Introductory Address

DELIVERED AT THE OPENING OF

ST. MARY'S HOSPITAL MEDICAL SCHOOL,
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BY

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GENTLEMEN,—I have this year accepted the honourable task of delivering the Opening Address of our Medical School; but not without considerable misgiving, for I really cannot but consider the undertaking a difficult one to accomplish satisfactorily. What is there connected with the study of medicine, having reference to the duties of the student and the duties of his teacher, which has not been already again and again said, and well said, within these very walls? And what could I hope to tell you on the subject, that is not to be found recorded in the opening addresses delivered in past years by medical lecturers?

Perhaps, therefore, you will excuse me if I venture (as some of my predecessors have done) to leave the ordinary path now, through former teachings, made so familiar to us all—I mean the attempt of enforcing upon you the duties which you owe to yourselves as students of medicine; the duties which you owe to your parents, who have sent you here for instruction; the duties which you owe to your teachers; and the duties which you owe to society at large, in properly fitting yourselves by study now for the great future business of your lives.

Truly, I would believe that the students of this generation need not the enforcement on them of such lessons. I would believe that, better prepared by an improved preliminary education, they have good sense enough to feel the responsibility which rests upon them while occupied here in the acquisition of knowledge. Our medical corporations seem to have sanctioned this opinion, in that they have diminished the number of lectures which you are obliged to attend. But they have surely not done this in order that your minds and hands may be less occupied than formerly. On the contrary, you are expected now to depend more upon your own exertions, and less upon the instruction of your teachers; and to play the part rather of active learners than that of passive hearers.

I will presume it, therefore, to be a fact, that you, gentlemen, in pursuing your medical studies here, feel that you are engaged in a serious business; that you have come here as responsible men, cast much upon your own resources, with time, and intellect, and means, at your disposal, freely to prosecute a great end. I say freely; because it is your own free will to learn, and your own free will to let the precious hours of student life pass idly by. All the elements of knowledge requisite to help you to an intimate acquaintance with your profession are here abundantly laid to your hand; and at every turn you will find a teacher ready and anxious to show you how best and most profitably to use those instruments. In every department of your studies,

there will, indeed, be found for him who would learn nothing but freedom and encouragement.

Instead, therefore, of attempting to read you a homily demonstrative of your duties as students, I shall venture to occupy your attention for a short time by saying a few words in reference to a phenomenon, which is thought by many estimable members of the profession to be a deplorable error, characteristic of the present generation of medicine—I mean the existing scepticism concerning the effects of remedies over diseases. I will endeavour to show you that there is here, as in other matters requiring the exercise of our judgment, a true and a false scepticism—a reasonable and an unreasonable faith; and that the scepticism of the time, in so far as it is reasonable, is simply the search of honest and inquiring minds, guided by the light of modern discovery and modern science, in pursuit of truth. In doing this, I shall have occasion to refer especially to what seem to me to be two serious obstacles to the advance or settlement of our knowledge concerning the effects of remedies over diseases. The first consists in the unreasonable deductions which men of our profession are wont to draw from what they conclude to be the effects of the remedies employed by them in the cure of diseases; and the second is the practice, which I may surely call unreasonable, heretofore so common, and still not wholly abandoned by us, of prescribing drugs in those cases in which drugs are admittedly not required for the cure of the patient. In other words, I would point out two great difficulties with which this modern and rational scepticism has to deal—the reception of illogical deductions concerning the actions of remedies as positive facts in therapeutics; and the throwing in our way of impediments by the unnecessary giving of drugs to a better and truer knowledge of the natural courses of diseases.

Gentlemen, we are often told that we live in a sceptical age; and if by the term it is meant that we live in an age when men refuse to accept without question the dogmata of the past, merely because they are consecrated with the dust of antiquity, or have high and honoured names for their authors, I believe there is complete truth in the assertion. How could it be otherwise? The sciences alike of mind and of matter, the arts and manufactures, political creeds, the very face of the earth, have been revolutionised since the birth of the present generation of man. Who of us has not lived long enough to have seen articles of political, social, and every other kind of faith, rudely shaken; to have seen opinions long received as settled truths on matters touching the worldly—aye, and the more solemn interests of man—modified or subverted?

