ON THE STUDY OF NATURE AS THE FOUNDATION OF MEDICAL SCIENCE AND THOUGHT.

Delivered at the Annual Meeting of the Lancashire and Cheshire Branch.

By JOHN HARKER, M.D.,
President of the Branch.

DR. HARKER commenced by indicating the necessity for the sound elementary scientific education of medical students, but at the same time he dwelt on the advantages of a real taste for nature, cultivated from student-life throughout the rest of a medical man's career. It gave training, foresight, and prevision for the healing art. The whole essentially progressive scheme of nature taught us to favour and live up to the idea that a true natural human aristocracy might yet be built up as the result of intelligent action, founded on knowledge. Dr. Harker then spoke of the physical characters of air and water, and of the impurities of the latter compound. The perfection of microscopy had enabled Dr. Dallinger to detect desmids measuring cubically one-millionth of an inch. The subtle character of invasion of histological elements by bacteria had been detected by the same advances in the use of the microscope. Even in the plant *anacharis*, a kind of bacteria-fever had been discovered. Dr. D. Astley Gresswell had studied the recrudescence of throat-symptoms in patients who had suffered from diphtheria; and it had thus been discovered that the specific germs of the disease were apt to lodge in the follicles of the fauces, and thus cause both recurrence and the infection of other persons. Bacteria theories required scrutiny; and Dr. Troup in a "Note on Bacteriotherapy" in the JOURNAL of June 19th, showed that the relatively innocent *Bacterium termo* did not kill the specific *Bacillus tuberculosis*, as had been supposed. Dr. Harker then referred to a primitive method of purifying suspected water, long carried out in some parts of the country. The water was boiled and poured over toasted bread; when cool, it was used for drinking purposes. Its hardness was taken away, and germs appeared to be filtered away by the process.

Reference was then made to our advance in knowledge of the blood, and to the lectures of Dr. Osler, recently published in the JOURNAL. His researches indicated further fields for yet more important discoveries.

The lecturer concluded by observing that there was for us in nature a revelation even more sure and valuable than that which we had in tradition, venerable and revered though the latter might be. The witness of nature was always with us for verification. It was a teaching learned from our surroundings, with which we must live in harmony, or else we should signally fail in our life and happiness. We should know ourselves as we were, and how to the circumstances of our existence. We were taught to appreciate the beauty of natural objects.

We learnt from the study of nature that certain foods were provided for certain creatures, not merely by adaptation, but also as provision. In the case of man, certain fruits were for the north, as, for example, the gooseberry-bush, which, in southern regions, became an evergreen, and ceased to produce succulent edible fruit. On the other hand, the grape was for the sunny south. Nature taught intelligent man the knowledge of good and evil by rewards and punishments. Evil began in the mind, but remained not there, becoming apparent in the life. So also did its converse, good; and, in life, they each had their mode. This we were taught by witnessing the effect of each vice. Sexual infidelity and excess were punished by sexual disease. Taught by nature, we believed not in the epicureanism of the ancients. We must develop and advance, or we should quickly retrograde. Purity and righteousness brought health and peace; dirt and vice brought, as a consequence, disease, misery, and unrest. Matter was sufficient to account for all we saw and knew. Yet we knew that the pure speck of gold, and the sparkling diamond-crystal of carbon, to be as wonderful and as worthy of admiration as were their various compounds and combinations; and even, if at the base of all the elements we should at some future time learn that there was pure matter, our admiration would be but increased. We were taught by design, by Providence, by dominant righteousness, by eternal power. We were no Agnostics, as some who thought in many things so much in harmony with us styled themselves, but in searching into the secrets of nature we found the knowledge of God.

ON HOSPITALISM.

Delivered at the Annual Meeting of the Yorkshire Branch.

By DAVID GOYDER, M.D.,
President of the Branch.

THE subject of the address, namely, Hospitalism, in the very widest and most literal sense of the word, had been forced upon Dr. Goyder's attention by recent and prolonged discussions occurring amongst the members of the Honorary Staff of the Bradford Infirmary, as to the manner of enlargement of the institution, the need of advancing pathological and clinical research, the revision of the laws of its management, the influence of the staff on its board, and the increasing difficulty of dealing with its out-patients. The last point was an especially important and pressing question, whether regarded in its relation to the public or to the profession. The growth of hospitals, in proportion to the aggregation of populations, had reached a point at which their economic management began to excite serious doubts and misgivings. A medical man was interested in assisting thorough inquiry into the causes which produced the increased application for hospital-treatment, in assisting to reduce to some definite system the rules regulating admission of patients, and in ensuring the appointment of some responsible authority to enforce those rules. For the causes of the financial failure of hospitals, which was decidedly threatened, not only deteriorated his own work, but depreciated the reasonable expectations and rights of his fellow practitioners outside. Besides, the admission of unsuitable cases tended to produce what was noxious to the state of which the medical man was not an unimportant member, the killing of the self-respect of the well-to-do artisan, and increased pauperisation of the masses.

