TO CONTRIBUTORS.

OUR contributors are reminded that prolixity is a great bar to publication, and, in consequence of the constant pressure upon space in every department of the JOURNAL, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to decline or hold over indefinitely a great number of communications, chiefly by reason of their unnecessary length.

PRESIDENTIAL ADDRESS

ON

THE RELATION OF PATHOLOGY AND THERAPEUTICS TO CLINICAL MEDICINE.

Delivered before the Clinical Society of London, on Friday, January 28th.

By W. H. BROADBENT, M.D. LOND., F.R.C.P.,

Physician to St. Mary's Hospital; Consulting Physician to the London
Fever Hospital.

GENTLEMEN,—I should be little worthy of the honour which you have conferred upon me in electing me president of this Society, did I not feel grateful for the confidence you have placed in me, and take pride in the high position to which your kindness has raised me. It has always impressed me to run down the simple list of presidents of the great medical societies, a place in which is an unimpeachable title of honour; and if I have had any ambition beyond that of doing my duty, it has been that I might some day leave my name on one or other of those honoured rolls. But however great my pleasure in realising this ambition, it is with no feeling of elation that I take this chair; rather is it with a sense of responsibility almost oppressive in degree, and a fear lest I should fail adequately to fill this position, and to represent the Society.

But I have already said more than enough of myself, and, after all, the progress and fortune of this great Society do not depend upon the president of the hour. Its basis is sound, its work is substantial, and it has an inherent vitality which will carry it over any stumbling block created by my shortcomings. It is unnecessary in this, its twentieth year, to explain the objects or justify the existence of the Society as a separate organisation. It is equally unnecessary to vaunt its usefulness, which is acknowledged on all hands, but I may for a moment foreshadow the further service it is destined to render to medicine. This Society represents the medical man at work in the relief of suffering and the cure of disease. Whatever, then, may advance our knowledge of disease; whatever may assist us in the recognition of all its forms and stages when present; whatever may enable us to foresee its approach and detect its causes—these, and all that may aid us in preventing, resisting, and curing disease, are the subjects which engage our attention.

Now it seems to me that we are at a very interesting and important period in the development of medical knowledge, and that the immediate future is pregnant with discoveries bearing on the treatment of disease. Pathology, for a long time occupied mainly in the examination and record of results, has long ceased to be content with this, and has advanced far in the study of processes. But these processes are none other than the diseases which we watch at the bedside. While morbid anatomy was the goal of the pathologist, pathology and therapeutics advanced on parallel lines, and seemed as if they could never meet; indeed, the *post mortem* table appeared only to demonstrate the absurdity of the attempt to combat disease. Now, however, pathology and therapeutics join hands. But morbid processes have beginnings and causes, or, if we are not allowed to use this word, antecedents. Some of these can only be ascertained by observation and inquiry, the results of which must often take the form of statistics, as, for example, with regard to the influence of heredity, of climates, of habits, of food; but many morbid processes can be started at will, and this permits of exact knowledge of the initial causes, and minute investigation of the succession of changes from beginning to end. Experiment, then, the chief instrument of exact science, enters the service of medicine. Experimental pathology has, in effect, never been much behind experimental physiology, and both are actively contributing to our knowledge. Experimental inquiry, however, not only occupies itself in the investigation of physiological processes and in the production and elucidation of morbid phenomena, but also in

the examination and determination of influences which check, control, and counteract disease. All these lines of research are being enthusiastically pursued by zealous and able men, especially young men; knowledge comes crowding in from every side in perplexing abundance; and, sensibly or insensibly, practical medicine is coming more under the influence of science and of scientific methods.

But no idea can be formed from the separate and isolated contributions by physical, chemical, physiological, pathological, and experimental science, which help medicine, now here, now there, now in the comprehension of morbid processes, now in the application of remedial measures—no idea can be formed of the flood of light which will be thrown upon the theory and practice of medicine when all these sciences have completed their survey of the body in health and disease, and meet in the explanation of the operations of which it is the seat; when, say, the chemistry of nutrition and of the secretions is as well known as the rate of travel of nervous impulses; when the mode of action of drugs is as clear to our minds as the interchange of gases in respiration. We are very far from any such ideal as yet; but we have instances in which the convergence on one point of knowledge from various sources, apparently irreconcilably apart, is beautifully illustrated. What can be more fascinating, for example, than the combination, for a given end, of the considerations brought to bear in recent cerebral surgery, of which such brilliant examples have recently been furnished by Hughes Bennett and Godlee in co-operation, and others? We have symptoms which the physician, largely through the insight and work of Hughlings Jackson, refers with confidence to a cerebral tumour. This is localised with precision through the experimental investigations of Hitzig and Ferrier. These and earlier investigations, again, having taught that portions of brain can be removed without danger to life; Lister's antiseptic precautions—themselves the outcome of scientific experiment in a totally different field—make the trephining of the skull and the excision of the growth comparatively safe; and, by a last refinement introduced by Victor Horsley, advantage is taken of the anæmia of the cortex during morphine-sleep, found years ago by Durham, to diminish the hæmorrhage during the operation.

