

THE
JOURNAL OF MENTAL SCIENCE
[*Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland.*]

No. 274 [NEW SERIES
No. 238.]

JULY, 1920.

VOL. LXVI.

Part I.—Original Articles.

The First Maudsley Lecture, delivered by Sir JAMES CRICHTON-BROWNE, D.Sc.Leeds, M.D.Edin., Hon. LL.D.St.And. and Aberd., F.R.S.Lond. and Edin., Lord Chancellor's Visitor in Lunacy, at the Quarterly Meeting of the Medico-Psychological Association of Great Britain and Ireland, held at the House of the Royal Society of Medicine, London, on May 20th, 1920.

GENTLEMEN,—I feel I owe the honour of having been selected to deliver this first Maudsley Lecture, not to any special fitness I possess to expone any of the more recent developments of that branch of medicine, the furtherance of which the lectureship is intended to promote, but to the fact that I am almost the last survivor of those who were associated with the founder of the lectureship in the early days of his professional career. While still a student at the University, Maudsley was revealed to me in a brilliant essay on Edgar Allan Poe, which was published in the *Journal of Mental Science* in April, 1860, and which, although too scathing and denunciatory of the ill-fated poet, as it now appears, was so rich in insight, originality and happy similitudes as to betoken unmistakably "the lighting of another taper at Heaven," which was at that time Maudsley's way of describing the arrival of a new man of genius on the scene. A few years later I made Maudsley's personal acquaintance at the table of that gracefully-refined and highly-gifted physician and philanthropist, Dr. John Conolly, who afterwards became his father-in-law, and in the years following I can recall many memorable meetings with him at "The Lawn," at Hanwell, in his rooms in Queen Anne Street, and in a restaurant in Soho, where, over frugal meals, he and I and Lockhart Robertson, and Broadbent and Harrington Tuke and Baron Mundy of Moravia, the zealous advocate of non-sequestration and family life and free air for the insane, held high discourse and adumbrated projects for the future of lunacy, some

of which have taken shape since then, while others remain unrealised and perhaps unrealisable.

Maudsley's pathway and mine diverged physically after these racy and roseate London days, when my lot was cast in the provinces for a decade, and they diverged spiritually also, for he abandoned the teleological platform on which we both started and advanced into scientific materialism and agnosticism, where I could not then follow him. But whatever differences of conviction and outlook separated us, our friendship remained unbroken to the end. I cannot claim to have been one of what was, I believe, the very small circle of his intimates, but I was never estranged from him by quarrel or misunderstanding, and the admiration and esteem in which I held him never for a moment paled.

I have not the material for even a biographical sketch of Maudsley if I desired to present one to you, and any such sketch would be of only ephemeral and partial interest, for we shall, I trust, have, one of these days, an adequate record of a life prosperous and uneventful, but rich in fruitful endeavour and leaving a distinctive mark on the philosophical history of the latter half of the nineteenth century. An appreciation of Maudsley's achievements such as the time-limit here would permit is still less feasible, and would be somewhat superfluous after the generous and sympathetic but discriminating obituary notices which we owe to Sir George Savage and Sir Frederick Mott, and would, moreover, be out of place, for I am sure the last thing the donor of this lectureship, retiring and shy of publicity as he was, would have wished would be that its inaugural discourse should be devoted to any elaborate eulogy of himself. Let me just say of him that in every situation in life, in the domestic circle, in society, in the lecture-room, by the bedside and in the witness-box he "gave the world assurance of a man," and of a man of a striking and unique personality, of keen and decisive intellect, and of a courageous and independent temper. Of tough Yorkshire fibre, deftly woven, Maudsley had in him a dash of the gloom and austerity of "Wuthering Heights," but that was lit up by the sunshine of a liberal culture and by genuine goodness of heart. He was cynical and sententious betimes, but the tartness of his tongue was belied by his genial smile, and the pessimism he preached was discounted by the charity he practised. Enemies he had, for he had no tolerance of fools, and was swift to castigate presumption and pretence. Dissenters from his teaching there were and must be many, for the sanguine revolt from the cheerless creed of man's helplessness and Nature's indifference, but on all hands he must be acknowledged as a force making for rectitude that powerfully affected the time in which he lived and that must far into the future stimulate the thoughts of man.

To discuss Maudsley's contributions to the physiology and pathology

of mind, which must constitute his great claim on the consideration of posterity, to disentangle what in these he derived from others—such as Herbert Spencer and Laycock and Van der Kolk and Morel and Darwin and Carlyle and Emerson—from his own acute observations and cogent reflections, would be an intricate task upon which I do not propose to enter, but in connection with the whole legacy he has bequeathed to mankind I would wish to say a few words about that portion of it which appertains to this lectureship and to the hospital which is to bear his name. It was no monumental craving, I am sure, that moved him to the endowment of either the one or the other, but an earnest desire to advance the interests of that special department of medicine which he had served so faithfully and to reduce the mass of human suffering.

In the lecture, which is to be alternately scientific and popular, he has devised a much-needed means of maintaining and extending the scope and usefulness of the Medico-Psychological Association, for the building up of which he did so much, and of conveying to those who stand outside our specialty and to the public generally some little knowledge of the work it is accomplishing. The nature of the medium in which we work and the legal restrictions under which that work is carried on have in the past kept us to some extent aloof from the main body of our profession, and but little has been known by the world at large of the polity of those somewhat insulated “cities of the simple” that now in such numbers stud the land. The consequence is that gross misconceptions of our status and performances are prevalent in some quarters, misconceptions to which we have ourselves in some measure contributed by our proclamation of grievances and calls for reforms, and to which, perhaps, the Maudsley lecture may prove henceforth an annual antidote.

Quite recently, in a book that has obtained wide circulation, Prof. Eliot Smith has drawn a painful picture of our situation. We are, it appears, backward and negligent to a shocking degree. The ignorance of our asylum medical officers of up-to-date knowledge in psychiatry is deplorable. Research is non-existent, our text-books are contemptible, our system of treatment does not conduce to recovery, and America, France, Germany and Switzerland have long ago faced the problems of mental disease which we have shirked.

Now Prof. Eliot Smith is, I know, zealous of many good works, and is no doubt eager to promote the best interests of the insane, but his attack on our specialty is, I venture to say, unjust and ill-informed, and it is evident that before making it he has not fully acquainted himself with the history of psychological medicine or with the writings of the founder of this lectureship and of contemporary alienists. I would recommend to him a careful study of the sixty-six volumes of the

Journal of Mental Science, and I am confident he will rise from their perusal satisfied that asylum medical officers have not lagged behind their profession generally, but have, in proportion to their number, and having regard to the arduous and time-absorbing routine duties imposed on them, produced more than their fair quota of sound, painstaking, progressive, scientific work. As regards the humane treatment of the insane, the nature of the asylum provision made for them, the investigation of their condition—psychical and corporeal—and the employment of remedies, medical and moral, for their relief, this country has nothing to fear from comparison with any other. In every march forward she has led the van. We are exhorted to look with envy at the spacious and well-appointed research laboratories attached to some asylums in Germany, and no doubt in that direction we have been somewhat distanced by developments in Germany and the United States, but it should be borne in mind that the first asylum research laboratory in Europe—small and humble it was, but still a research laboratory, in which experiments of high and permanent value were conducted—was established in connection with an asylum in England more than fifty years ago. Our Scottish asylums have been co-operating in laboratory work for thirty years, and in several asylums in England and Wales well-equipped laboratories exist which, now that the war is over, may be expected to yield a rich harvest.

No doubt in our department changes and reforms are necessary, but we have been the first to acknowledge it and to press for action. Greater freedom is needed in meeting the manifold requirements of a protean disease. Some archaic legal fetters should be struck off, the medical staff in some of our large asylums should be reinforced and more liberally remunerated, and, above all, facilities should be afforded for the early treatment of cases of mental disorder, incipient in character or of recent origin. But the necessity for early treatment under such circumstances, the advantage of which has been so conspicuously demonstrated in the psycho-neuroses of the war, is no new discovery. You can scarcely open any asylum report for the last fifty years without finding in it expressions of regret that the patients admitted have not been more promptly dealt with, and statistical evidence that the prospect of recovery is in the inverse ratio of the duration of the insanity prior to removal to the asylum. There can be no question that the legal formalities connected with asylum treatment, intended for the protection of the liberty of the subject, have led to some increase of insanity, or rather accumulation of lunatics. There has been a natural shrinking from certification, magisterial inspection and registration as a lunatic or person of unsound mind, and from all the vexatious limitations that attend detention in an asylum, with the stigma that it is supposed to leave behind it, and so the evil day has been

in many cases postponed as long as possible ; the golden opportunity has been allowed to slip past unimproved, and what might have been a transitory illness has been converted into a permanent infirmity.