This generation truly has seen the world march on with giant strides in the path of civilisation, such as centuries of its former years of progress have not witnessed. Well, I suppose that in the advance of science must we look for a solution of this surprising tale. Science has subjected to her searching analysis the opinions and the credulities of mankind. She has called upon men to give an account of the reason of their opinions. She has waged, and is still waging, combat with the ignorance, and the prejudices, and the thousand vain images, which have so long kept, and which still keep, the world from a clear vision of the unclouded truth.

How, then, should medicine—an art, above all

others, based on empirical practice, on opinion, on the results of individual belief and experience—escape the questioning of an age in which opinions are being thus remodelled? Assuredly, this questioning and revolutionary spirit has passed into medicine. We cannot but recognise and accept its workings. And our duty clearly is so to direct this inquiry, as most effectually to advance the knowledge of our art.

I think you will agree with me, that never at any period of the bygone days of medicine, did science—as we now understand the term—subserve the physician's purposes in the cure of disease, either directly or indirectly. In his treatment of disease, he trusted to his own experience, and to what he could gather from the recorded experience of his forefathers. His diagnosis of diseases was most defective; his theories of their nature, for the most part, baseless fabrications; and his treatment was necessarily guided by, and on a par with, his diagnosis and his theories. But (and we surely may learn something from the lesson) his belief in the powers of his remedies over diseases was unhesitating and complete. In the application of his defective knowledge to the cure of disease, he never doubted. If the patient recovered in his hands, the remedies administered cured the disease; and if he died, still the remedies were not wrong—only the disease, the concoction of ill-humours for example, was too powerful for the remedy. The greater the ignorance of the physician in his knowledge of the nature and diagnosis of diseases, the more implicit, it would appear, has ever been his belief in the power of the therapeutical agencies employed by him in their cure. True, in all this, medicine was handled like every other branch of human study of things material. The masterly minds who then practised medicine acted according to their lights. Their generation did not grant to them those instruments and aids to better knowledge with which we have been favoured. We may, indeed, regard the past history of medicine with reverence and pride. We find recorded proofs that the very highest order of intellect has been engaged in the practice of medicine.

Our forefathers erred inevitably, because, dealing with matters of the utmost complexity, they possessed no other light to guide them through the labyrinth than experience—experience, whose fallaciousness in matters medical the father of medicine has so emphatically, and alas! so vainly, recorded. But to us science—that tree of the knowledge of good and evil—has come bearing with it its fruits of present painful doubts and difficulties, and also the full assurance, we may safely add, of great future good. It has demonstrated to us the errors of the past. It has shown us how we may struggle out of the errors which have heretofore beset the path of medicine. It enables us to judge with a something like certainty between the positive and the hypothetical in medicine. It tells us where we may walk securely, and where we must step with hesitation. What, in fact, is all this remarkable conflict of opinion now going on in the profession concerning the effects of remedies, but the struggle of modern scientific investigation with errors which have been handed down to us, and which encumber the progress of medicine? We are now, at last, beginning to learn what are the limits of our powers as curers of diseases; to moderate the powers which our fore-

fathers taught us we possessed over them; to appreciate the line of demarcation which must be drawn between what is positively true and what is possibly true, and what is positively untrue, of the effects of remedies; to distinguish more nicely between what our art can and what it cannot do in the cure of disease.

