Address in Medicine:

MEDICINE AS A SCIENCE AND MEDICINE AS AN ART.

Delivered at the Annual Meeting of the British Medical Association held at Ipswich on August 1st, 1900,

By PHILIP HENRY PYE-SMITH, M.D.,
F.R.C.P. LOND., F.R.S.,
CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—It has sometimes been disputed whether medicine should be regarded as a science or as an art, but there is no doubt that the original meaning of "medicine," and of the corresponding term in other languages, is the art of healing. Medicine is so defined by Aristotle, and the art of curing, to which we may add the art of preventing, disease has all the characters of an art. It depends upon experience and skill, it deals with individual cases, and the perfection it aims at is practical, not speculative—the knowledge how to do and not the knowledge how things happen. Nevertheless, as practical navigation is founded on astronomy, meteorology, and physics, and as the art of agriculture rests on botany, geology, and vegetable physiology, so the art of medicine depends on the science of pathology, the practice of physic on the principles of physic. On the one hand, then, we must never forget that we practise an art. We must never allow theories, or even what appear to be logical deductions, or explanations however ingenious, or statistics however apparently conclusive, or authority however venerable, to take the place of the one touchstone of practical medicine, experience. We must never treat the disease without considering the patient, for the art of healing is the art of healing individually. Nor need we wonder if vast knowledge, profound learning, and the best scientific training sometimes fail to make a successful practitioner, since, besides adequate knowledge to save us from gross blunders and a strenuous endeavour to do our best for each patient, however uninteresting the case or however irksome and unrewarded our toil—besides these first requisites for our art there is ample room for those personal qualities which ensure success in every department of life: for power of observation and insight, for the personal influence by which a strong character will secure obedience and inspire hope, for the judgment which divines what kind of remedies are suited to each patient, what kind and of what strength, and for the sympathy which puts one in the patient's place and not only meets, but anticipates, his wants.

If, however, medical science without art is inefficient, medical art without science is not only unprogressive but almost inevitably becomes quackery. As soon as we treat our patients by rule of thumb, by tradition, by dogmas, or by metaphysical axioms we do injury to ourselves as well as to them. The bone-setter who is ignorant of anatomy and the wise woman who cures by charms are not more irrational or less successful than was the physician of the seventeenth century who, in obedience to the doctrine of signatures, advised an infusion of roses for hæmorrhage, and saffron for jaundice, and lungwort for consumption, or the astrologer who prescribed salts of silver, iron, lead, or mercury in accordance with the horoscope of the patient and the planet under which he was born. Not less mischievous, and, in the true sense of the word, unscientific, were the systems of medicine known as the "iatromechanical" and the "iatrochemical," which in their turn had their vogue. The Brunonian system, explaining all diseases as due to laxity of fibre, was no better; for indiscriminate use of "corroborants," or, as they would now be called, "tonics," is as irrational as that of hydropathy, of alcoholic stimulation, or of electricity. There is no such thing as a tonic or strengthening medicine. The only source of strength is oxidisable food, and bitter medicines can only give strength by improving appetite and digestion. The last of the systems of medicine founded on a dogma is homœopathy, of which the theoretical absurdity is somewhat concealed by the more obvious nonsense

of infinitesimal doses. It, like other systems which preceded it, is not a rival to rational medicine, it is not a mistaken answer to a legitimate question but an attempted solution of a problem which does not exist and an attempted answer to a riddle which has no solution.