Whatever the knowledge of the day may be, and whether it has been reached by scientific investigation or has as yet only the sanction of experience, it is through the physician or surgeon that it is brought to bear on individual cases. And here let me repudiate and protest against the idea that there is any antagonism between scientific and practical medicine or any incompatibility between practical skill in the treatment of disease and love of knowledge for its own sake. It is contradicted throughout the history of medicine. The medical man ought to be animated by the scientific spirit and, for the most part, is. It is true that a knowledge of men and women may lead to success in practice, as well as a knowledge of disease, and that the weakness, frailty, and folly of mankind constitute a mine of wealth to the unscrupulous man who obtains power and opportunity to exploit them by a medical degree, but so it is in all professions, and it need not make us doubt that the practice of medicine is fundamentally scientific. Nor need we concern ourselves with such instances; they are unworthy of our attention as individuals, and we may be sure that the very last place to which the triumphs of the charlatan will be brought for criticism will be this Society.

The medical man, as I was about to say, is the intermediary who gathers up and applies for the benefit of the patient all the knowledge available at any given period, and whatever is most essential to individual members of the profession in the exercise of this function is the most worthy of the attention of this Society. This, unquestionably, is diagnosis. I have heard distinguished lawyers in confidential after-dinner chat parody Danton's noted phrase about audacity, and say that the first condition of success at the bar is good animal spirits, the second good animal spirits, and the third good animal spirits, adding that a little knowledge of law is not amiss. In more serious mood, I should reply to the question, "What is most important at the bedside"—diagnosis! diagnosis! diagnosis! But diagnosis is a word of deep meaning—thorough knowledge. It is no diagnosis at all to say that such and such is a case of valvular disease of the heart, or even that it is a case of aortic or mitral disease, obstructive or regurgitant. We must be prepared to estimate the degree of obstruction or the amount of regurgitation, to say whether the valvular change is probably stationary or likely to be progressive, to measure the effects on the cardiac muscle and cavities, and to judge in what direction and in what degree lethal tendencies are developing themselves. It is no diagnosis again to say that a man has hemiplegia; we must localise and specify the lesion which has given rise to the paralysis. But the lesion is itself only an incident in some general morbid tragedy which is

being acted in the body, and this must be read from the beginning. Diagnosis, moreover, embraces a knowledge, not only of the seat and character of the disease, but also an appreciation of the condition of the patient in relation to the attack. Is the disease merely the winding up of a bankrupt constitution?—a mode of dying rather than a cause of death? or is it, on the other hand, a necessary though violent readjustment of the organism to the environment with which it had been long getting out of harmony, or a defensive reaction against some powerful disturbing influence? The problems presented are often of the highest degree of complexity, and we cannot too diligently cultivate our powers of observation, aiding the senses by the instruments with which science has furnished us, and bringing everything, as far as possible, to the test of measurement and the balance. With regard to this, however, I need say nothing; every meeting of the Society gives proof of the zeal with which morbid phenomena are watched and recorded, and of the acumen with which they are discussed and criticised. It is sometimes objected that the cases read here are usually such as are rare and exceptional, and therefore of little practical use; but the exceptional cases of to-day are the common ones of to-morrow. There is no one who has for many years been in the habit of noting all he sees, who cannot look back to cases which he did not at all understand at the time, but which are now perfectly clear. And I would remind my hearers of the profound saying of Sir James Paget, "That an exception to one rule is only an example of another rule as yet unknown." The explanation of an exceptional case may thus be the revelation of a new law.