It was in the hope of avoiding such calamities, and of furnishing opportunities for the early treatment of cases of acute and recent mental disorder, while at the same time promoting pathological investigations and the education of medical students and medical practitioners in psychology, that Maudsley generously supplied the funds for the hospital which now stands on Denmark Hill, admirably equipped, and happily under the sagacious tutelage of Sir Frederick Mott. It was in 1907 that the scheme occurred to him, but long before that the want of such an institution had been felt and insisted on, and I hope I shall not be regarded as egotistical if, in order to show that we have not been as blind and sluggish as is alleged, I quote a passage from the Presidential address which I delivered to the Medical Society of London in October, 1895 : " For my own part," I said, " my hopes are centred in the establishment in or near London of one or more, not asylums, but genuine hospitals for mental disease. These hospitals would be organised like ordinary general hospitals, would have a staff of visiting and assistant physicians, and of consulting surgeons, and specialists in diseases of the eye and ear and in those peculiar to women, and of resident medical officers and clinical clerks. Attached to them there would be an out-patients' department and a school of medical psychology with laboratories and museums, in which systematic investigation, teaching and demonstration would be carried on. A few such hospitals—not merely 'monasteries for the mad' or convenient shoots for human rubbish, but real mental hospitals—would exercise at once a salutary and invigorating effect on the medico-psychological specialty and bring it back into closer correspondence with the medical profession as a whole."

That vision has in part materialised in the Maudsley Hospital, and the Maudsley Hospital has set an example which will be followed under the more liberal and elastic lunacy law dispensation which is undoubtedly in store for us. Hospitals like it will spring up in our large towns, and psychiatric clinics will be established in connection with our general hospitals, where sufferers from mild and larval insanity may receive skilled treatment in conjunction with patients suffering from purely nervous affections without incurring the odium of having been in an asylum. There will be an extension of the out-patient department in our public asylums and a perfecting of their clinical apparatus, for it is in them, however successful early hospital treatment may be, that an enormous majority of the insane will still be lodged and treated.

That early treatment will be successful in intercepting some part of the stream of the mentally deranged that now flows on so copiously to

our asylums cannot be doubted, but exaggerated notions of the benefits that will accrue from it should not be entertained. The main part of the stream setting towards asylums consists of congenital idiots and imbeciles, of general paralytics and chronic epileptics, of confirmed cases of dementia præcox or paranoia, and of patients labouring under organic and senile dementia, for whom treatment, early or late, will be of little avail, and there must always be included in that stream a certain proportion of recent and acute cases in which dangerous propensities render immediate admission to an asylum necessary. Already too recent and acute mental disorders occurring in persons belonging to the upper and middle ranks have had the benefit of early treatment and highly skilled advice by specialist physicians, while in all ranks such disorders have been and are successfully grappled with to some extent by the capable general practitioner, who nowadays knows enough of insanity not to be afraid to touch it, and who in the near future, it is to be hoped, will be so educated as to be able to deal with it *secundum artem*. Altogether the relief afforded by early treatment to the pressure on our asylums will not be as great as has perhaps been anticipated. The special mental hospitals, psychiatric clinics and mental nursing homes that come into being under the new *régime* will be auxiliary to our asylums, but they can in no degree supersede them, and it would be a misfortune if they derogated in any way from the reputation of our asylums as curative institutions. Our asylums must become hospitals more and more, and more and more there must be enlisted in their service men of high professional and scientific attainments. There will always be scope in them for the exercise of the finest qualities of head and heart, of expert discernment, and of the healing art, and for experimental inquiry as interesting and promising as that pursued in psychiatric laboratories. Abundance of fresh material is ever pouring into them, and there is, unhappily, piled up in them a huge heap of human *débris* that will reward sifting over from time to time. Nothing in my official experience has struck me more than the way in which cases of insanity of long standing and labelled "chronic" have unexpectedly recovered. And apart from any prospect of recovery, chronic cases of insanity are deserving of scientific attention and ministrations. "It is not beneath the dignity of a medical man," to quote the words of Macaulay, "to contrive an improved garden chair for a valetudinarian, to devise some new way of rendering his medicine more palatable, to invent repasts which he might enjoy, and pillows on which he might sleep more soundly: and this though there might not be the smallest hope that the mind of the poor invalid would ever rise to the contemplation of the ideal beautiful and the ideal good."

With the view of insuring that our asylums shall, to the utmost,

fulfil their diverse functions, it is proposed that henceforth those holding in them the higher medical posts should possess a diploma in psychological medicine representing a curriculum of special studies and an examination thereon. The proposal has much to recommend it, but I confess I hope it will not be too rigidly interpreted. In general medicine the asylum medical officer cannot be too proficient, and in the anatomy, physiology, and pathology of the nervous system he must have more than the current modicum of knowledge, but as regards psychiatry in the technical sense I am not quite sure that any great length of time should be devoted to its academic study outside the asylum. Of course a general acquaintance with its terms and methods is desirable, but everyone, lay or medical, acquires some acquaintance with psychology in his passage through life, and it is in the wards of the asylum, in the school of experience, that a man must pick up his practical psychiatry. In the treatment of insanity—in asylums at any rate—it is the physical conditions underlying the disease and its corporeal concomitants that should receive primary attention, and any man endowed with *nous* and sympathy, the universal solvent, will soon in his practice acquire a competent acquaintance with mental operations in their normal and abnormal manifestations. I can conceive of a man learned in all the wisdom of the psychologists who would be a less successful asylum medical officer than one with quick insight, wholesome imagination and vivid sympathy who altogether ignored Freud and Hegel. There is a *tactus eruditus* in handling the morbid mind that only personal practice can confer. Laboratory methods, as Sir James Mackenzie has pointed out in reference to bodily disease, invaluable as they are in their proper place, can never, in clinical medicine, supplant the use of the unaided but trained senses, and may even lead astray, and so in mental medicine psycho-analytical procedures in their more intricate applications, interesting and suggestive as they are, can never, I believe, yield that all-round information and pilotage which methods of observation, long in use, can, when diligently employed, supply, and may even involve the oversight of significant facts.

That the adoption in our asylums of every new means of alleviation and cure which modern science suggests, and in our mental hospitals and psychiatric clinics of prompt and efficient treatment in early cases of mental trouble, will have eminently beneficial results cannot be questioned, but it is, as I have hinted, to neither of these that we must look for a material reduction in the load of lunacy under which we groan. In order to secure that we must apply ourselves to the conditions out of which lunacy grows, and by the curtailment or removal of these prevent its occurrence.

The recently published report upon the physical examination of men of military age by National Service Medical Boards during the last year

of the war presents us with what the Committee themselves describe as "ugly facts," revealing the altogether unexpected extent of the inroads upon the health and physique of our manhood which the progress of civilisation in the nineteenth century has brought in its train. Of the 2,425,184 men examined only 871,769, or 36 *per cent.*, were placed in Grade 1, corresponding with a normal and very moderate standard of health and strength for their age, while 1,553,415, or 64 *per cent.*, were classed in the three lower grades, corresponding with different degrees of physical shortcoming or defect down to permanent unfitness.

The causes of unfitness enumerated in the report, which range from poor physique and hammer-toe up to advanced tuberculousis and valvular heart disease, include insanity and mental defect, but afford no indication of the prevalence of these in the adult population. The certificated insane and the recognised mentally defective were, of course, excluded from the purview of the report, and it is notorious that considerable numbers of lunatics and imbeciles did pass into the army undetected. Among the volunteers who flocked to the colours in the enthusiasm of the early days of the war were many men of unsound mind who slipped through the then cursory examination, some of whom "foremost fighting fell," and many of whom have been sent back to find their ultimate destination in our asylums; and amongst the men who passed through the stricter scrutiny established under the Army Service Acts were many who laboured under disabling mental deficiency. The examination of the National Service Medical Boards was essentially physical, and practically no mental tests were applied except where signs of mental weakness were ostensible, and then the tests consisted in ascertaining what standard at school had been reached and what wages had been earned, or by setting a simple sum in arithmetic. I believe that many mentally deficient lads of fair physique, able to do everything directed by the doctor, were graded 1, until there came a letter of expostulation from a father or a belated medical certificate relating facts necessitating rejection.