Apart from these exploded systems of treatment our profession has often suffered from lack of the scientific, inquiring, sceptical spirit and has often been led too easily by authority, by tradition, and by fashion. The reckless abuse of venesection in the last century and the former half of this century led to almost complete disuse of a valuable means of treatment and the misuse of mercury in the treatment of syphilis led to the denial of its unquestionable efficacy. Have we not seen the value of stimulants in a contest with fever lead to their indiscriminate use in almost every ailment? Has not the immense value of careful and thorough nursing led to its absurd exaltation to an independent place—as if good nursing was anything more than an intelligent carrying out of the physician's directions? Has not the remarkable power of electrical stimuli led to a blind, unscientific, and mischievous employment of this remedy as if it had some mystic power apart from its demonstrable physiological effects? May we not say the same of hydropathy, of massage, and of hypnotism? It is significant that the irrational exaltation of any of these particular modes of treatment into a panacea, while it begins in want of scientific intelligence, invariably ends in imposture and deceit. Our only safeguard against the spirit of quackery and the deserved loss of public confidence in the profession which it brings with it is continued recurrence to the scientific basis on which the practice of medicine rests. Our art is most satisfactory and efficient when most closely resting on science. The surgeon is continually guided by anatomy and mechanics in dealing with injuries and deformities. The physician is often able to apply his knowledge of chemistry and natural history to the direct and satisfactory treatment of disease. In general, medical science justifies itself in the same way as astronomy or chemistry by its predictions coming true. In particular the detection of plumbism, the diagnosis and cure of scabies and ringworm, the treatment of poisons by chemical antidotes, and of specific diseases by attenuated inoculations, are all instances of strictly scientific medicine. Nor can I refrain from citing the most recent and one of the most remarkable advances of our science in the discovery of the origin of malaria. This heavy tax upon national as well as individual vigour and happiness has been known and treated from the dawn of medicine; but although by a happy accident its efficient treatment was discovered it is only lately that by the combined labours of scientific physicians, Frenchmen, Italians, and our own countrymen, the origin of the disease has been discovered, the mode of its transmission traced, and the diagnosis of its several forms established. We know that treatment of symptoms without a diagnosis is always unsatisfactory and frequently worse, but we know also that diagnosis must rest upon accurate knowledge of morbid anatomy and of the natural history of the disease. Scientific medicine based on observation and experiment is always practical as well, but empirical medicine, whether based upon fanciful speculation or working by blind rule of thumb, is the most impractical thing that can be.

PREVENTIVE MEDICINE AND ETIOLOGY.

That important and constantly growing branch of medicine which deals with the prevention rather than the cure of disease depends no less upon science, for tracking the dependence of one event upon another is the essence of inductive science. All efficient measures for the preservation of health, whether by individuals or communities, rest upon exact knowledge of the natural course of diseases. In fact, disease may be defined as the reaction of the human organism under conditions which make for its destruction. We must never forget that no irritant will cause inflammation in a lifeless skin; that no bacteria can produce fever without a nervous system to play upon; that no meal, however Gargantuan, and no potatoes, however deep, can produce their wonted effect without a stomach to react. The infection of small-pox, of diphtheria, or of tubercle exerts a very different influence upon vaccinated or unvaccinated subjects, upon one who has received and one who has not received the prophylactic serum, upon an organism which is predisposed to, or which is refractory against, the invasion of the enemy. How closely natural science is related to preventive medicine

is shown by the history of Jenner who was a naturalist, and of Pasteur who was a chemist. How dependent we are upon science is well illustrated by the history of myxœdema. The cretinoid condition in adults which was discovered by the clinical acumen of Sir William Gull, unintentionally produced by the surgical skill of Professor Kocher, and reproduced in animals by Mr. Victor Horsley, is now cured by the eminently scientific method due to Dr. G. R. Murray of Newcastle and to Dr. Hector Mackenzie of St. Thomas's Hospital. Such examples of accurate tracing of causation by observation and experiment admonish us to give up the perfunctory explanations which so often do duty for investigation. If we ascribe every inflammation to cold or if we acquiesce in the popular ascription of disease to overwork, mental strain, and the nervous tension of modern life, we shall make no progress in true etiology. I see many patients suffering from idleness, but few or none suffering from hard work. "Nerve prostration" from "worry" and "brain-tension" generally proves to be a decent veil to the effects of gambling and drink. Modern life is easier, safer, and smoother than it was 100 years ago. Our young men and maidens are healthier, stronger, better grown, less emotional, less hysterical, and sounder in mind and body than their great grandparents. I venture to think that the duty of a physician is not to flatter the selfishness of neurotic patients, but to inspire fortitude and to prescribe regular and steady work as the best cure for a thousand nervous ailments.