It is not so easy to deliver my mind on the subject of treatment. On looking through our *Transactions* the reproach that we give attention to everything but treatment might seem to be well founded. This reproach, it is true, could not be addressed to the surgeons. Surgery is treatment. Medicine may be or may not; and, as a physician, I am tempted to envy my distinguished surgical predecessor the splendid record of improvements and advances which have marked his term of office. I cannot hope that my reign will compare with his in this respect, although I trust the physicians and general practitioners will be stimulated to a generous rivalry with the surgeons. One reason why we seem to lag behind them is that our results are less tangible than theirs. We may, and we do, check the ravages of phthisis in the individual as in the community; we may beat back for years the advance of renal disease; we may deprive locomotor ataxy of its qualifying adjective "progressive"; but these and like instances, which are our most genuine triumphs, cannot well be put into the form of cases. Many such diseases, indeed, deadly as they are, get a worse character than they deserve through our reticence, and young practitioners are often astonished to find the fulfilment of their gloomy prognostications so long deferred. I wish it were more easy to exemplify the results of successful resistance to disease, and it would be a great advantage if we could have brought within the ken of the Society some of the minor ailments which so constantly come before us. A certain proportion of them are early stages or forerunners of serious disease, and others, which we can only look upon as functional derangements, inflict more misery upon the patient than cancer itself. They are, therefore, supremely worthy of our attention. It would be difficult, I admit, to convey the fine distinctions, on which so much depends in giving an account of such affections; but well-observed individual cases would be far more instructive than the generalized descriptions which are given in treatises. An opening would be afforded also for the discussion of many unsettled questions. The mental depression, for example, which is often clearly traceable to functional derangement of the liver (to employ a term sanctioned by the authority of Murchison)—is it a reflex disturbance or inhibition of some nerve-centre, or is it the effect of a blood-impurity acting as a poison to the brain like alcohol or opium? or is it a local or general derangement of the cerebro-spinal circulation? It is an every-day experience that a dose of blue pill will relieve the mind, clear the complexion, and relax the arterioles. Now, in many cases of obstinate and severe melancholia there is every reason to believe that the cause is outside the nervous system; and if we could, in the familiar examples of low spirits and irritable temper, trace accurately and minutely the way in which the initial gastro-hepatic disorder produces its effects upon the nervous system, and the exact process by which these are reversed, we might understand and prevent or remedy the more serious overthrow of the mind seen in melancholia. It is not a final explanation, discharging us of all responsibility in searching out the cause, and rendering futile all efforts in the direction of cure, to find a family history of insanity. The hereditary tendency to melancholia may be indirect, and capable of defeat, just as hereditary tendency to apoplexy may be traceable to family gout, which can be prevented from developing its evil effects in individual members.

Whether we find such an opportunity of considering the forms and phases of diseases, to which I have just alluded, or not, I hope we shall not lack cases illustrating the effects of remedies, and by remedies I here mean drugs.

Nursing, care, appropriate food and stimulants do much for our acute cases; diet, clothing, climate, hygiene, are powerful remedial agencies in chronic disease, and we cannot too closely study the surroundings of the patient, or direct too minutely the management of the sick room; we cannot inquire too carefully into the habits and mode of life which have led to chronic ailments or give instructions too detailed as to the means by which the injurious influence of past errors may be counteracted in the future. Were we to neglect these particulars, we should in effect ignore the first principle of rational treatment—"the removal of the cause"—and wilfully leave an insuperable obstacle in the path of recovery. But when we have attended to everything of this kind, we should be shorn of our strength, were we debarred from bringing to the aid of sufferers the powerful remedies we hold in our hands. In acute disease they often turn the scale in favour of the patient, as, for example, when death is averted in enteric fever by a timely dose of opium or quinine, or when the distended right heart is relieved by a calomel purge. In chronic affections, again, even if the patient is prepared to renounce his self-indulgence and forego his pleasures, or to neglect his business and abandon his ambitious schemes—and how often is he unwilling to do the one, or unable to do the other?—the long chain of evil consequences would be very slowly unwound, whereas we can often snap it almost at a stroke.

I shall venture to assume that scepticism, in the evil sense of disbelief in medicinal agencies, is extinct. I shall not, at any rate, argue the question, but take it for granted that we have confidence in the drugs we employ and believe we have abundant evidence of their good effects. Were this not so, few of the men now before me would consider the medical profession worthy of their adoption as the work of their lives. We look to quinine in ague, to mercury and iodide of potassium in syphilis, to iron in most forms of anæmia for effects as certain, and as constant as chemical reactions. These and similar examples, of themselves, or the single instance of the multifarious benefits obtainable from the administration of opium and its alkaloids, would justify us in asserting that we are able to modify profoundly and beneficially the course of disease. It is only want of knowledge of the morbid process on the one hand, and of the mode of action of the drug on the other, which prevents our having the same certainty in a thousand other instances. In proportion as our investigation of the cases which come before us is thorough, and our aim and object in the employment of medicines are clear, definite and precise, in that proportion will our confidence in the uses of drugs be firm and will continue to increase.