Had an examination been held into the mental condition of the men coming before the National Service Medical Boards, at all comparable in thoroughness and minuteness with that instituted into their physical condition, and had that examination been conducted by experts, it would, I am confident, have shown an amount of mental unfitness in our adult male population—that is to say, in the sanest section of our community—that would be startling, and would corroborate the finding of the Ministry of National Service Committee that a grave emergency exists. Were a psycho-census of the whole people practicable we should undoubtedly have brought to light in all classes of society an unsurmised amount of mental deficiency or disorder of one kind or another, and a wide diffusion of that neurotic temperament that is the soil in which

the neuroses and psychoses alike grow. Our mental grade 1 in such a census, including average intelligence, the absence of minor mental defects and general fitness to meet the obligations of life, would be small and select, and the other grades, corresponding with partial fitness only, would be made up of heterogeneous masses of mental inefficiency very unequally distributed in different areas of the country and industrial centres.

We need not, however, wait for any psycho-census before insisting on measures being taken for the mental betterment of our people. The physical returns already before us are sufficient to warrant an immediate resort to these. Even from the returns of stature alone we might infer, having regard to the co-relation between height and mental ability, that there is some general deterioration of mental energy, and the lists of the causes for which men were rejected or low-graded reveal a multiplicity of morbid physical conditions with which mental disability is associated or on which it will become engrafted. It is impossible to regard either the standards of height or of health as satisfactory, and we may well be surprised, to quote the words of the committee, "that with human material of such physique it was found possible to create the armies which overthrew the Germans and proved invincible in every theatre of the war." But the spirit of the race which made that possible deserves that no efforts should be spared to ameliorate the conditions which have brought about such deplorable effects upon its health and physique.

One of the compensations we have for the war, with all its horrors and anguish, is the discovery of our imperfections and of the risks we have been running, the realisation of the urgent need of sanitary reform, and the demonstration—the absolute demonstration—as set forth in Sir John Goodwin's recent Chadwick Lectures, of the infallible success of sanitary precautions scientifically employed. We are awake at last, and under the Ministry of Health, with its medical head, prompt steps will be taken for the better housing of our people, with the re-constitution of family life that that will make possible, for their better and unadulterated feeding, and for their physical training and protection against over-fatigue, and for the restriction of the ravages of preventable disease, and especially of venereal disease, which will all in course of time be reflected in improvement in their mental vigour and in their immunisation from certain forms of mental disease. These are comprehensive hygienic measures of the need of which every member of our department is profoundly convinced, and in the carrying out of which they will all in their own sphere zealously co-operate; but there are other hygienic measures of a less material but still momentous nature with which they are even more closely concerned, and on which the founder of this Lectureship persistently dwelt. "The prevention

of insanity when possible," wrote Maudsley, "is a better thing than its cure, which is often impossible." And the two principal ways for its prevention he laid down are to hinder its propagation from generation to generation, and to employ that training and culture which is best fitted to repress and suppress its germ in one who is predisposed to it. Eugenics and education: these are the two great safeguards against mental degeneration, disease, and decay.

An early eugenist, even before Galton invented the word, Maudsley strongly advocated the main principles of the science. "Were it the rule," he said, "in the marriage mart, as in the horse mart, to require a warranty of soundness, either many marriages would not take place which now take place, or many actions for breach of warranty would lie." "In the breeding of animals," he said, "we should unhesitatingly discard stock wanting in the qualities which are the best characteristics of the species. But mental balance and integrity is the highest attribute of man, therefore all manifesting any lack of it should be for breeding purposes discarded." But to this sweeping generalisation he did not consistently adhere. A believer in the transmission of acquired habits, and holding that mankind is indebted for much of its progress to genius, which has almost invariably emerged in families in which there is a predisposition to insanity, he fell into what we should now regard as grave error. "To forbid the marriage of a person sprung from an insanely disposed family," he said, "might be to deprive the world of singular genius or talent, and so be an irreparable injury to the race of men. Let it be supposed that a person will have children, one or more of whom will go mad; it might still happen that the world would gain more by one of the children who did not go mad than it would lose by those who did. In that case, would not this marriage, grievous as its consequences might be to individuals, be amply justified by the good done to the race? Nature does not take much account of the individual or his sufferings; it is singularly lavish in the production and destruction of life. Of all the multitude of living germs produced, but an infinitesimal proportion reaches maturity. If, then, one man of genius were produced at the cost of one thousand or fifty thousand insane persons, the result might be a compensation for the terrible cost."

But the cost, we will now say, would be a good deal too high. In the case assumed by Maudsley, the production of the mad folks would be certain, but the appearance of the genius would be problematical; genius is a rare commodity, and to encourage the marriage of persons strongly predisposed to insanity on the off-chance of getting one genius out of fifty thousand lunatics would be an exceedingly rash speculation. The destruction of superfluous life by Nature takes place for the most part at an early stage of existence. It is the living germs that are sacrificed, and that sacrifice goes on abundantly in human beings; but

lunatics are matured forms, and to sacrifice thousands of them to lunacy in order to secure even a first-class genius would be ruinous.

Apart from this bit of homage to genius, Maudsley soundly enumerates eugenic principles. He attaches primary importance to the insane diathesis or an inborn tendency to emotivity which has played so conspicuous a part in our war psychoses, he distinguishes the several varieties of the neuroses which differ in degree and in liability to hereditary transmission, the transformations which they undergo in passing from one generation to another, and their tendency to reappear after skipping a generation, and he does all this with a charm of style and a wealth of metaphor that make his teaching captivating and impressive.

Since Maudsley's time eugenics have advanced, and it is possible now to speak positively on points which he left indefinite, but there is still infinitely much to be done before a trustworthy code for practical guidance can be constructed. It is still very often a perplexing problem to know what to allow or forbid in the marriage mart. But the most valuable contributions to our knowledge of eugenics in human relations have come from our lunatic asylums and from the study of inebriates and criminals, and it is to our lunatic asylums that we must look for further guidance, now urgently required.

As regards mental deficiency, thanks to the labours of the Royal Commission and to subsequent legislation, there has been reached some popular recognition of the risks run and the restrictions and segregation necessary, but beyond that all is licence and prohibition is unknown. In the cultivated classes it is rarely that persons contemplating union seek medical advice, and the proletariat marry and are given in marriage without a thought of their physical or mental fitness for parentage. During the war there has been much precipitate and indiscriminate matrimony of a very short-sighted description, and altogether it would be Utopian to hope for any speedy diminution of insanity due to increased eugenic wisdom. But the eugenic propaganda should be more active than ever, and the public mind should be disabused of the notion that the doctors are the uncompromising opponents of marriage wherever any tendency to insanity exists on either side. It is theirs to weigh probabilities, and as often to abolish unnecessary apprehensions as to warn against prospective evils. I daresay it has happened to many of us to be consulted in fear and trembling by the son or daughter of a general paralytic, born long before the infection leading up to that disease was contracted, who would live for years haunted by misgivings but for the assurance which the doctor is able to give.

As regards education in connection with the prevention of insanity, Maudsley took a broad and judicious view. "There are not many

natures predisposed to insanity," he said, "but might be saved from it were they placed in their earliest days in exactly those circumstances and subjected to exactly that training most fitted to counteract the innate infirmity." And we may go further than that and affirm that there are not many natures, whether predisposed to insanity or not, that may not be fortified by genuine education against the attacks of those malign agencies that are productive of mental disease, and that are encountered by all men and women in their journeying through life. All high-grade alloy steels owe their strength and shock-resisting properties to scientific heat treatment, and so high-grade brains should owe their tensile strength and shock-resisting power to the scientific educational tempering they have undergone.

But scientific educational tempering which will brace the brain and steady the mind and prove protective against adverse influences is yet to come. Instruction we have had on the large scale, education to a limited extent, and while instruction has conferred upon the country enormous benefits, it has also been responsible for some disastrous consequences where it has over-strained immature feeble and under-nourished brains, or has tended, under hare-brained teachers, to unsettle these fundamental tenets of morality on which mental and social stability depend. The seeds of insanity have sometimes been sown in the school, and its first sproutings have taken place there unnoticed. "The loom of youth" has left nasty flaws and introduced distorted patterns into the fabrics it has woven and splendid opportunities of promoting mental hygiene in our gymnasias have been wasted, simply because our ruling educational authorities have in their self-sufficiency ignored psychology and cerebral physiology. We are, I think, becoming alive to that now. The attention bestowed on the bodily health of the children since the appointment of school medical officers has conduced to their mental welfare, and the weeding out of the feeble-minded has led to the recognition of different degrees of educability in those who are not technically defective.