The abuse of gratuitous hospital-relief had been well proved by statistics. This subject called, he considered, for a searching inquiry by a Royal Commission. This evil was chiefly due, not to uneven distribution of wealth, but rather to faulty safeguarding of the portals of hospital-relief; and, perhaps, not only lay managers, but the part of the profession directly concerned in hospitals, might have shared in distributing lax and lavish benevolence.

Dr. Goyder next discussed the alleged increase of disease. It did not appear to increase in proportion to the growth of the population. The greater frequency of neurotic affections, arising from the wear and worry of life, was counterbalanced by the diminution of zymotic disease effected through sanitation. Intemperance and its consequences were certainly decreasing, and malignant maladies, though their augmentation was alleged, might be dependent for this appearance upon the greater skill exercised in their diagnosis. But if disease was not increasing relatively to population, yet massing of populations increased it in bulk. Thus the increasing centralisation of large commercial and industrial interests concentrated people from the country districts into cramped town-dwellings. This centralisation furnished one great factor in increasing applications for hospital-relief. This, however, could only be ameliorated by sanitation. Some persons, by the way, believed that this excessive centralisation would find its own remedy in the gradual loss by England of its great manufacturing supremacy, and the return of a large mass of the inhabitants of towns to agricultural pursuits—a belief more humane than patriotic, however likely to prove true.

The lecturer then referred to the lavish distribution of recommendations from subscribers to hospitals, which resulted in the admission of numerous cases well able to pay for private advice, to the great detriment of the general practitioner. These recommendations ought to be abolished, and every case henceforth admitted solely on its merits. In some towns in which hospitals had abolished recommendations, especially in centres of teaching, cases were often admitted, whether able to pay or not, because they illustrated to students special characteristics of disease or treatment.

In justice to those who sent them in, it must be admitted that any motive so sordid as payment was never even thought of; but, apart from the benefit to patient or student, was not evil thereby wrought to the practitioner outside? Was it not the first duty of the hospital physician or surgeon, the circumstances of the patient being known, to remit the case to the practitioner who had attended it, and even to urge his prosecution of the case, not for his monetary benefit merely, but that he might increase his skill and acquaintance with the treatment of severe disease? Such a course would do good in every direction.

Another cause of the increase of hospital applicants, was the com-

mon public opinion that the poor obtained the best relief at hospitals. In reality, only remarkable or serious cases obtained special attention, and the out-patient officers were always overworked. The number of cases seen in hospital should be limited, and the rest should be scattered amongst certain outside practitioners, appointed in proportional districts of a town. It was important to exclude patients really poor, but subject to a craze for physic, and others who simply came to get drugs, which they sold to others outside. This had been detected at the Bradford Infirmary.

An expedient to cut off these parasites had been successfully tried at certain hospitals. A nominal charge was made to every patient receiving medicine, remitting it only to patients above suspicion, who produced evidence of inability to pay. That some such method would be an excellent deterrent to unworthy applicants there had just been experimental proof in regard to dental extractions. In the month of May, 1885, the number of teeth extracted gratuitously at the Bradford Infirmary was 230. This number varied month by month, a few less or more, till May 1886, when, at the suggestion of Dr. Bell, a fee of threepence was ordered to be charged to each applicant for extraction; at once, the number of extractions fell from 230 to 63, or about one-fourth. If a fee of threepence deterred applicants, suffering positive pain, from seeking gratuitous relief, a slightly larger fee would surely banish applicants possessing imaginary ailments, or positive thieving propensities. But a proposal of this kind might raise objections. Subscribers might consider that such a demand contravened the first principle for which their benefactions were made: that of affording medical assistance to those temporarily incapacitated by disease. It might be replied that the charge was too small to weaken the act of undoubted charity which they, as subscribers, intended, or which the authorities and unpaid or honorary staff of the hospital administered. It tended to cut off unworthy applicants, yet would be remitted wherever inability to pay was made clear, and it would be cheerfully paid by the mass of the really deserving. Besides, it would only be exacted when medicine was furnished, and the proceeds could be applied to lessen, in some degree, the increasing outlay of hospitals upon drugs.

Again, general practitioners in the poorer districts of towns might allege that such a charge would act as a sort of bribe to their constituency, to save eighteen pence or two shillings a visit and medicine, and lure their patients to the hospital where they could obtain both for sixpence. These fears, however, were groundless, because, where the plan had been tried, the applicants at the hospital had been lessened. Two safeguards would render the abuse of charity impossible: *a*, the fixing of a scale of incomes, below and above which applicants would be refused hospital assistance; and *b*, the employment of officers of the Charity Organisation Society, or a special official detective paid by the hospital, whose duty it would be rigidly to search into the circumstances of all applicants, and report the result to the hospital authorities, who could thus reject all unworthy cases.