With regard to the effects of remedies, however, we have, for the most part, only the testimony of experience, pure and simple, and our experience is a very insecure anchorage for belief, and a very feeble agency in carrying conviction to the minds of others. A man's own experience will, for himself, outweigh that of any number of others, and a single instance in which his own observation contradicts, or appears to contradict, the concurrent testimony of the rest of the world will overthrow his belief in that testimony. In the complicated phenomena of disease again, it must often happen that all the facts are not known, and the experience of one case may not apply in another apparently similar, which unsettles confidence. When, however, he has an explanation which commends itself to his judgment, adverse facts often make little impression. Hence the sway of theory: whether we will or no, we refer the action of remedies to some theoretical cause, and it is because we have not always confidence in our theory, and not because we have any doubt about our facts, that we sometimes appear to falter in our testimony in regard of therapeutics.

The remedy for this is a knowledge of the mode of action of drugs, and it is to discoveries in this direction that I alluded when, in an earlier part of this address, I said that we stand at an important period in the development of medical science. Already we employ digitalis with greater confidence and discrimination from the light which experiment has thrown upon its action on the arteries and heart, and nitro-glycerine, amyl nitrite and the nitrites have actually come into use on the ground of their experimentally demonstrated effects in relaxing the arterioles, and have proved to be of immense benefit. We have also introduced into practice, on experimental evidence, substances which directly and constantly bring down the temperature of the body. Enormous importance attaches to the investigations which are in progress on all hands, and I would refer particularly to Dr. Sydney Ringer's experiments, showing the influence of minute proportions of soda, potash, and lime salts, on the action of

the heart, which bring into evidence once more the radical differences which exist between substances commonly regarded as all but identical. Soda and potash, for example, are, for the most part, looked upon simply as two alkalies, which may be employed almost indifferently, the only exception recognised being, perhaps, that potash is the better solvent for uric acid and more of a diuretic, whereas their alkalinity is almost the only property they have in common; when regarded as medicines their relations with the organic constituents of the body and their influence on muscular contractility are totally different; they are found in different structures, and a minute proportion of any potash salt injected into a vein paralyses the heart, while soda salts have no such effects.

But while the mode of action of drugs is engaging attention, and great discoveries are bound to come before long, the progress made as yet is only small; and although the eagerness with which new remedies, which come accredited by science, are seized upon by the profession is a hopeful sign—there is danger of present injury from their employment. It is a tremendous piece of knowledge that a given drug will certainly lower the temperature, but this does not by any means warrant its indiscriminate administration in pyrexia. There is the further question, by what processes the temperature is reduced, and what concomitant effects are produced. Quinine, salicine, salicylic acid and its compounds, antipyrin and like substances, aconite, and many other drugs, agree in diminishing the body-heat, but this is the only effect they have in common. There is positive peril in acting simply on the knowledge that the temperature can be lowered. Are we certain, to begin with, that a high temperature is always mischievous? May we not, in checking it, be interfering with defensive or readjusting processes? Are we to assume that Nature does not know what she is about when she sets the heat-regulating mechanism for a higher level whenever things go wrong in the economy? To take a practical example. In enteric fever, in which the long-protracted pyrexia becomes in itself a distinct danger by its effects on the nervous system, by disintegration of the muscular fibres of the heart and the glandular structures, and by the strain on nutrition, I am convinced of the utility of systematic cold bathing, by my own observation as by the testimony of such men as Brand, Liebermeister, Cayley, and Tripiér (of Lyons); but I think, from what I have seen, that the repression of body-heat by means of salicylates, antipyrin, and the like in this disease is very dearly bought. Nor can I see what we have to gain by suppressing the short sharp fever, say, of pneumonia. Even with regard to the employment of salicine and the salicylates in rheumatism—remedies which came to us straight from the laboratory, and whose mode of action is expounded in chemical formulae by Dr. Latham—I think it well to raise a warning note. Properly employed, salicine and the salicylates almost rob acute rheumatism of its terrors and dangers, but given in routine fashion, as we should give an effervescent mixture, they have seemed to me capable of doing serious harm. At any rate, I have seen deaths in rheumatic fever, of a kind quite new and strange to me, after prolonged administration of salicylate of soda every four and six hours. The pain and fever had never yielded, the drug had been continued in hope of this result, till, in course of time, warning was given by delirium, the pulse became more frequent and extremely weak, what has looked like a modified hyperpyrexia has set in, with flushed face and hot perspiring skin, and the patient has rapidly sunk, the temperature, however, never rising above 105° Fahr.