But we are just entering on a new era in education and again we have to thank the war for a drastic change. The new Education Act has secured for this country, I believe, educational machinery superior to that of any nation in the world, and it remains for us to put that machinery to a right use. It has become obligatory to provide not only a sound elementary or preparatory education for all, but to follow that up by a further course, the type and extent of which, whether secondary, technical or university, will be determined, not by social standing or economic conditions, but in the first instance by the outlook and forethought of the parents, and in the second place by the ability and inclinations of the students themselves. Our educational activities are to be extended both upwards and downwards, and it is to be hoped

that in their every stage they will be aided by medical and psychological knowledge and experience.

In the nursery schools which are to be established some modifications of the methods of Dr. Montessori—a distinguished member of our specialty, whose system is founded on the work of another of our confrères, Seguin—will certainly be adopted, and will help on infantile mental evolution on right lines. In our elementary and secondary schools expert assistance will have to be sought in adapting the curriculum to brain growth, and in devising the best means of educating the inborn capacities and faculties in different groups of boys and girls at different ages, and in performing a duty in which schoolmasters and teachers now lamentably fail and for which they are perhaps incompetent, and that is to advise on the course of life and occupation for which the boy or girl leaving school is best suited by talent, attainments and predilection, and in which he or she will find most satisfaction and success, thus avoiding the danger to mental equilibrium which an uncongenial like-work entails. In schools of all ranks the health ideal must be set up, dislodging the old fetish of book learning with contempt for this vile body, as it used to be called, and in all, as in the home circle, there must be initiation into the mysteries of life and the inculcation of sound rules of wholesome living.

In order that education may be made fully effective in the prevention of insanity and of its neurasthenic and hysterical harbingers much study of the growing mind is still necessary, and that must be undertaken by psychological experts, who will no doubt employ psycho-analysis—but psycho-analysis of our old English type, chaste and approved, with no admixture of German frightfulness, and in constant conjunction with neuro-physiology. Much light has been thrown on the part which education in its widest sense may play in the prevention of insanity, and on the dangers that attend the lack of it—that is to say, the lack of trained disciplinary control of the higher over the lower centres in the nervous system by the psycho-neuroses which have arisen out of the war; and some light is, I believe, thrown by these on the mechanism of the brain and on its functional habits. Particularly interesting in this respect have been those rapid transitions from states of grave mental disorder and incapacity to restored power and normality which have been of such frequent occurrence, which have, more than any other mental war phenomena, interested the public, and which have, of course, corresponded with sudden brain changes.

Now sudden brain changes are no new things. They have been brought into prominence by the war, but they have occurred from time immemorial, and, just as has been the case during the war, many of the most striking instances recorded in the past have been in connection with speech and phonation. Herodotus tells us of a son of

Croesus who had never been known to speak, but who, at the siege of Sardis, was so overcome with astonishment at seeing the King, his father, in danger of being slain by a Persian soldier, that he exclaimed aloud, "Oh, man, kill not Croesus!" This was his first articulation, but thereafter he retained his faculty of speech as long as he lived. Dr. Wigan, the author of *The Duality of the Mind*, had a patient eight years old, sound in intellect but perfectly dumb, and whose family had abandoned all hope of curing him, who, seeing his father fall overboard from a boat in the Thames, called out aloud, "Oh, save him, save him!" and from that moment spoke with almost as much ease as his brothers. The late Dr. Charlton Bastian was consulted about a boy—the son of a leading barrister—who had fits in infancy, and who, when five years old, had not spoken a word. Two eminent physicians were consulted about his dumbness but could not help him, but before the end of another twelve months, on the occasion of an accident to one of his favourite toys, he suddenly exclaimed, "What a pity!" The same words could not be repeated, nor were others spoken for two weeks, but thereafter he began to talk and soon became exceedingly loquacious.

In cases like these there has been, we may presume, an arrest in cerebral adjustment in one of its compartments. The age at which articulate speech is acquired, or at which the receptive and motor neurons concerned in it establish communication, varies considerably in different individuals, and in cases such as those just mentioned had been from some cause indefinitely postponed. But a powerful emotional impulse, which is always of higher tension than a volition, ultimately forced its way through the prepared, but hitherto untrodden, pathway, and brought into relation those centres in which had been accumulated the memories of vocal sounds and those in which had been coordinated the complex movements of articulation. The channel, once thus opened up, afterwards remained pervious.

But much more frequent than postponed is interrupted functioning in certain cerebral tracts, and of that we have many different kinds, all of which have been copiously represented during and since the war. We have had not only mutism, but blindness, deafness, paralysis, contractures, amnesia and other mental derangements of instantaneous incursion and sometimes capable of instantaneous cure.

Of the war neuroses, due to shell-shock—the term is objected to, but I use it as short and convenient and now of pretty general acceptance—of the war-neuroses due to shell-shock, those in which there has been severe concussion or commotion cannot, of course, be terminated abruptly except in death. In such cases ending fatally there have been found minute scattered punctiform hæmorrhages into the periaventricular sheaths and substance of the brain similar to those seen in gas-poisoning,

but in cases in which the concussion, actual or aerial, has been less violent, and in which recovery has taken place, there has been what might be called bruising of the delicate brain tissues. Of all the lessons in neurology taught by the war there has been none more striking than that showing the tendency to natural recovery in nerves which have been concussed, compressed, lacerated, and even divided, their recovery being sometimes delayed as long as ten or twelve weeks after the injury. "After a time," says Dr. Macdonald, "regeneration commences in the lower end of the proximal segment, and new axon cylinders grow down to and beyond the point of section. In from four to six weeks there will be bundles of new axis cylinders at this point, and if they are firmly tapped with the finger the patient will experience tingling, or 'pins and needles,' in the skin over the dorsum of the foot. If the new axis cylinders succeed in growing down the trunk, or if the latter has only been contused and has preserved its anatomical continuity, then, *pari passu* with the growth of the axis cylinder, there occurs a downward extension of the distal tingling on percussion."

Now if similar recuperative changes occur in the neurons, axons, dendrites or nerve-fibres of the brain which has been subjected to contusion or compression, we can understand how gradual, although perhaps long-delayed, resumption of cerebral function takes place where that has been suspended more or less by shell-shock or other accident, as in cases of anergic stupor. Under such circumstances sudden recovery is not to be expected, either through reparative processes in injured parts or by transference of function to intact areas, but the state of matters is very different where there has been no coarse change in the cerebral mechanism, but only that subtle interference with activity which we call functional.

It is in cases of shell-shock where the physical injury has been slight, or in cases where there has been no physical injury but merely strain and stress, fatigue, or violent emotional perturbation, that there is interruption in cerebral communication amenable to the immediate re-establishment of continuity. It is in cases where psychogenesis has been at work that sudden brain changes are most often observed, and the psychogenetic conditions in such cases according to a certain school are ascribed to conflicts between the standards of civilisation and a body of imperfectly controlled and explosive forces in the subconscious mind, the most common conflict being that between a sense of duty and the instinct of self-preservation, immediate or deferred. We are told that the war let loose horribly cruel, sadistic murderous impulses which had been kept chained down during peace, and that is—as regards our men, at any rate—I would say, a gross libel and a cruel insult to those of us who have graves in France and Flanders to tend. As well say that the operating surgeon is stirred by a latent taste for butchery.

No doubt in the heat of battle the combative instinct and the instinct of pursuit asserted themselves ; no doubt now and again a man may have given way to the lust of cruelty ; but throughout the war I am confident the mass of our men, under the most harrowing and revolting circumstances, were animated and sustained by worthy motives and not by subterranean devilry. Their heroism, their endurance, their helpfulness in the field, their unaffected stories, their merry jests, the letters they wrote home, the poems they composed, prove this incontestably. Even the bayonet exercise they went through, which is singled out as pure savagery, was engaged in more, I believe, as a trial of skill than with a blood-thirsty intent. The herd-instinct of which we hear so much may have helped to hold them together and impose restraint, but it was patriotism pure and simple, and a sense of right and duty that enabled them to accommodate themselves to the new assemblage of strange and horribly trying circumstances in which they found themselves. Our men went over the top, or suffered long-drawn-out misery in the trenches, in no spirit of wanton aggression and brutality, but for self-defence, for the protection of those united to them by family affection, by friendly association, patriotic sentiment, or for righteous conviction. The flame of modern knight-errantry was lambent amongst them.