As another point in scientific etiology, suffer a warning against the assumption that because many diseases are now proved to depend upon the presence of bacteria this must be true of all. Science does not anticipate but waits for proof. We have complete scientific evidence, according to the criteria so well formulated by Koch, of the absolute and constant cause of anthrax, of relapsing fever, of tubercle, and of several other diseases in both men and animals; but we must not forget the preliminary difficulty of identifying the specific bacillus as in the case of enteric fever and diphtheria, or the difficulty of finding one of the lower animals which is susceptible to the disease as again in the case of typhoid fever and of cholera, or the difficulty of the same anatomical and clinical conditions being produced by different organisms as in the case of pneumonia and ulcerative endocarditis. Moreover, while in some diseases which are undoubtedly infective and specific no constant pathogenic microbe has yet been determined—as in typhus fever, measles, small-pox, and syphilis—we have, on the other hand, in the case of leprosy and of lupus examples of disease unquestionably specific and bacterial in origin, but very unlike other infective maladies in their clinical course and natural history. At present it is surely undesirable to speak of "the undiscovered microbes of rheumatism." Science has to do with proved facts alone, and our language should never outrun our knowledge.

PROGNOSIS AND STATISTICS.

Another important branch of medicine—prognosis—depends as an art upon experience and insight. In making an individual prognosis shrewd observation is needed, and in this, of all branches of our art, it is true that—

"Old experience doth attain
To something like prophetic strain."

Yet here also rational prognosis rests on the science of statistics.

It is to Louis and the French School of the second quarter of this century that we owe the application of this important method for learning the natural history of disease—a method which not only supplies a foundation for prognosis but also a criterion of treatment. There are, however, many pitfalls in deducing conclusions from statistics. The morbidity or incidence of a particular disease upon the whole community is often confused with the mortality or the fatal cases of it compared with the population, and this last is confused again with the case mortality. The return of deaths from a certain disease in a town or kingdom has been applied to the population which existed eight or nine years before. The success of treatment of a disease occurring in barracks—that is to say, among picked subjects, all in early manhood, under strict discipline, and sent to hospital as soon as they are unwell—has been compared with that of other measures carried out in totally different circumstances. As examples of statistical misuse take these facts. The numerical returns of the lying-in charity of a London hospital led to the conclusion that more women were delivered of a second child

than a first. A physician to inspire confidence in an anxious patient assured him that the mortality of the complaint from which he was suffering was only 1 per cent., and in answer to the further inquiry whether he had seen many cases, said, "Yes, I have looked at my note-books and find that I have seen 99, and they all recovered."

Apart from the corrections and limitations of statistical science we are sometimes in danger of forgetting that to be of any value statistics must be based upon cases which are both numerous and accurate. A small number of cases is useless. It led to the conclusion that myxœdema was peculiar to women and that insular sclerosis was rare in men. It was only after hundreds of cases had been observed that we learnt that infantile paralysis sometimes befalls adults and that osteo-arthritis may occur in children. This defect is remedied by time, but the defect of inaccuracy is without remedy. If diagnosis is perfunctory or careless or nomenclature is arbitrary and inconstant the more cases observed the less do they teach. It is disappointing, after the immense labour, time, and trouble devoted to the compilation of the official nomenclature of diseases of the Royal College of Physicians of London that although adopted in the navy and the army and by the Registrar-General it is constantly neglected, not only in conversation, but in systematic treatises. How can statistics be anything but misleading when made up of cases of one and the same disease under such different titles as "chronic rheumatism," "rheumatic gout," "rheumatoid arthritis," "arthritis deformans," and "osteo-arthritis"? Of what value are statistics when such different diseases as acute lobar pneumonia, broncho-pneumonia of children after measles, pulmonary tuberculosis, cirrhosis, and septic suppurative of the lung are all labeled "pneumonia"? One difficulty is put in the way of the practitioner in making an accurate return by the well-meant, but I think in practice unfortunate, provision for returning a primary and a secondary cause of death. Sometimes this corresponds to facts and gets over a difficulty; but if a patient dies from enteric fever there is nothing gained by adding congestion of the lungs as the secondary cause, still less do we learn from a return of "primary cause, a chill; secondary cause, debility." As a matter of fact, in looking through hundreds of death-certificates one arrives at the valuable conclusion that a frequent cause of death is "exhaustion" or "cardiac failure."