After weeding out every unworthy applicant for hospital relief, the number of deserving patients still remained legion. No rightly constituted mind would question for an instant that the best interests of a community were fostered and worthily exercised in providing for the care of its sick poor. For that reason hospitals existed. It was also to the interest of the community, that they should be wisely and efficiently administered. All bodies, therefore, concerned in their monetary support, ought to be represented in their management; and, above all, their acting staffs should be largely represented on all their boards and committees. Where this representation had been absent, disastrous results had followed, especially where the central executive authority had been vested in one or a few paid officials and directors, who disregarded representative boards of management as well as the medical staff. This evil was shown by the wasteful extravagance in the erection of the colossal, unsanitary, and in one portion of them misapplied, buildings of St. Thomas's Hospital; and, by the paralysis of the best work of an eminent staff, by the severance from them of the control of the nursing arrangements, at Guy's Hospital. In these respects, matters were more judiciously arranged in the provinces. In Bradford, the staff was fully represented, and the general management of the institution by the laity upon its board appeared to be wise and economical. The voices of the staff should have more weight in questions of improvements in the buildings and their sanitation, and of ampler facilities for clinical and pathological work. The laity on the boards of hospitals should learn that the truest economy ran hand in hand with the rapid and successful treatment of patients; and this was only secured where the opportunities for research and experience by the staff were multiplied and perfected. Dr. Goyder then observed that the lay managers often attributed interested motives to members of a hospital staff who sought the extension of facilities for scientific

observation. He pointed out the fallacies underlying this idea. He believed that general practitioners should encourage improvement in this direction by frequent visits to hospitals, in order to keep up their clinical knowledge.

The lecturer then dwelt on the necessity for the control of the nursing in a hospital to be in the hands of the medical staff. He deprecated the aggregation of the sick into large and imposing edifices, and believed that the skill in battling against disease and vitiated air in colossal hospitals might meet with still greater success in the homes of the people, when those homes had been rendered healthy. Dr. Goyder believed that hospitals should be smaller and more scattered, and officered by practitioners living close to them, who best knew the character and social conditions of the surrounding population. More convalescent hospitals were needed, and incurables ought to be treated in special hospitals.

Dr. Goyder believed that this decentralisation would be beneficial and not harmful to students. Their anatomical studies should be pursued in institutions far from hospitals, and afterwards they could go through their clinical education under far healthier conditions than at present. Under the proposed system, patients need not be worried by large classes of students, for the students would be widely distributed over several district hospitals, where they would obtain a sound clinical education. The student's health must also be considered, for he must be strong in order to be of service to the community in after-life. Hence dissecting-rooms should not only be built far from hospitals if possible, but should also be well ventilated and well lighted. There was a great necessity for well-paid medical teachers; and, if hospitals were decentralised, the services of medical officers must cease to be honorary.

The reformations proposed in the address lay in the hands of the profession, and only such an organisation as the British Medical Association could bring to bear upon the Legislature and the public the intelligence and force essential to secure the needful changes. It had been said that reforms seldom issued from within corporate and other self-constituted bodies; but it was of the essence of our profession to be continually impelled into inquiries respecting individual, collective, and national health, and the means for this must keep pace with our advancing knowledge. All we wanted, but that was essential, was united action, and affiliation of all the bodies and interests of the profession present and to come. It would be a fatal misfortune that our wish to advance should fall behind the growing requirements of the age, for the so-called rising democracy was becoming an educated, lynx-eyed, and invading force, which tended to unsettle or overthrow everything which was not in advance of itself. Our knowledge was of a kind which, peculiar in itself, required the devotion of a life to master. Let us only be steadfast in our efforts to perfect and ennoble it more and more, and then we should have the State and people with us, and never against us.

THE RECOVERING POWERS IN OLD AGE.

Read at the Meeting of the East Anglian Branch in Ipswich.

By G. M. HUMPHRY, M.D., F.R.S.,
Professor of Surgery in the University of Cambridge.

In a paper read at the Royston meeting of this Branch, and published in the *BRITISH MEDICAL JOURNAL*, July 12th, 1884, I called attention to the rapidity with which wounds, ulcers, and fractures are often healed in aged persons, adducing evidence from information supplied by members of the Association in reply to a Collective Investigation inquiry. I have since received much additional evidence bearing on the same point, and hope that the contrary impression which has arisen, rather as an issue of probability than as a result of observation, is beginning to be modified.

In that paper I endeavoured to show that the failure of union in intracapsular fracture of the neck of the thigh-bone, upon which so much stress has been laid, is due to the peculiar conditions of the part, to the separation of the broken surfaces, to the buried position of the inner fragment in the cavity of the acetabulum, which prevents the formation of any uniting medium around it, as well as prevents the contact of the fractured parts, and also to the bathing of the fractured surfaces by synovial fluid, wherein the products, which might have subserved to repair, are lost. The neck of the thigh-bone is, indeed, circumstanced much in the same manner as the patella and the olecranon; and that failure of union in it is due to the causes I have indicated, and not to the age at which the accident occurs, is