That fear, or rather the fight against fear, and the inhibition of its expression, have been largely accountable for our war psycho-neuroses is indubitable, but that in no way impugns the courage of our troops, for it is to be remembered that although the number of cases of psycho-neuroses has been large, the proportion of these to the number of men serving has been exceedingly small, and that in almost all the cases of psycho-neurosis thus originating there has been evidence of strong psychopathic tendencies having existed before the war, or of that neurotic temperament which corresponds with high susceptibility of the higher nerve centres and diminished control of the higher over the lower centres. The trend of modern civilisation seems to have been to an extension of the dominion of man's will in the higher or intellectual sphere, but to a reduction of its sway over lower corporeal levels. North-American Indians and negroes have a control over the reactions of painful and disagreeable stimuli which Europeans do not possess. They can endure without wincing torture which would cause in us the most lively manifestations of suffering, and I suppose it is true that the coloured races engaged in the war have suffered less from shell-shock than our men. Our great-grandfathers were probably harder and less sensitive than we are to-day. The kind of neuroticism induced by terror or protracted fear will depend on the direction in which will-power, owing to inborn disposition, over-indulgence or habit is weakest. The ascendancy of the will is not exerted along particular lines as it ought to be, and so subordinate centres break away from

authority and unduly assert themselves. Impulses which should be disciplined become insurgent, and there is not a conflict but a stampede. "The private," says Dr. Head, "develops a conversion hysteria and is carried from the danger-zone paralysed. The officer becomes the victim of an anxiety neurosis and commits suicide." An army medical officer, writing to the *Times*, says that "well-bred horses, like well-bred men, or shall we say highly organised men, suffer from shell-shock more than low-bred ones, though the same well-bred horses are infinitely more gallant than their low-bred companions."

There is a well-known anecdote related of some great general who read on a tombstone the inscription, "Here lies one who never knew fear," and upon this remarked—"Then that man can never have snuffed a candle with his fingers." The emotion of fear must have been felt by all who in the war have been exposed to imminent peril to life and limb, and who have at the same time seen around them wounds, death and boundless anguish and misery, but in the well-balanced mind the counteractives have been sufficient to hold the emotion in check. The terrified soldier, we have been told, is restrained by the thought that if he runs away he will be shot at dawn, but that is a crude explanation of the way in which terror has been resisted. The instinct of self-preservation is assuredly primary and paramount, but even in the lower animals it may be set aside by love of offspring or a rudimentary sense of herd obligation, and in man it is subordinate to a multiplicity of sentiments and ideas, ingrained or fluent, which hold up the hands of the will to resist its promptings, however insistent these may be. Martyrology is a chronicle of the triumph of religion over the self-saving instinct and heroism is invariably associated with its abnegation. Even inexcusable superstition is sustaining against it. "A man has a mascot," writes home *The Boy with the Guns*, "a charm of little worth though of great value to him, or a photograph or flower; he loses it and then loses his life. Such things are always happening. And the men must have something to believe in, and something tangible to express their belief—a sign, a symbol, something, a link between themselves and the inexpressible, between themselves and all that they cannot see or understand but which they feel exists." But the degree in which the instinct of self-preservation may be held in check under terrifying conditions depends on the functional activity for the time being of the highest cortical centres in the brain. Where these are vigorous and have been braced by discipline a man can command himself and retain self-possession throughout the most appalling ordeal, but where they have been weakened and worn down by long stress, by the constant expectation of evil, or by bodily debility the bravest may respond to fear-inspiring impressions with reflex uncontrollability. Under such circumstances self-preservation may assert itself as

inevitably as the blinking of the eye on a threatened blow. Remembering what our men went through, it is reassuring to know that in cases of cowardice and desertion no man was condemned to death who could justifiably plead shell-shock or some mental damage. When a soldier, in his defence or in mitigation of punishment, urged a substantial plea on mental grounds, medical witnesses were called, and the court-martial was adjourned and a medical board was held. At the adjourned hearing one or more members of the board were called as witnesses, and amongst them was always a mental specialist if there was a suggestion of shell-shock or other kind of mental or nervous disorder.

The fear factor, as disclosed in many of the war psychoses, has been simple enough in its operation. A man became possessed by fear, felt ashamed of it, struggled against it, and concealed it from his companions, but it gradually increased in stringency as he suffered more and more from fatigue and hardship, and finally overcame him, ending in a fit followed by mental confusion and delusions. For practical purposes is it necessary to proceed further in such a case or to invoke psycho-analysis? That the mental breakdown resulted from fear, which a sense of duty and self-respect and apprehension of ulterior risk were unable to subdue, is obvious enough. Shall we be much wiser or better able to help our patient if we trace it back, or pretend to trace it back, to an unresolved infantile mode of behaviour or to some relation between it and unsatisfied sexuality? The conclusion that the morbid variety of fear represents the discharge of repressed and unconscious sexual hunger is, we have been told, one of the most securely established in the whole range of psycho-pathology, upon which my comment would be—"So much the worse for psycho-pathology!"

Emotional conditions, especially when violent and often repeated, are extremely potent in precipitating new mental arrangements, and it is little wonder, therefore, that the profound agitations which our men at the front have passed through have resulted in disruptions of mental continuity corresponding with disruptions of physiological continuity in the brain. "One thing we may conclude certainly," said Maudsley; "of all moral commotions and mental overstrains which cause insanity—that they do so by straining or breaking the molecular ties of nerve structure and so injuring or destroying its vital activities." Prof. Waller's recent experiments, following on the lines already laid down by Féré, Tarchanoff, Slicker, Muller, and Peterson, have proved that large and sudden electric discharges which are independent of any muscular movement accompany a great many of the alarms and shocks of life. It was found that when strong and disagreeable stimuli were used—such as an unexpected loud sound, an unexpected burn, a disagreeable and pungent smell, or a

painful thought—while muscular movement of any kind was absent, marked electrical actions occurred. In a Belgian woman who was told to think of her native land—she had seen various tragic episodes of the German occupation—a very strong reaction was evidenced, and it was always noticed that the most effective ideas were such as were accompanied by disagreeable or painful emotion. We are, I think, justified in inferring that it is in such electrical discharges accompanying the intense and violent emotions evoked by the war that we have the explanation of many of those sudden losses of function which have so often followed these emotions. Impinging on the synapses of the neurons, which play so important a part in psychical processes, and which are the weak points in the nervous pathways, it may well be that they have increased their resistance in certain areas to the point of non-conductively producing a state analogous to fatigue which, when excessive, results in changes in the cell substance. The discharges would be most damaging in the higher and later developed levels of the nervous system, where the cells' functions are less solidly organised than in the lower levels, where they are relatively firm and open to the nervous currents, and they would be most likely to induce injurious effects where the neurons are constitutionally less closely compacted and more unstable. An apt illustrative analogy of what probably takes place under such circumstances is supplied by Mr. Charles Salmonds. "We may picture," he says, "an electric current passing through a copper rod divided into a large number of segments; if at one end of the rod the segments are pressed firmly together the current passes easily; if at the other the segments barely touch one another the current passes the junctions only with difficulty." Prof. Waller observed that different subjects react very differently to different stimuli, and the same subject in different states of health and at different hours of the day to identical stimulation; and so we can understand how the violent emotions of the war have caused sudden brain blockage in men predisposed to hysteria, neurasthenia, or the psycho-neuroses, exhausted by strain and stress or worn down by illness, while they have left men of more equable temperament and in sound health unscathed.

Recovery from brain blockage and the re-establishment of synaptic transmission sometimes takes place almost immediately, and, as it were, spontaneously; sometimes gradually, in altered environment and under medical treatment or re-education, and sometimes even after long delay quite suddenly under an emotional jerk much milder than the original shock, but, like it, accompanied, no doubt, by an electric discharge, exciting a change in the synaptic membrane by which transfer takes place. The emotions producing brain-blockage are almost invariably of a painful and startling description; those removing it are generally

of a pleasurable complexion. We are all familiar with such cases. Many disabilities have been swept away in the twinkling of an eye by the announcement that a man would have no more fighting to do. Power was instantly restored to the paralysed arm of a soldier on receiving an affectionate letter from his wife. A soldier who had been rendered deaf and dumb during the fighting in Flanders regained speech and hearing in a burst of laughter during a humorous sketch at a concert in his hospital, and another soldier struck dumb in battle was cured on the spot by being kissed by a young lady visiting at his bedside. The way in which an emotion may counteract the effect of mental shock and blockage is very beautifully illustrated by Tennyson :

“ Home they brought her warrior dead ;
 She nor swooned nor uttered cry ;
 All her maidens watching said,
 ‘ She must weep or she will die.’