Another and opposite mistake is often made by attempts at too great precision in diagnosis. To say that a man died from apoplexy or from paraplegia is to state a fact within any competent practitioner's knowledge, but in the absence of a post-mortem inspection to say that he died from cerebral hæmorrhage or from myelitis is not a fact but a more or less doubtful inference. It is surely better to be satisfied with a statement that there were ascites and enlargement of the liver when the cause of enlargement is altogether uncertain than to be more exact and less true. I have again and again seen diseases the existence of which no experienced physician would assert without a necropsy returned as if they were common and easily recognised conditions—"pernicious anæmia," "syringomyelia," or "cancer of the lung." It would, I venture to submit, be a great improvement if the return of one cause of death only were demanded, if certainty and definite statements were aimed at rather than speculative minuteness or vague generalities, if a query were allowed to qualify deductions as distinct from observations, if the fact or the absence of a necropsy were always stated, and lastly, if the authorised nomenclature was always used.

EXPERIMENTS IN SCIENTIFIC MEDICINE.

There is one aspect of scientific medicine so important that it must not be omitted—the necessity of experiments for the progress of pathology and through it for the prevention and cure of disease. It requires no argument to convince anyone who is the least acquainted with the principles of inductive science that experiment is no less necessary than observation. In physics and in chemistry this is obvious and is universally acted on. The same method is indispensable for the progress of animal and vegetable physiology, and to such practical applications of science as engineering, agriculture, and medicine. Nor can experiments be restricted to rare and solemn occasions. They must be carried on in large numbers by many different experimenters and under every variety of condition. Any attempt to abolish, to check, or to limit this experimental

work is, in the degree that it is successful, fatal to progress. Happily it can never be successful, for the impulse to increase knowledge of the works of creation is too deeply implanted in men. Investigation must and will go on by the only path which it can follow. The method which was preached by Francis Bacon and followed out by his great contemporary William Harvey, which was continued by Lower, Hooke, and Mayow in the early days of the Royal Society, and by Aselli, Malpighi, and Haller, by Hunter, Hewson, and Hales, by Edward Jenner, by Sir Charles Bell, by Johannes Müller, by Claude Bernard, by Ludwig, and by the many eminent physiologists and pathologists in Germany, in France, and throughout the civilised world—this method of investigation is absolutely necessary for the progress of our art. As its objects and methods are better understood it will secure the enlightened patronage of all who desire the diffusion of human knowledge and the further spread of human happiness. Fortunately this very progress of science has brought with it the removal of the one grave drawback which every right-thinking man must have felt to the benefit we reap from these experiments upon living animals. Inflicting pain upon the humblest of God's creatures is repugnant to our feelings, though no one (unless maintaining a thesis) would contend that it is wrong to exact the most painful efforts, or even the death from exhaustion, of a horse in order to carry help to a human being. The discovery of ether, chloroform, and other anæsthetics and the improved methods that we owe to the genius of Lord Lister have not only relieved the surgeon of the most repulsive part of his duties but have relieved the experimenter also. Except in the investigation of the action of new remedies or in the inoculation of infective diseases—both of which inflict discomfort of a limited degree and duration rather than anything that can be described as pain—the experiments of the laboratory, whether physiological, pathological, or therapeutical, are conducted without inflicting pain. The opposition to them has not succeeded and it is sure to diminish. However mistaken our opponents we are glad to find that there is even exaggerated jealousy to avoid anything approaching to cruelty. Our more candid critics may be assured that this legitimate object is already amply provided for.

THERAPEUTICS AND SCIENCE.

