "The psychic mechanism of the voice in relation to the emotions," reminds me of a remarkable case of deaf-mutism which came under my observation some years ago. This condition existed in a collier for about seven years, consequent upon receiving a "shock" in an underground colliery explosion. He was eventually cured by another shock during a second colliery explosion underground; he regretted that he never recovered the power of singing, as he had belonged to a choir before the first accident, and was incapable of rejoining it on that account, although he still enjoyed listening to music.

After his recovery this patient came to a surgical ward