Address.

THE PROGRESS OF MEDICINE DURING THE LAST FIFTY YEARS.¹

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IF we consider the progress which medical science has made during the past fifty years, and its position at the present day, we are led to hope that the time is not far distant when the healing art will approximate in certainty to the exact sciences. Not many years ago, for example, it seemed impossible that a correct diagnosis of the principal structural diseases of the brain and spinal cord could ever be attained; and yet we are now almost as familiar with their characteristic symptoms, and with the nature and anatomical situation of their lesions, as with those of the lungs, the heart or the pleura. The twin departments of physiology and pathology (the former was born almost within the memory of some of us) have made immense strides, and, along with improved methods of clinical observation and research, have aided more than anything else in the advancement of our knowledge of disease and its treatment during the past half century. Bacteriology has revolutionized our notions of the causes and nature of many diseases, and of their proper management. A great amount of useless and pernicious medication has been abandoned, while the number of valuable remedies has been increased. The principle of prevention is advancing in proportion to our increased knowledge of the causes of disease, and hygiene has become an important branch of medical education. Even in tuberculosis, the most wide-spread and fatal of maladies, the results of prophylactic treatment, founded in part on the great discovery of Koch, are found to be most encouraging; and it is not unreasonable to hope that the disease may in time become as controllable as is small-pox at the present day.

Many other recent advances in medicine readily occur to us. I need only mention the progress in State medicine, in public hygiene, in the construction of hospitals, in our acquaintance with the laws of climatic treatment of disease; passing by many others which the limited time at my disposal prevents me from noticing. In no department of medicine, however, has development been more conspicuous than in that of teaching. Formerly, good teachers were rare, and students were compelled to acquire what knowledge they could chiefly by listening to didactic lectures. In my day there was but one teacher in clinical medicine in Harvard Medical School, and he could give but little time to it, being at the same time professor of *materia medica*; whereas now clinical teaching has to a great extent supplanted didactic lectures in all medical schools. New departments for the study of various specialities have been created, and provided with competent teachers and well-equipped laboratories, and it cannot be long before a full course of at least four years' study will be required of every applicant for the degree of doctor of medicine.

Did time allow, it would be interesting to study the causes of this great advance in medical science, but I can barely allude to them. In many respects they are the same as in the case of other sciences, both

physical and moral. Each step forward of one helps the growth of others. Medicine is almost as much indebted for the position it now holds to biology, to chemistry and other branches of physical science, and even to mechanical art, as to clinical observation and pathology. Electricity puts us in touch with the whole civilized world, and every new discovery in science and art is immediately announced from one hemisphere to the other. Communication between distant regions is abridged by railroads and steamships; and scientists whose homes are thousands of miles apart can come together with comparative ease, for the interchange of knowledge. We must, indeed, ascribe to the more frequent professional intercourse which we enjoy a prominent influence on the growth of medical science, as of science in general. In small communities physicians do not often meet for the discussion of medical subjects, and stagnation of ideas is apt to arise from the lack of diffusion of personal knowledge; but when large numbers are gathered together from distant parts, differences of experience and observation give rise to discussion and to the development of new ideas. We find, for instance, that diseases may vary in clinical aspect, in severity, and in methods of efficient treatment, according to geographical situation, climate, elevation, race and modes of life. Some are more or less strictly confined to certain regions, and our knowledge of them must be obtained from observers living in those regions, or visiting them. The treatment of disease, both general and special, often varies much in different countries and in different parts of the same country. In some it is active, including a large amount of medication; in others it is more passive, being directed rather to the condition of the patient and to the special symptoms which he exhibits, than to the disease itself. Certain wide-spread diseases, specific in their nature and self-limited in duration, are found to be but little influenced in their mortality either by geographical locality or by different and opposite modes of treatment; while, on the other hand, age, constitution, habits, and complications play a much more important part in the result. This is strikingly shown in the various papers on the mortality of pneumonia which have appeared in different medical journals during the past year.

It is not easy to overrate the great influence of the medical press in elevating the standard of the profession, and in the diffusion of scientific knowledge in all parts of the world, by the publication of original articles, clinical and other lectures, reports of interesting and instructive cases, and proceedings of societies and conventions. Thousands of practitioners who are unable to leave their homes are thus brought into communication with the highest authorities in medicine, and can avail themselves of the most recent advances of medical science.

Finally, we must recognize as one of the great advantages of medical conventions the privilege of becoming personally acquainted with men from all parts of our country whom we have hitherto known only by reputation, or through their writings. In this way the profession is more closely drawn together, sectional prejudices are allayed, harmony of ideas on the subject of medical improvement is promoted, and the foundation is laid of enduring and delightful friendships.