I believe that now, for the first time in the history of medicine, our art is finding something like a sure foundation to rest upon, and that (although the actual advances hitherto made by it towards the position of a science be small) it has entered on the path by which alone it can ever hope to reach that position. Our actual knowledge of disease and of its treatment, though it be limited, is still, as far as it goes (in one sense) becoming sure. Active error is now no necessary associate of medicine. We can mark where our positive knowledge ends, and where our treatment becomes experimental. We can calculate nicely the worth of the theories and the worth of the practices which we follow out in the cure of diseases. What is it, indeed, which most essentially distinguishes rational scientific medicine from barren empiricism, but this very knowledge of its imperfections, this philosophic estimate of its actual powers over diseases? Who now but the veriest quack boasts of his unlimited powers and of the infallibility of his remedies?

If our modern progress in medicine were measured solely by this negation and elimination of past errors—a supposition which assuredly I do not for a moment admit—it would have been immense. For, how can we ever hope to lay the foundation of a true theory and practice of medicine, until all the vicious theories and practices which have directed, and of course viciously directed, the hand of the practitioner to his work, have been cleared away? The fermentation which medicine is now undergoing, under the agency of modern science, is, as I see it, a process of its purification from the errors which have become mingled with and have corrupted it, during past ages. We need not, then, be surprised that, whilst this elimination of error is going on, our progress in a positive sense should have been but small; why we have, as yet, made but slight advances towards a knowledge of the essential nature of diseases, and of that kind of treatment of them which may be called specific.

We of this generation cannot hope, it is true, to witness the consummation of which I have spoken, the elevation of medicine to the rank of a science. We must be contented with the humble task of assisting in the removal of the obstacles which have hitherto concealed its true features, and which still beset its progress; we must be content to collect materials for the reconstruction of the building. We must, I fear, learn humility, and moderate our pretensions as curers of diseases, casting aside that false goddess which men of our profession have so long and vainly worshipped. We must be satisfied with that true and legitimate knowledge which comes to us as the offspring of rational scepticism enlightened by science. We must subject the daily and ordinary methods which we employ in the treatment of diseases to the test of a reasonable inquiry; and when we have done this, must then ask ourselves how far they are really and in truth worthy of the full and unhesitating confidence which we repose in them, remembering that the profoundest belief of the

physician in the efficacy of the remedy which he administers, imparts no real curative powers to it. Our medical opinions must, in fact, like other opinions upon which action is taken, be passed through the fire of rational inquiry.

The source of the deepest errors which have ever attached themselves to medicine may, I believe, be traced to the overweening confidence which men of medicine have placed in what is called their experience—that infallible oracle, from whose dictum, alas! there is often no appeal. Men have not always sufficiently appreciated the real value of the words, medical experience. They have been content to bring into immediate relation, as cause and effect, the two extreme factors of the problem—the giving of the drug and the recovery of the patient—leaving out of the calculation the infinite number of disturbing causes which affect and interfere with what is in truth the experiment they are watching—the effects of a remedy over disease. Does not every page of the history of medicine bear proofs of the fact that the medical man has ever been over-hasty in attributing the cure of the disease directly to the effects of his remedy—too readily concluding that the result, the cure, was a positive effect of the cause, the remedy; instead of being, possibly, the mere sequence of an antecedent? I need not stop to point out how complicated is, in fact, the character of most diseases; how infinite the variety of accidental agencies that are at work in the body, inherent in the constitution of the patient, or to which he may be temporarily subjected from without, all or any of which may interfere with and modify the natural or ordinary progress of disease, or interfere with its progress at any one of those numerous periods, or series of links which form the chain of the diseased process. I only refer to them to show how irrational we are, when, in the satisfaction of this most complicated problem, we are content to draw positive conclusions concerning the effects of remedies from the knowledge obtained through a mere personal (and, therefore, most limited) experience of their actions.