“ Then they praised him soft and low.
 Called him worthy to be loved,
 Truest friend and noblest foe.
 Yet she neither spoke nor moved.

“ Stole a maiden from her place,
 Lightly to the warrior stept,
 Took a face cloth from his face ;
 Yet she neither moved nor wept.

“ Rose a nurse of ninety years,
 Set his child upon her knee.
 Like summer tempest came her tears.
 ‘ Sweet my child I live for thee.’”

The appropriate affinitive impression for the relief of shock in this case—an excitation that discharged inhibition—was discovered, not by any process of psycho-analysis, but by the ripe experience of an old woman. Similar experiences sometimes surprise us in our asylums. I remember reporting the case of a young woman (S. W—) who had been a schoolmistress and who laboured under dementia præcox—or acute dementia as we then called it. She was depressed, imagining she had done some great wrong, and markedly stereotypic, remaining fixedly in any position in which she was placed, and being generally mute. She was several months under treatment, showing no marked improvement, when suddenly one evening she shook off her lethargy and became quite herself, and remained from that moment bright, intelligent and natural in her conduct. Her quick recovery she herself explained, saying that it came about as she was being fed with her evening meal by a new nurse who had just come into the ward. She heard the nurse tell another nurse that she came from Lincoln, and the mere mention of Lincoln, where she had herself been born and reared

called up a flood of happy memories which swept her delusions and inertia away. The motherland suggestion, as the psycho-analysts would call it, was obviously the touchstone in this case, but perhaps the course of baths and tonics to which the patient had been submitted had prepared the way for its magical effect.

We have all, no doubt, met with instances of this sort in which there has been sudden relief from brain stasis by an emotional antigen, and most of us must have had personal experience of the effect of a summation of voluntary stimuli in procuring significant brain changes at an express rate. In the lapses of memory which occur during fatigue, illness or old age, we grope anxiously about for a time for a proper name, and then it suddenly flashes upon us, the reinforced mind current having spanned the synaptic gap, just as an electric current of higher potentiality will spark across an interval that was too wide for a current of lower potential to leap.

In connection with sleep sudden brain changes are noticeable. Its incursion is ordinarily gradual. The senses are closed, will-power is let slip, and fancy, free from control, sports for a little discursively and then subsides; but sometimes, as in extreme fatigue, sleep comes instantaneously with a snap. There is, as it were, brain stasis in sleep but no general blockage, and on waking the stasis gradually gives way before the stream of returning consciousness, first trickling and then flowing freely; but the stream may come with a gush, and then instantaneous awaking occurs. Dreams are, of course, replete with sudden variations, and Dr. Hughlings Jackson suggested that certain absurd and persistent delusions are fixations of grotesque fancies and dreams in which a morbid change in the brain has happened suddenly and increased suddenly during sleep. The fixation of the grotesque fancies or ideas gives rise to an imperative and fixed idea, and Hughlings Jackson thus accounted for these quasi-parasitic states or delusions in cases where general mental power is but little lessened.

Deeply interesting studies of sudden brain changes may be made in connection with what is known in religion as conversion, of which I must only speak here with great deference and reserve. On its theological aspects I must not touch beyond saying that it is by great multitudes of people regarded as a direct spiritual influx and outpouring of divine grace—a sort of celestial telepathy—and there can be no doubt that it has, on the large scale, meant an altered attitude towards life and a favourable change in disposition, character and conduct, sometimes transitory but often enduring. But from the physiological side it is an inner brain happening with new arrangements of nerve-currents, and where it has taken place in connection with revivals it has often presented many of the features of recovery from shell-shock and anxiety neuroses, and under such circumstances might be described as soul-

shock. It is no slow growth, but catastrophic in character. John Wesley said: "In London I found 652 members of our Society who were exceedingly clear in their experience and whose testimony I had no reason to doubt. And every one of these, without a single exception, has declared that his deliverance from sin was instantaneous—that the change was wrought in a moment." In the revival cases certainly, and in many others just as in our psycho-neuroses cases, the soul-shock has been brought on by fear, or by fear and the promptings of the instinct of eternal self-preservation. It has been by appeals to fear that revivalists have carried out their mission. They have succeeded in inducing in their more sensitive auditors a state of terror not unlike that experienced by the more emotional of our soldiers in the perils of the trenches and the field. Our men have constantly described the battles in which they took part as "hell," and it is by visions of hell conjured up before them that the ardent votaries of evangelical religion have been plunged in emotional perturbation. Jonathan Edwards, whom all succeeding revivalists have imitated, thus horrifically played on the feelings of a congregation: "If we should suppose that a person saw himself hanging over a great pit full of fierce and glowing flames by a thread that he knew to be very weak, and knew that multitudes who had been in that position before had fallen and perished, what distress would he be in. The unconverted belong to the devil, and he is ready to seize them the moment God permits. God is more angry with many of you now than he is with many in the flames of hell. Some of you will within a year remember this discourse in hell. You would have gone to hell last night had not God held you like a loathsome spider over the flames by a thread."

We cannot be surprised that exhortations like this, delivered with superlative earnestness and unction, repeated again and again, wrought up to great excitement a crowd of people often in a state of exhaustion, for the services went on for hours, sometimes continuously by day and night. Shouting, singing and groaning were indulged in, and all sorts of nervous disturbances and even insanity resulted. Let me quote a description of a revival at Red River in 1800. At the words of an effective preacher faces were streaming with tears at a pungent sense of sin, and the cries for mercy were terrible to hear. The floors were covered with the slain. Services were held for seven days and sometimes all night. The circulation was affected, and nerves gave way; many dropped to the ground, cold and still, or with convulsive twitches or chronic contortions of face and limbs, and at Cover Ridge 3,000 were laid out in rows. The crowd swarmed all night from preacher to preacher, singing, shouting "Lost! Lost!" leaping and bounding about. As the excitement went on it took the form of jerking, beginning with the head; with others it became barking, or the holy-laugh, as it was called. They saw visions and dreamed dreams.

The transports of these revivalists were, for the most part, short-lived, and passed away, leaving only nervous exhaustion behind, but in a large number of instances they were followed by anxiety neuroses and psycho-neuroses of a pronounced type. There was prolonged melancholia, with delusions, headaches, sleeplessness, hallucinations—such as voices summoning to repentance and visions of the Day of Judgment—palpitations, sweatings, indigestion, vomiting, and nervous tremors and convulsions, and it was from this state of engrossment of the mind by one system of ideas that conversion was the escape. By persuasions by the minister or evangelist, by suggestions of friends, by some emotional appeal in the singing of a hymn, or by some trivial and apparently irrelevant incidents, as the reading of a text, conversion came in a flash, and not only was mental tranquillity restored, but a state of complete happiness was reached. A transformation took place which could not be clearly set forth in words, but which was vaguely described by those who had undergone it as “Heaven upon earth,” “a mighty presence,” “a sense of newness,” “a great surrender,” “assurance of salvation,” “a glorious light,” “a wave of the spirit,” and so on. In such cases the translation from one order of thought and feeling to another that occurs in so many young people brought up in evangelical circles, as a normal phase of adolescence and a growth into a larger spiritual life, takes place momentarily. At the summons of some particular event or word a feeling is aroused that spreads itself like wild-fire over the whole field of consciousness and imparts a colouring to all elements included in it. This religiosity *per saltum* connotes a sudden change of current in the association centres of the brain. The old system is changed, beaten tracks are deserted, and new communications are opened up. In a violently excited state of emotion pressure in the brain-cell or psycho-active matter is increased just as a stronger current is yielded by a heated electric cell. And this gives rise to movement without and within. There is muscular restlessness, associations are no longer regulated by established canons, overflow takes place, and after an inundation, more or less wide-spread—the confused and hallucination period—fresh channels are hollowed out and an entirely new system of canalisation is established. This may be permanently maintained, or it may be relinquished, in a return to the old system.