The organization of this Association is peculiarly adapted to aid the progress of medical science. It

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represents no one section of our country, but includes practitioners from all parts of the United States and Canada, whose experience, observation, knowledge, and ability are brought together for comparison and for mutual instruction. The programme for the present session includes many subjects of interest and importance, and its length warns me that I must no longer trespass on your time.

Original Articles.

SCIENTIFIC WORK BY ALIENISTS.

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In a recent issue of the *Nineteenth Century* is published, under the title "Lunatics as Patients, not Prisoners," a semi-professional article by John Batty Tuke. A fair amount of expert knowledge is necessary to the adequate appreciation of his remarks: we may also bear in mind that he is at the head of a private asylum for insane.

From the above paper it appears that in England, the taxpayer, seeing a steady increase of pauper lunacy, is inclined to think the millions of money furnished for the arrest of such disease not judiciously expended; that the public look fruitlessly for any manifest indication that the specialty which professes the treatment of insanity has kept abreast in the onward march of science; that grave and deep-seated faults underlie the system of management; a doubt arising as to whether mere philanthropy has not absorbed the pabulum which should have given life and strength to really kind science. The ultimate object of the numerous establishments—the greatest good, that is, cure, of the insane—has not been obtained, because the best methods have not been adopted. While it seems ungracious to demonstrate the failure, in any degree, of philanthropic schemes, yet, if we are to progress, experience should be bold in criticism. Although it is a primary duty of the State to protect, affording refuge is not the highest function of an asylum. To quote the author, "The structure and arrangement of any one of our pauper asylums," with "the constitution and duties of its medical staffs," show that the "organization was begun on the motive of protection and under the psychological (non-modifiable by treatment [?]) theory of insanity." "But what has been done for the disease of the brain? We seek in vain in our asylums for any evidence of systematic inquiry" and treatment based on modern notions of cerebral physiology. We find, indeed, chapels, ball-rooms, cricket-grounds, but no hospital or laboratory for psycho-pathologic research. To copy, again, his words, "Committees have but little sympathy with the scientific view. So far is this the case that I have known candidates for appointments objected to on the ground that they had scientific proclivities, and had no knowledge of farming." This original plan has undergone little if any modification down to the present day, while a century of observation has been lost and hundreds of misdirected lives of good men wasted or frittered away. If this be thought strong language, compare the work done since 1850, regarding the pathology of the brain and spinal cord, with what has been accomplished by specialists in lunacy. Save a

few recent sporadic efforts, the veteran Calmeil only has given to the world productions worthy consideration as scientific in the almost future branch, psychiatric medicine: for, as yet, treatment is entirely empirical, depending mainly on good hygiene and personal experience.

Dr. Tuke makes pertinent recommendations as to appropriate disposition, style, and expenditure in architecture; changes in supervisory and medical duties; furnishing apparatus for observing, treating, and teaching; and the benefits which will therefrom ultimately reach the public. Physicians in asylums should be allowed to fulfil the proper duties of their office, but not be required to do the custodial routine service for which properly-trained attendants are quite competent. More cures might, in such conditions, be expected, and time secured for original investigation, progress, tending toward evolution of a rational system of treatment.

Concerning alleged difference in principles of management by the English and Scottish, he states that such does not exist, unless it be in the point of administration, efficient supervision over a limited area being the practice in the northern realm. Of bills lately proposed for legislation he strongly combats those which (besides other defects, some of them doubtless due to their being drawn up by lawyers only) permit especial privileges to existing private asylums.

The questions above treated, while not altogether new are of such importance that they may well be brought repeatedly to the attention of a public interested in both the welfare of the individual now needing care, and the scientific investigation that will inure to better guidance of future sufferers from enfeebled or disordered mind. Despite yet existing impediments to the cure of acute cases, and embarrassments in the care of the chronic insane abroad (which evils are apt to become of great moment in this developing nationality), recent literature upon the condition of lunatics in the Old World inclines us to have a somewhat more optimistic opinion than that given in Dr. Tuke's paper. The limits of this review, however, compel us to restrict the present survey rather to facts and projects of our own country.

In America, during recent years, the great number of applications for admission to asylums, and the pressure to provide accommodation for inmates put upon those in charge of administration, have hitherto practically prevented extended scientific work. It has been rather a period of asylum-hospital construction. The capable superintendent is presupposed to possess professional and moral qualifications of a high order, being charged with delicate and responsible duties, in the proper performance of which every citizen of the State is deeply interested. Though illumined by the philosophic spirit, and enthusiastic with faith in the gospel of science, he has been, therefore, necessarily almost exclusively occupied with the business of direction; has not had time to give his personal oversight to details of original research, or to use his own fingers in manipulation of the microscope and other appliances: yet he is abundantly able to indicate what course skilled observers may wisely follow in old or in newly-found fields of work and experiment, and to lay out the tasks with which others can be productively employed.

Granting that European institutions are, perhaps, in some ways, more fully equipped as regards hospital