If it be not to this unreasonable, this illogical mode of drawing conclusions, that we must ascribe the extraordinary differences of opinion held by equally capable observers concerning the effects of remedies, I really know not whither to look for an explanation of the unfortunate fact. You know, gentlemen, that when, in the case of any particular disease, the treatment of the present day is opposed *toto celo* to the treatment of the past, an explanation is found in what is called a change of type in the nature of the disease. For example, men bled in other days, I suppose I may say from the time of Hippocrates down to the beginning of the present generation; but they bleed not now in inflammatory diseases. And why? Because diseases have changed their type! Doctors who bled then were right, just as also are doctors who bleed not now. I know not who invented this *deus ex machina*, nor will I here stop to argue upon his worth. Horace, as you will remember, objected to the introduction of such violent powers on the scene, unless the difficulty were so great as to be otherwise incapable of a satisfactory solution. I will not, however, draw any illustration of the point in hand from the differences of treatment of the past and of the present day. I will content myself with begging you to call to mind

the profound—I would almost say the melancholy—differences in treatment which, in the case of acute diseases, characterise the practice of men of equal capacity and of equal honesty, at this present day, in cases where change-of-type theory cannot interpose its subtle explanation of the difficulty. Surely I need no other proofs of the statement that our deductions must be somewhere illogical, than these very discordances of opinion. Nor need I stop to illustrate the fact of these discordances. I apprehend that they are spread broadcast through the pages of our modern medical literature, and well known to us all. But how, it may be asked, are we to emerge from the difficulties which surround us? One source of instruction is, I fear, almost closed to us; and that is, the observation of the natural progress of disease. Yet I know not how we can ever arrive at any completely satisfactory results respecting the effects of remedies until we have determined what is the natural progress of disease—the course which diseases would follow, if left to work their way in the body without interference. This source of instruction, for obvious reasons, has been hitherto almost untouched, though manifestly the most important additions to our therapeutical knowledge are to be derived from it. I think, however, that we may, independently of this source of instruction, by a careful and logical comparison of the value of our present methods of treating, obtain a much more accurate estimate of their real value than we at present possess.

Let me, therefore, venture to point out what, as I think, may be considered as the proper and only test by which we can determine what is a therapeutical fact founded on experience; and then consider how far our daily practice is founded on, or is in accordance with, such rational experience. I believe that a therapeutical fact, to be worthy of the title, must have something of the following definition. It should be the resultant of very numerous observations made by fitting and capable inquirers, who, after due inquiry, have arrived each at a like conclusion—the conclusion not being contradicted by the observation of other equally capable observers. Every practical deduction in therapeutics, which will not bear this test, seems to me to deserve the title of irrational, in so far at least as it is accepted and acted upon as a positive fact. The wide and uncontradicted acceptance of the deduction alone gives it a stamp of genuine value—entitles it to the name of a fact. Are we not, indeed, reasonably and logically forced to the conclusion, that the real virtues of a remedy have yet to be decided, so long as the experience of half the medical world applauds its use, and the experience of the other half condemns it as useless; when men of equal honesty and equal capacity are totally opposed concerning its use? Is it not, I ask, illogical, in the satisfaction of this most complex problem—the effects of remedies—to permit our personal opinions, the deductions of our limited experience, to degenerate into solid convictions, so long as the experience of others has not confirmed, or is opposed to, our conclusions? Well, if this reasoning is right—and I see not how it can be disputed—there results from it this important conclusion: that in every case in which there exists (amongst competent observers) discordance of opinion of the kind spoken of, concerning the effects of a given remedy over a given

disease, the true effects of that remedy over that disease have not yet been definitely settled. It is, in truth, the tacit and partial recognition of this truth which has given birth to what I have called the rational scepticism of the day respecting the effects of remedies over diseases; and as the truth spreads, so will the consequences of irrational belief, or, in other words, error, be more and more eliminated from the practice of medicine. Surely we are daily becoming better acquainted with the lesson taught us by scientific investigation; viz., that our estimate of the real value of this or that drug, or of this or that other method of treatment, must be derived, not from what we have hitherto been too apt to regard as the unanswerable conclusions of our own personal and therefore limited experience, but from a comparative consideration of its value, as estimated by the experience of other and equally capable observers. A reasonable scepticism teaches us to measure and try our personal convictions by the convictions of others, and modestly to accept the conclusion. And am I not justified by fact in saying that all of us fall more or less into the way of gathering strong convictions from the apparent results of our personal experience, and of acting upon them after the fashion which I have ventured to call unreasonable? And no one can doubt that such a practice must be a stumbling-block to the advance of therapeutical knowledge. How can we ever hope to obtain an expression of the truth, if each of us proudly and obstinately maintains that his conclusions alone are right?