Lastly, how far is the final end of our art—the cure of disease—directly dependent upon science? It rests, we know, upon that sure basis, but even in its practical carrying out we are bound to take with us a scientific spirit. The administration of digitalis for cardiac dropsy, of mercury for syphilis, and of thyroid extract for myxœdema is as truly scientific as prescribing a chemical antidote for poison or nitro-glycerine for angina pectoris, for it rests on a sure basis of observation and experience. But because in many cases we cannot as yet explain how remedies act we should not prescribe them without watching the effects of the experiment. The foolish cry against hospitals as “places where they experiment on patients” is meaningless just because it is true. Every prescription given, every operation performed on rich or on poor, is an experiment and ought to be watched with critical and scientific eyes. Here let me say that our practice is often ineffectual, not for want of an accurate diagnosis or of adequate means of treatment, but merely for want of the needful treatment being thoroughly carried out—a want which inevitably prevents success and therefore leads by a vicious circle to scepticism and want of thoroughness on the next occasion. A man who believes everything he is told of the action of remedies not only in the serious treatises of Garrod, or Wood, or Brunton, but in the partial assertions of advertising druggists, is sure to be unsuccessful, and, beginning with credulity, is apt to end in unbelief of such remedies as digitalis, and mercury, and opium. Such a man will prescribe and will never see that his prescription is carried out, and by the habit of giving multifarious mixtures of drugs in ineffectual doses he will allow what he has ordered to be taken three times a day for a fortnight to be really taken twice or only once a day for a week. He will prescribe exercise or lying down, abstinence or feeding, and never see that his directions are carried out. Who shall blame the patient if he ceases to believe in remedies to which the physician obviously attaches no importance? If we would sometimes prescribe no drug at all, but insist on abstinence from certain articles of food or drink or on more frequent or less frequent meals, on regular exercise or absolute rest, should we not secure more obedience from our patients when we prescribe really necessary

drugs—just as a clergyman who desires to get a liberal collection would do wisely to begin by insisting on the sin of giving to charities which one believes to do more harm than good? How can we expect success in treating an obscure nervous affection if we apply galvanism to the spine without making sure of any physiological effect, nay, sometimes without making sure that a current is passing through the electrodes? or if we send a patient to drink the waters of such and such a fashionable watering place without remembering that there are two or perhaps three springs, one of them inert and the other perhaps injurious? What success can be anticipated if we order ointment for a weeping eczematous patch where it floats on the secretion and never reaches the inflamed tissue? or if we prescribe a lotion to be applied twice a day to skin well protected by its sebaceous secretion? We all know this half-hearted ineffectual mode of action in every-day life—we all know the man who wipes his shoes as a ceremony but never looks to see if he has got rid of the mud, the groom who feeds his horse but never sees whether the oats are eaten, and the nurse who washes the baby and still leaves wet places. Now much of this weak and therefore useless treatment comes of the indolence to which we are all prone and against which we must struggle as a temptation, but much of it, I am sure, is the offspring of incredulity which again springs from half-belief in quackery and imposture. Again, our ineffectual treatment often depends upon want of thorough diagnosis. Until we make up our minds whether a certain eruption is psoriasis or a scaly syphilide we shall never deal with it effectually. If we only suspect syphilis we shall give our remedies in too small doses and relinquish them if we do not see immediate benefit; whereas, if our diagnosis is real and thorough we shall use our remedies with confidence, increasing the doses, varying the form, but always persevering until we obtain the result we aim at.

Another source of failure in therapeutics is the legion of new remedies of which the biographies and eulogiums fill our waste-paper baskets and light our fires. It is astonishing to find apparently rational men forsaking the remedies which have been proved effectual by the experience of long past times and of every civilised nation to take up with drugs the very composition of which is often unknown, the use of which they have never learned, and of which the value rests upon the interested or credulous assertions of those who try to sell them. It takes a man long years of practice to learn how to prescribe opium. Why throw away this priceless knowledge to dabble in quack remedies the very praises of which inspire distrust? New remedies are, no doubt, discovered from time to time; in this generation we have had several, and all probable claimants should be tested in pharmacological laboratories and in hospital wards. But I am speaking of drugs which have never passed either of these tests. Surely in this age of advertisements which disfigure and defile the beauties of land and sea, of town and country, of literature and art, the most credulous must be convinced that costly and pertinacious advertisement is evidence of the lack rather than the possession of genuine worth. No, so far from our profession being carried away by this noxious habit let us hope that we may not only stamp it out from among ourselves but spread our own standard of conduct to other pursuits, until some day an honest tradesman shall be ashamed to push his sales by degrading self-laudation and the wealthy manufacturer shall shrink from offending the eyes and deafening the ears of his fellow-creatures by scribbling his name on blank walls and screaming it in every street.