The Eleusinian mysteries seem to have had something in common with modern revivals. They aimed at counteracting the passions of ordinary life by the abiding remembrance of an appeal to terror and pathos, and so profound was their influence that it was said of some who have gone through them that they were never seen to smile afterwards.

Many who have never undergone religious conviction are aware of

secular experiences of a somewhat similar type, critical moments in their lives—often during adolescence—when quite suddenly and without warning new life streamed in on them, as if from without. A course of study may have led up to it, a strong emotion may have preceded it, or some quite trifling incident may have determined it, but abruptly and inexplicably the change came, and a sense of strangeness and expansion dawned. There was a jolt, a turn, and the mental contents were as if kaleidoscopically re-arranged in an order different from that which had hitherto obtained. A memorable example of this spiritual new-birth, reached not by gestation but by a regenerative flash, as it occurred to Carlyle he has himself described: “Nothing,” he wrote, “in *Sartor Resartus*, is fact, symbolical all, except that of the incident in the Rue St. Thomas de L’Enfer, which occurred quite literally to myself in Leith Walk. The incident was as I went down I could now go straight to the place,” and the incident may be epitomised as follows: “Full of such humour and perhaps the most miserable man in the whole French capital or suburbs was I one sultry Dog-day after much perambulation toiling along the dirty little Rue St. Thomas de L’Enfer, when all at once there arose a thought in me, and I asked myself ‘What art thou afraid of?’ and as I so thought there rushed like a stream of fire over my whole soul, and I shook base fear away from me for ever. I was strong, of unknown strength; a spirit, almost a god. From that great moment of Baphometric Fire baptism I became a new man,” or, as Carlyle has it, “I authentically took the devil by the nose”—a victorious ending of a protracted conflict.

But besides sudden expansions there are sudden contractions of brain energy. “The memory of James Hinton as a boy,” Sir William Gull has said, “was quite marvellous. A school-fellow of his at Reading recalls that when the master set six pages of history, Hinton read it once over and repeated it verbatim. But rushing one day hurriedly from cricket to his lessons there was a sudden lapse of this remarkable power, a sense of gone-ness, and it never returned to him.”

I have referred to cases in which sudden recovery from insanity has taken place, in response to some moving emotion, and we are all familiar with cases in which sudden recovery and relapse occur under some periodic physiological law still unexplained, allotropic brain changes they might be called. But I should like to mention that there are cases in which sudden recovery supervenes on a physical concussion or jar. It is easy to understand why physical shock should interrupt the functions of the brain, but it is not so easy to understand how it should resuscitate them and restore their balance. Some time ago I visited a gentleman who had for years laboured under delusions of persecution, which had become so aggressive as to make him dangerous

and to necessitate his being placed in an asylum. Two attendants having arrived at his house to remove him, he rushed upstairs to escape from them, and jumped from a first-floor window into the street. When he was picked up it was found that his vertebral column was broken in the dorsal region, but that he was perfectly clear in mind. His delusions had vanished, and he was reasonable and collected. He ultimately died from the effects of his injuries, but he lived some months, and was lucid to the end. The late Dr. Robert Smith, of the Durham County Asylum, reported a similar case, that of a woman, *æt.* 36, labouring under confirmed melancholia, who one day, under the hallucination that she saw her husband outside, smashed a window-frame with a brush-handle and jumped through, falling a height of 24 ft. and alighting on a gravel walk. She fractured her leg and sustained other injuries, but did not lose consciousness, and recovered her soundness of mind on the spot. All her depressed delusions left her, and, in the course of a few weeks, she went home quite well. Sir James Dundas Grant has given me the notes of the case of a man who was wounded at Delville Wood on the Somme in July, 1916, by a bit of an exploding shell. He remembered nothing more until, coming to himself in a train, he found he could hear nothing. He remained deaf until August, 1917, when one night he had a vivid dream that he was going through the shell incident again. In the agitation caused by this dream he fell out of bed and knocked his head on the floor. His mother hearing the noise, came into the room and asked him what was the matter. He heard her question and replied, and has been able to hear perfectly ever since.

One can only speculate as to what went on in the brain in such cases, but assuming that it was not a psychical shock that proved curative, it might be suggested that the change was analogous to the rearrangement of particles and altered electric resistance that takes place in a coherer when it is tapped. The impact broke down morbid cohesions in brain elements, permitting unusual conditions, and then the nerve currents flowed back into their normal channels.

Dr. Feldman has described the case of a woman suffering from trinitrotoluene poisoning, who illustrated the effects of physical shock during suspended brain function. She developed delirium quite suddenly, was restless, and not in her right mind, and then developed twitchings and became semi-conscious, the jaundice being intense. The window just over her bed in the Poplar Hospital was broken by the great explosion in January, 1916, and she sustained a severe shock, and the remarkable feature of the case was that by the next morning she had completely recovered consciousness and was quite natural. On the second day she was much improved, but on the fourth day she had relapsed into the same condition she was in before the explosion.

A severe physical shock had, in this case, a very marked effect on the central nervous system, even during what proved fatal toxæmia.

In recurrent insanity we have, one may suppose, alternating currents, the brain, in which resistance in the synapses in certain tracts and centres normally in relation is for a period increased to the point of blockage, and is then, for another period, relaxed and overcome, and the alternations often take place quite suddenly. Some years ago I visited, with the late Dr. Louis Bockhardt, of Manchester, a lady who suffered from intermittent mania. On one day she was in all respects lucid, calm, rational, intelligent; on the other she was a different being, excited, incoherent, mischievous. This sad sequence had gone on for years when, on one occasion, it was curiously interrupted. The lady, being a German, attached much importance to the domestic observance of Christmas, and Christmas Eve, being her good day, she spent happily with her family. On returning with her nurse to her rooms in the evening she said to Dr. Bockhardt, "I mean to eat my Christmas dinner with my mother at her house to-morrow." "That is not possible," Dr. Bockhardt replied, "for to-morrow is your bad day." "Yes," she said, "but I will tell you how I can manage it. I will make to-day and to-morrow into one day. I shall keep awake all to-night, and I shall be as well as I am now to-morrow morning." She kept her word. She went to bed, remained there quietly the usual time, wide awake, the nurse sitting up with her, and was calm and collected on Christmas morning and dined with her mother on that day. She slept well on Christmas night and awoke the following morning in the state of mental excitement which had been postponed for twenty-four hours. In this case the change in the couplings of the nerve centres corresponding with orderly and disorderly mental action only took place during the suspension of the influence exerted by the higher nerve centres over the lower which takes place in sleep, and the patient, having herself become aware of this, was able by maintaining the activity of the higher centres to put off for a time the running riot of the lower ones. She gave an extension of power to inhibition, but she could not permanently re-establish its authority.

In a moment of bitterness Maudsley once imagined a physician who had spent his life in ministering to the mind diseased looking back sadly on his track, recognising the fact that one-half of the diseased beings he had treated had never got well, and questioning whether he had done real service to his kind in restoring the other half to reproductive work. But it was in no such mood that he provided for the Maudsley Lectureship and Hospital. He must, then, have had faith in the seeds of time and hope in the future of psychological medicine, and it is, I feel sure, in such faith and hope that our speciality accepts his gifts and pursues its mission. The old order changeth everywhere, and the new

order that is taking its place, in our department at any rate, however diverse its methods may be, is alive and in earnest. There is no help-
less folding of the hands, nor shruggings of despair, but strenuous
endeavour and a confident expectation that much may and will be
done to stem the devastating tide of madness and to increase the
number of rescues from its troubled waters.

PROCEEDINGS.

The PRESIDENT said it had fallen to his lot to have the honour of presiding at the First Maudsley Lecture. He thought that any of his hearers who contemplated the problems of history would always find it difficult to judge whether any special event, or any particular individual, had had much influence in shaping history. But in this particular case he thought they would have very little doubt. In the years immediately following the publication of *The Origin of Species* there was a great awakening on the subject of the study of psychological medicine, and in this regard two names stood out. One of those was the name of Dr. Maudsley, whom they were now met to honour, and the other was the name of the Lecturer to-day. (Hear, hear.) He did not intend to speak about Dr. Maudsley at all: that was the subject of the Lecture. He wished merely to say, in that regard, that this Lecture was due to his munificence in bequeathing a sum of money for lectures on the subject of mental disorders and allied sciences. Maudsley's life was devoted to the welfare of the insane: posterity was to be benefited by his foresight. In the early years of the West Riding Asylum, 1871 and onwards, under the care of the then Dr. Crichton-Browne, there was a galaxy of talent which had an immense influence upon history. Among the early contributors were David Ferrier, Herbert Major, T. W. MacDowall, Hughlings Jackson, Clifford Allbutt, W. B. Carpenter, Lauder Brunton, John Merson; and this was all organised and arranged by Sir James Crichton-Browne, who was to lecture to this audience to-day. He thought the connection between that and Dr. Maudsley's first book, *Physiology and Pathology of Mind*, which was published in 1867, was interesting. He was sure those two events had much to do with the development of the speciality. He had great pleasure in asking Sir James Crichton-Browne to deliver his address.