There is one other drawback to the advancement of our therapeutics, which, unless I am much mistaken, has injured our art deeply both in its scientific and in its social aspects, to which I would shortly allude. I refer to the too common practice of prescribing drugs on all occasions, whether they be or be not required by the condition of the patient. Doubtless, we are all of us, in this matter, much under the pressure of custom—under a somewhat slavish adhesion to the habits of our forefathers. We, with our better and more scientific knowledge of the nature and diagnosis of diseases, and of their natural modes of progress, are still, in the matter of drug-prescribing, living somewhat in the dark ages of medicine. In other days, the very soul of the treatment of diseases was, in all cases, thought to lie in some heroic exercise of the lancet, or in the virtue of some superdecompound bolus, or in an extraordinarily compounded draught: these things were regarded ever as essential in all cases. We, however, have learnt the error of all this, and yet we adhere to the practice, certainly in a very modified and comparatively harmless form; but still we adhere to it, and so far we allow our therapeutical practice to lag behind our scientific knowledge. We know, for example, that there are diseases in which medical treatment of the most effective kind does not involve the administration of drugs; but I put it to you, is it not a fact that the writing of a prescription is, as a matter of course, a part of every medical consultation? Does not the very word prescription mean, in our ordinary use of it, simply and solely the writing of a drug-formula? In prescribing a particular line of treatment, is not the prominent, if not the only feature, in such prescription, the drug-formula? The patient assuredly looks for the, to him, cabalistic formula, as the chief equivalent re-

ceived for his fee. He regards as of infinitely greater consequence a due attention to the taking of the physic prescribed, than he does the punctual fulfilment of those other apparently minor directions which, it may be, are in reality of fifty times greater importance, and perhaps absolutely essential to his cure. We, or rather those who went before us, have, I fear, educated our patients in the belief that the cure of diseases and the taking of drugs are in all cases things inseparable, and that the main and most essential part of the practice of medicine and the cure of disease consists in the prescribing and taking of drugs. But are we, in so far as we keep up this delusion in practice, doing justice to our patients and to ourselves? And, above all, are we thereby advancing the scientific standing and the social character of our profession? I cannot but think that our patient often positively suffers in this way, through the neglect of those other things which are recommended for his cure, and which are in reality of much greater need in his case. Not being prescribed, they are regarded as of little value. So long as the drug is regularly taken, the patient considers that he acts in sufficient conformity with the line of treatment advised for his cure. Moreover, to this unfortunate custom of ours, and to this habit of the patient, may, I believe, be in great part traced the spread of many quackeries and delusions, and especially of that most remarkable of all quackeries and delusions—I mean homœopathy. And, conversely, I am led to think that there is no better means of waging successful combat with these quackeries than the simple one of giving drugs in those cases only in which, in our opinion, drugs are actually required; and of educating our patients to a better understanding of the uses of our art, and its power. Our patients have been educated, or, at all events, have grown up, in the belief that the drugs they take are in all cases not merely elements, but the essential elements, of their treatment; and this, too, sometimes, even though the physic be as mild as coloured water, or as innocent as a bread pill; and the result is evident, and, as I think, most hurtful to our profession's reputation. If the patient recover not, he blames the drug and him who gave it, and at length loses his faith in the practice of legitimate medicine, or in the taking of drugs, which are to him convertible terms, and so rushes into the arms of the homœopaths, or of some other of the Bashi-Bazouks of medicine. I venture to think that, at this time of day, we should come to a better understanding with our patients. It surely cannot be worthy of the medicine of this day to play in any way down to the weaknesses and false imagination of the patient. And if it be indeed true, that our profession originally created the delusion in his mind, still more forcibly is the duty pressed home to us of removing the scales from his eyes.