In another popular branch of treatment it seems very desirable that the scientific spirit should be somewhat more freely admitted—I refer to treatment by baths and waters. That both are valuable modes of treatment no one will deny, but will anyone be so bold as to assert that it makes any difference whether our patients take a bath of water heated as it comes from the soil or heated to the same degree in a kettle? Who would pretend that so many grains of laxative or alkaline salts will act differently when occurring in natural solution and when dissolved in the same proportion in the druggist's shop? That benefit is obtained by change of air and scene, by early hours, regulated rest and exercise, and copious draughts of water is beyond dispute, but it is surely a pity when instead of rational explanation of our treatment our patients are deceived by unscientific and more or less untruthful statements.

Is it not a pity for so many of us to prescribe the made-up pills and mixtures offered us by wholesale manufacturers

instead of our own combinations? It leads our patients to ascribe their recovery, not to our skill, but to this or that "cure," and would it not be an excellent task for this great Association to set some of our skilled analytical chemists to strip the veil from mysterious remedies and tell us the exact composition of the many patent medicines some of which are inert and some injurious?

SCIENTIFIC MEDICINE AND ITS WAGES.

Finally, we may ask whether scientific medicine obtains the recognition that is its due at the hands of the public. I believe that on the whole it does, or if in any degree it fails that the failure is due to ourselves. We cannot expect that any but the most educated and enlightened should look at our science or our art from a rational point of view. The popular notion of a medical man among out-patients is a man who has got some wonderful stuff in a bottle which will make them well. The more educated patients suppose that, knowing what is the matter with them, or as we say, having made their diagnosis for themselves, their first business is to choose the practitioner who has devoted his exclusive attention to the malady of which they suppose they are the subjects, or if they chance to suffer from what they call a "complication" of diseases they will consult a "heart specialist" to cure palpitation, a "throat doctor" to cure hoarseness, and a rising young surgeon at "a special hospital for diseases of the knees" to cure weakness in that joint; and if they should find no relief after these consultations—

"Flectere si nequeo superos, Acheronta movebo."

—they denounce legitimate medicine as useless, and go to the lowest impostor, and will afterwards tell their friends that after being "given up by the faculty" they found instant and miraculous relief from a single box of wind pills, a galvanic belt, or a pad of oriental herbs worn on the pit of the stomach. The fact is that we cannot expect that our patients should understand the scientific basis of medicine, the meaning of etiology, or the possible degree of efficiency of treatment. What they frequently ask of us is to allow them to continue the very course of life to which we have laboriously traced their symptoms and to give them some medicine which as if by a charm will break the inevitable sequence of cause and effect. They are slow to understand that this world gives nothing for nothing, and that we can only subdue Nature by obeying her laws.

There is, indeed, only one way in which we can obtain what we call our just recognition. Our services, however great, are services to the individual not to the community. It is therefore absurd for us to expect the honorific or the more solid rewards justly assigned to statesmen, to generals, or to judges; but from individuals we may expect—and I venture to say that as a rule we receive—the trust, the honour, and the gratitude which we have earned. Few of our patients will ever understand our principles or our methods, the reason for our successes or the explanation of our failures; what they do understand is personal character, honesty and sense, kindness and sympathy, and liberality and benevolence to rich and poor. These are the qualities which have always gained and still gain the respect of our fellow-men; and I venture to say that there is not a town in the three kingdoms where such respect is not widely and deservedly enjoyed by our profession. Go to any cathedral or almost to any parish church in England and you will see tablets bearing witness to that respect. If such men do not receive all the money they deserve they have money's worth. They spend their lives in constant exercise of the powers of the mind guided by the best feelings of the heart—a sure path to happiness. They find constant interest in their daily work, and when their work is over and the medical man becomes the patient—as we all shall one day—they can look back on a life spent in the service of God and man with gratitude to both.