Sir JAMES CRICHTON-BROWNE was cordially received and delivered his lecture with an eloquence which always distinguishes his public utterances. His lecture was heard with deep interest and many of his striking passages with much applause.

On its conclusion, the PRESIDENT said the Lecture had been a wonderful one; beautiful thoughts had been expressed in beautiful language, and in a beautiful way. And though they knew there could be no merit in eloquence as such, that there was nothing more than temporary value in a silvery tongue, yet they did know that when this was coupled with penetrating insight and with clear and lucid thinking the result was wonderful, and such it had been to-day. He had been particularly charmed by the note of hopefulness which ran through the Lecture. He believed Sir James Crichton-Browne began the practice of medicine so long ago as 1861, and he was President of this Association more than forty years ago. He had now given a *résumé* of his work and of his thought, which was full of hopefulness to those in the speciality; it was an inspiration to them, and he was sure the audience would wish that Sir James should be cordially thanked for his Lecture. (Applause.) He had one suggestion to make. He believed it was one of the conditions attaching to the Lecture that it should be published in the *Journal of Mental Science*. That, he did not doubt, would be fulfilled, and in that way it would appeal to a very much larger number than could be present to hear it. As this was not now a meeting of the Association, nothing in the way of business could be done, but he proposed to suggest to the Editors of the Journal that the type be kept up until there had been an opportunity for the Council of the Association to come to a decision on that matter. He would like the Lecture to be printed and circulated in pamphlet form, printed on good paper, and circulated widely, so that it would reach a much larger circle than the Journal catered for. He had

the support of the Treasurer and the General Secretary in making the suggestion, and he hoped it would be carried through. In order to give support to the thanks he had ventured to express, he asked Sir George Savage to say a few words.

Sir GEORGE SAVAGE said the duty which fell to him was a very simple one. All who had heard the lecture must have appreciated it from beginning to end, both its matter and the manner of its delivery. The orator who had to speak on such a subject should refer to the man, to his works, and how he was represented by his writings, and, most importantly, the way in which he would look upon the work of to-day. Sir James Crichton-Browne, like the speaker, knew Maudsley for many years, and they recognised his very strong individuality. He was a member of the Reform Club, and he himself had many reforming characteristics. The requirement of him (Sir George), however, on this occasion was not to speak of Maudsley, but to express the feelings of gratitude entertained by this meeting towards Sir James Crichton-Browne for having placed so lucidly before his audience the character of the man and his works. He did not think there was any man better calculated or more suited to give this oration than Sir James; it was the eloquent man discussing the fluent man. Maudsley was not the fluent orator that Sir James was, but he was polished in his written word, just as Sir James was polished in speech. He (Sir George) could not help wondering, towards the close of the lecture, what Maudsley's feelings would have been in regard to psycho-analysis, with what scepticism he would have approached that and the subject of shell-shock. There was nothing so useful to mankind as prudent unbelief. He was sure all present would feel that Sir James Crichton-Browne had inaugurated this oration in a way which was worthy of him.

The vote was carried by acclamation.

Sir JAMES CRICHTON-BROWNE (in reply) thanked the President and Sir George Savage for their kind words. He regarded it as a very honourable compliment, the greatest that had fallen to his lot, to be asked to deliver this lecture to his friends and compeers in that department of medicine with which he (the speaker) had been so long connected. And it was very gratifying to have an old friend like Dr. Bedford Pierce in the chair, because he stood half-way between the old guard to which he himself belonged and the new army which had sprung up and was now so vigorous. Dr. Pierce had shown the wisdom and moderation of the old guard and the originality and enthusiasm of the younger men who were pressing to the front. There were some stipulations connected with the lecturer, and one which should have been imposed in his case was that he should have been compelled to undergo a course of instruction for the Diploma in Psychological Medicine before being called upon to deliver. He would then have been better able to adapt himself to the attitude of younger men with high philosophical and scientific attainments. He had written the lecture under pressure due to other engagements, but he had done it *con amore*, and his pen had run away with him; hence he had, in the reading, left out page after page, with the feeling which occurs to all who have to cut down their own compositions, that he was throwing perhaps the best of his progeny to the wolves. And those excisions might have been more painful to his audience than to himself, for they probably interfered with the consecutiveness of the address. But he wished to express his great gratitude for the patience with which he had been listened to. (Applause.)

Appreciation by the 'Times,' May 21st, 1920.

Sir James Crichton-Browne, the distinguished alienist, called attention yesterday to the "load of lunacy" under which the nation suffers. We are not sure that the figures of lunacy, grave as they are, need be taken to indicate an increase in insanity. There is an idol of the statistician as well as of the market-place; increase and decrease of percentages require scrutiny before they should arouse satisfaction or dismay. With insanity, as with other human afflictions, increased skill in diagnosis, more thorough sifting of the population and the provision of facilities for treatment discover cases that formerly passed unnoticed. Even at present the school attendance officer unearths the idiot child, and the fool of the family is handed over to the county asylum. We may predict with assurance that when more psychiatric clinics are provided, the provision for out-patient treatment extended and the legal formalities connected with certification are reformed, the first result will be an apparent increase in the numbers of the insane. The process

of prevention will reveal the extent of the evil. Everyone will agree on the need of more facilities for the study and treatment of insanity. But alteration of the law regulating the certification of lunatics is sure to arouse suspicion. The putting away of an inconvenient relative by means of a certificate has been a favourite theme of playwrights and novelists, and an occasional case in the Law Courts seems to justify popular dread. Yet there is a strong case for alteration. The existing Lunacy Act protects the liberty of the subject, but does not provide sufficient scope for treatment and cure. The early symptoms of mental disorder often occur before certification is possible. It is during these incipient stages that skilled attention is most successful and most difficult to obtain. The Professor of Psychiatry in the University of Edinburgh recently stated in our columns that Scotland in this respect is more happily placed than England. For more than fifty years mentally-deranged persons in Scotland have been able to receive curative treatment in any house or home without being certified to be insane and without being sent to an asylum. These powers have not been abused, and there is no reason to suspect that they would be abused in England. At the present time, indeed, insane patients are often sent by physicians from England to Scotland to benefit by the more considerate laws. The army authorities during the war arranged that mentally-disordered soldiers should be received into military mental hospitals without orders or certificates, and did not send cases to asylums until mental disability had lasted for nine months and was deemed incurable. Large numbers of men were received in early stages of mental disease and were cured. Authority and practical experience combine to recommend the reform of the Lunacy Law.

The Relation of Infections to Mental Disorders.⁽¹⁾ By W. FORD ROBERTSON, M.D.(Edin.).

SOME of you may remember that, four years ago, I inflicted upon you a paper dealing with almost the same question. It was entitled "Some Examples of Neurotoxic Bacterial Action." Since that time I have continued, in the Laboratory of the Scottish asylums, the practical study of bacterial infections on a fairly wide basis, and I believe it is now possible to define with something approaching exactness the part which such infections play in the causation of mental disorders, including insanity. It can now be shown that this part is a very much larger one than at present is generally believed. The same can, however, be said with equal truth regarding the relation of infections to common maladies.

It is to be remarked, in the first place, that asylum patients, like other persons, may suffer from acute and chronic infections which produce the ordinary results. For example, they are subject to common colds, influenza, pneumonia, bronchitis, dysentery, and tuberculosis, all of which are of bacterial origin. There is now, however, solid ground for the conclusion that bacterial infections have also a special relation to mental disorders. Nevertheless, there are few bacteria, if indeed there are any, that can be said to produce insanity as the characteristic result of their pathogenic action. The special relation is dependent essentially upon a peculiar vulnerability of the central nervous system

⁽¹⁾ A paper read at a meeting of the Scottish Division of the Medico-Psychological Association, November 21st, 1919.