I come back, then, to my point that, in order that we may employ antipyretics, or remedies of any kind, with confidence, we must know exactly how the effects produced are brought about. With regard to this we are, however, only on the threshold of an inquiry which must go more deeply into the relations between physiological processes and the substances which modify them than, as yet, we have any conception of, for our information is superficial. Now it is an axiom in science that for every action there is an equivalent expenditure of energy. It is not by its mere presence in the blood or in the nervous centres, or in the gland structures that a poison or remedy produces its effects; there is some dynamic agency at work. In the case of such bodies as the powerful organic alkaloids, this can scarcely have any other source than chemical change in the substance itself, while, in the case of inorganic salts, it would seem that they condition reactions between other substances. We know that carbonic oxide proves fatal by combining with the hæmoglobin to the exclusion of oxygen, so that the blood corpuscles are no longer available as carriers of oxygen to the central nervous system, and the anæsthetic gases and vapours act much in the same way, their safety consisting in the fact that the higher centres concerned in the mental operations and sensation succumb to the privation of oxygen before the lower centres, which are the seats of the vital reflexes, and that they are easily displaced by

oxygen when this is again freely supplied. Here the proportion of the anæsthetic agent is comparatively large, and the mode of operation is physical rather than chemical, the vapour-density actually counting in the comparative effects of different anæsthetics.

I might name other actions more or less capable of explanation, but it is such effects as those produced by aconite, atropine, morphine, and prussic acid, in which a fraction of a grain will give rise to profound disturbance or destroy life, that we need to understand. Twenty years ago or more, when science was not prepared to answer, nor I qualified to put, such questions as those relating to the action of poisons and remedies, looking at the fact that all powerful alkaloids contained nitrogen, and that all, or nearly all, the constitution as well as the composition of which was known, belonged to the class of amides, imides, and nitrites, in which an ammonium radicle had been robbed of successive atoms of hydrogen, I conceived the idea that this departure from a stable type gave rise to a chemical tension capable of producing effects when brought into presence of the chemical tension which seemed to me to be required for the explosions of nerve-force.

It occurred to me that prussic acid—the most deadly of poisons, and, at the same time, almost the simplest of organic substances—offered the best possible chance of ascertaining the exact mode of action of, at any rate, one drug.

Hydrocyanic acid is composed simply of a single molecule each of carbon, hydrogen, and nitrogen—there is no room for complex changes. The hypothesis I entertained was that, when it reached the nerve-centres, and under the influence of the chemical operations concerned in the evolution of nerve-force, the dislocating influence of nitrogen found its opportunity, and the nascent carbon and hydrogen flying apart, appropriated the oxygen needed by the nerve-cells, death resulting from the consequent arrest of activity of the centres in the medulla necessary to life. I cannot say that I proved my point, but I have met with no more satisfactory explanation since, and I met with facts which have never failed to interest men when I have related them. For instance, prussic acid is not a deadly poison to frogs. Many times I injected as much as ten minims of the pharmacopœial solution (one minim of which was fatal to a rat) under the skin of a frog, and as long as he was allowed to hop about in the room he appeared to be no worse for it. If, however, even at the end of half an hour I put him under a bell-jar with other frogs, the prussic acid he exhaled sent the whole lot into a state of torpor. My interpretation was that the evolution of nerve-force in the frog was not attended with sufficient chemical energy to explode a HCN molecule. Another curious fact which turned up was that nitroglycerine, which proved fatal to rats, apparently by paralysing the nerve endings like curare, was a convulsant of terrible energy when administered to frogs.