ACCOMMODATION FOR INFECTIOUS DISEASES AT BRISTOL.—The Health Committee of Bristol propose to submit to the Town Council a scheme for increasing the accommodation for infectious diseases. At present 147 beds are available, which is an average of one bed for 2300 of the population. The Health Committee suggest the extension of Ham Green Fever Hospital by the addition of the buildings originally intended and in the meantime temporarily to re-open Clift House, Bedminster, as a hospital in case the present hospital should not afford the necessary accommodation.

Address in Surgery: THE SURGEON IN THE NINETEENTH CENTURY.

Delivered at the Annual Meeting of the British Medical Association held at Ipswich on August 2nd, 1900,

By **FREDERICK TREVES, F.R.C.S. Eng.,**

SURGEON EXTRAORDINARY TO H.M. THE QUEEN; SURGEON-
ORDINARY TO H.R.H. THE DUKE OF YORK; CONSULTING
SURGEON TO THE LONDON HOSPITAL.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—The honour of being selected to address an Association which represents not only in numbers but also in dignity and repute the medical profession of this country is an honour of such a kind that I feel it can only be belittled by any expressions of gratitude I am able to command. I will do no more, therefore, than sincerely thank you for bestowing upon me a great distinction, and at the same time remind myself of the words of Goethe that "it is easier to bind a wreath than to find a head worthy to wear it." I am fortunate also in the circumstance that the occasion for the giving of this address should coincide with the concluding year of the nineteenth century. This century has been without a parallel in the history of human culture, and so far as the art of surgery is concerned has embodied an advance in principle and in practice which has been no other than revolutionary. I do not propose to attempt a review of the progress of surgery during the last 100 years. That work has been already done by abler hands. I would venture rather to deal with the progress of the surgeon himself during this period and with the advancement of the individual as an exponent of a grave profession.

There is little difficulty in fashioning a picture of England as it was 100 years ago. A sympathetic literature has left us with ample records of the men and women of the time and of the scenes they moved among. These records are rich with the littleness of personal affairs and are made living by the very gossip and petty commentaries of those who constituted society when the century was young. The life in England then was largely life spent in the country, in sleepy villages, and in sober self-esteeming county towns. The conditions were yet immature which led men to herd together in ever-extending cities and to swarm around oases of blackened chimneys and restless furnaces. Travelling was a luxury limited to the few. The many were content to live and die within sight of fields and spires which had been familiar from babyhood. They were apparently content to keep to their own stations in life, to take their notions of dignity from the squire and their conceptions of religion from the vicar, and to be satisfied with such excitement as was afforded by harvests and market days, by the movements of the locally great, and by the achievements and misdoings of their neighbours. In many a town it was no little event when the coach from London lumbered through the cobbled streets, or when a gang of pressed men marched by on their way to the sea, or when some soldier home from the wars made the little alehouse lurid with tales of arms and tragic lands. These simple folk were comparatively free from the fever of social ambition, from the almost savage conflict of modern commerce, and from the bewildering hurry of events which compass the peace of later times.

London was then not one-fourth of its present size; the great city ended towards the west at Sloane-street and beyond were quiet fields and meadows intersected by foot-paths, certain of which led to the hamlet of Kensington and the little riverside village of Chelsea. The lover of solitude would have found seclusion in the wide open country through which ran the Edgware-road. Paddington was still in the fields. Game could be shot about Westbourne Green and around the isolated farmhouse which marked the present settlement of St. John's Wood. Few would have cared to venture after dark across the bare fields of Battersea or to traverse the expanse of open land which stretched to the north of Tottenham Court. No railway terminus flaunted its hideous structure in the city's midst, and neither omnibus nor cab nor tram-car invaded the narrow streets. There was no telegraph and no telephone.