For a full comprehension of the action of remedies we must know and understand the chemical actions and reactions which are taking place in nutrition, secretion, and disintegration; the chemical changes which attend and condition the evolution of nerve-force and muscular action; the modification of the chemical processes which result from the administration of a drug, and the change in the composition of the drug itself, through which the energy is evolved by means of which it produces its effects. The future of therapeutics is thus in the womb of chemistry. What microscopy has been to anatomy and pathology, chemistry will be to physiology and therapeutics. Anatomy and pathology are the statics of medical science, physiology and therapeutics the dynamics; microscopy, therefore, represents the statical, chemistry the dynamical department of medical investigation. The microscope reveals the ultimate structure of tissues, the methods by which they are developed, and the changes which take place in them in disease; chemistry deals with the forces and operations by which the structures are built up or destroyed and with the actions and reactions of the atoms and molecules which enter into their composition, and will ultimately extend our ideas as much beyond their present scope as the microscope has enabled us to advance beyond the knowledge of the old anatomist.

I cannot invite the relation of researches and the discussion of speculations on the mode of action of remedies in our meetings here, but I do not think I have gone beyond the scope of the Society's aims in speaking of them, since the moment views and investigations are brought to the test of observation at the bed-side and can be embodied in cases, they may be brought before us. This, I acknowledge, I should earnestly desire to encourage.

I can, indeed, refer to contributions of my own in the *Transactions* of this Society, insignificant it is true, in which I tested the hypothesis that substances closely allied chemically, ought to have a similar action on the system, or that any diversity in their operation should

be capable of explanation on chemical principles by experiment with the iron group of metals and with the arsenic group of bodies. I may perhaps be allowed to say, incidentally, that if the medical men and pharmacutists, who devoted so much time and pains a while ago to devising methods for administering that intractable body, permanganate of potash, had been familiar with my paper and with observations long antecedent to mine, they might have been spared much trouble by the information that it is the manganese itself, and not the latent oxygen they vainly thought they were getting into the system, which acts as an emmenagogue, and that the chloride and sulphate of the metal can be administered as easily and as freely as the corresponding salts of iron.

But I must recall myself and you from the contemplation of future powers to the consideration of our present duties. What we have to do is to observe and record; to watch to-day with a mind instructed and guided, but not biased, by the results of yesterday; to bring the experience we gather, without reserve, before the Society for the information of others, submitting our views and conclusions to the judgment of our colleagues, and bringing an open mind to the appreciation or criticism of cases which they contribute in their turn. As iron sharpeneth iron, we shall put a finer edge on each others' faculties, and render our individual and collective diagnosis more certain, clear, and deep.

Diagnosis will not lose in importance as knowledge increases or becomes more easy. If we knew all that is to be known of the action of remedies, it would only render diagnosis more important than ever, just as every improvement in the accuracy and power of artillery makes the aim of the gunner of greater consequence. A bad gun—to continue a simile employed before—badly directed, may hit the mark; a good one could not by any possibility; so precision in the employment of remedies would only make failure more certain and disastrous if the diagnosis were wrong.

I have been brought irresistibly back to diagnosis, since from it all treatment must flow; and now I conclude, as I began, by thanking you for the honour you have done me in entrusting to me the duties of President of this Society, assuring you that to them will be devoted my best energies.

LETTSONIAN LECTURES

ON

SOME OF THE MENTAL AFFECTIONS OF CHILDHOOD AND YOUTH.

Delivered before the Medical Society of London, January, 1887.

By J. LANGDON DOWN, M.D. LOND., F.R.C.P.,
Senior Physician to the London Hospital.

LECTURE III.

INFANTILE MANIA.—MELANCHOLIA AND DELUSIONS.—MORAL INSANITY.—“IDIOTS SAVANTS.”—VARIATIONS IN THE MENTAL CONDITION.—EPILEPSY AND CATALEPSY.—PHYSICAL DEFORMITIES.—ASSOCIATED DISEASES.—RATE OF GROWTH.—DIAGNOSIS OF IDIOCY.—“BACKWARD CHILDREN.”—DEFERRED OR ABSENT SPEECH.—MORBID ANATOMY.—TREATMENT OF FEEBLE-MINDEDNESS.

Infantile Mania.—Infantile mania occasionally occurred in quite young children—acute maniacal attacks, in which the patient destroyed everything within reach, or crept under tables and sofas to hide, screaming and biting and scratching anyone who approached. When the attack subsided the conduct was good, but in a few days the violent mania recurred.

Melancholia and Delusions.—Cases in which there were well marked delusions of suspicion, the ordinary trust and unsuspectingness of childhood being replaced by painful mistrust, were occasionally met with. In some cases the delusions were associated with melancholia. He related the case of a girl, herself ill-favoured in appearance, who in a maniacal attack attempted to burn her brother, of whose beauty she was jealous. About three years subsequently she became epileptic, and became later on the subject of epileptic dementia. It was highly probable that the maniacal paroxysm which manifested itself in homicidal mania was really masked epilepsy. As puberty approached, attacks of mental aberration assumed a special character; there was

frequently unnatural introspection, and a critical hyper-conscientiousness became prominent. Five cases, three boys and two girls, were quoted in illustration; they were all very good and studious children, but between 11 and 13 years of age they became moody, had conscientious scruples as to their motives, being anxious not only as to whether they had told the truth, but whether they had done so in such a way as to convey to others the precise idea in their minds. These cases caused great anxiety at the time, and occasionally led to a permanent break-down, but if the climacteric period of puberty was tidied over, might do well. It was important to guard against suicidal impulse. Care should be taken to be quite sure that there was no sexual deviation, and to treat it, if present, not as moral wrong, which would inevitably lead to further mental disquietude and peril, but as a physical evil. These deviations were to be recognised by the following group of symptoms: supra-orbital headache, dilated pupils, a brown-umber areola surrounding the eyes, an averted look and a statuesque bearing which even alone was often conclusive; occasionally the statuesqueness resembled a minor cataleptic state.

Moral Insanity.—Moral insanity was met with in childhood and youth—cases of purposeless theft, purposeless lying, and purposeless mischief. The subjects of this condition were sometimes intellectually bright, and had an amount of address which made them extremely troublesome to their friends. More frequently moral insanity was associated in children and youths with some (it might be a very slight) amount of mental backwardness. The manifestations of moral insanity in such cases, said Dr. Down, are multifarious. I have seen a boy who had brought from school sixteen watches without being discovered by the sufferers, or the principal of the school, and this was so cleverly done as for a long time to elude detection. Another was dismissed from school because he persisted in getting on the roof, and putting pillows and other articles of bedding down the chimneys of neighbouring houses in the terrace, or in filling the pillar-boxes with stones. Another would beg sufficient money during the morning in the streets to enable him to travel backward and forward by the Underground Railway the whole of the remainder of the day. A still more dangerous form is a tendency sometimes met with of setting fire to articles of furniture, often where it would be perilous to themselves as well as others. Many forms of low cunning are developed in backward boys, by associating them with others with more wit, who are also bullies, the feeble one calling to his aid lying, theft, and deceit, to compensate for his lessened intellectual vigour. Again and again I have seen the moral sense developed in boys of this class when they have been removed from the bullying to which they had been subjected, and submitted to appropriate training. In all the cases I have met with of moral insanity, there has been marked antecedent neurotic history.

“*Idiots Savants.*”—This name has been applied to children who, while feeble-minded, exhibit special faculties which are capable of being cultivated to a very great extent. One youth was under my care who could build exquisite model ships from drawings, and carve with a great deal of skill, who yet could not understand a sentence, who had to have his food dissected for him, and who, when writing to his mother, copied *verbatim* a letter from *The Life of Captain Hedley Vicars*, by Miss Marsh, although it had not the slightest appropriateness in word or sentiment. Another has been under my care who can draw in crayons with marvellous skill and feeling, in whom, nevertheless, there was a comparative blank in all the higher faculties of mind. Extraordinary memory is often met with, associated with very great defect of reasoning power. A boy came under my observation who, having once read a book, could evermore remember it. He would recite all the answers in *Magnall's Questions* without an error, giving in detail the numbers in the astronomical division with the greatest accuracy. I discovered, however, that it was simply a process of verbal adhesion. I once gave him Gibbon's *Rise and Fall of the Roman Empire* to read. This he did; and, on reading the third page, he skipped a line, found out his mistake, and retraced his steps. Ever after, when reciting from memory the stately periods of Gibbon, he would, on coming to the third page, skip the line and go back and correct the error with as much regularity as if it had been part of the regular text. Later on, his memory for recent reading became less tenacious, but his recollection of his earlier readings never failed him. Another boy can tell the tune, words, and number of nearly every hymn in *Hymns Ancient and Modern*. Often memory takes the form of remembering dates and past events. Several children under my observation have had this faculty in an extraordinary degree. One boy never fails to be able to tell the name and address of every confectioner's shop that he has visited in London—and they have been numerous—and can as readily tell the date of every visit. Another can tell the time of