But pray, gentlemen, do not misunderstand me. Do not suppose that I want to inculcate the idea that the cold shade of scepticism hangs over the entire practice of medicine, and that drugs are useless as remedies in diseases. Let me defend myself from such an imputation by saying, that I dare say I prescribe as many drugs as any of my colleagues do. What I ask is simply this; that we should give drugs only when we can reasonably conclude that drugs are actually required; that we should write no prescriptions of complaisance, and give no physic on

the principle "that it will do no harm, if it does no good"; and that we should educate our patients to the knowledge that the whole cure, and often the most important part of the cure of diseases, does not consist in the taking of drugs—teaching him that there is not in all cases an inseparable connexion between the physician's art and the druggist's shop.

Neither do me the injustice of supposing, because I have objected to the drawing of positive conclusions concerning the effects of remedies from the results of mere personal experience, that I mean to infer we have no positive facts in therapeutics to rest upon. I could run on for an hour, and give you examples of that kind of concordance in treatment which justly gives to that treatment the title of rational. I could give you numerous instances, I need hardly say, in which large, concurrent, and uncontradicted experience points out to us the usefulness of given remedies in given diseases. The fault which I speak of is the practice, wherever it exists, of unhesitatingly attributing to remedies virtues which, arguing reasonably, they cannot be said to possess, or which, at all events, are not yet proved of them. I would impress on your minds the cultivation of a *reasonable* faith in the powers of our art to cure diseases, and so save you from that blind scepticism—that dead sea of negation—into which unreasonable and disappointed expectations too often lead the enthusiastic. I would save you, on the one hand, from that irrational and blind credulity which finds its most perfect exposition in the insolence and unbounded promises of quackery; and, on the other hand, I would dispose you, by forming and moderating your faith in the power of medicine in accordance with the reason of the thing, from ever falling into that atheism in therapeutics which is born of an overweening and unreasonable credulity, and of broken and deluded expectations.

In so far as the practice of our art is still an experimental practice, let us, I would say, pursue it as philosophical experimentalists, not with the credulity of pure empiricism. In all cases let us fashion our belief in the power of our art in accordance with the light which we possess. In those instances in which a universal concurrence in opinion prevails, we can act in full assurance of the result. In those other cases, in which adverse opinions neutralise our own, we should act with caution, as I have said, experimentally, not blinding ourselves to the truth by an overweening reliance on what we deem the unanswerable convictions of mere personal experience. I do not ask you to sit idly by whilst disease is working its ravages. When the human body is sick, the physician's skilful art has ever its useful labours to perform. I know of no disease—I know of no phase or period of any disease—wherein the presence of the healer is not required to conduct and guide the cure; wherein he may not practise his art—do something, if you please—to the advantage of his client. My desire has been simply to warn you against the adoption of that unreasonable course in the treatment of diseases which, as I have attempted to show, deceives ourselves, deludes the subject of our treatment, and hinders the progress of therapeutics. Rather, indeed, I ought to say that I have attempted merely to put forwards a few words in favour of that rational spirit of inquiry which has already entered into and is leavening the practice of medicine—hoping thereby to assist in hastening the advance of

those good things which a rational scepticism, if read the matter aright, has in store for us. I have, indeed, been engaged in laying somewhat markedly before you facts, which have been now for some time accepted and acted upon by most of the leading and scientific members of our profession.

Gentlemen, I fear I may have already made a call upon your patience by attempting to say thus briefly what it would take many lectures to develop satisfactorily; but perhaps I may yet for a few minutes longer ask your indulgence, whilst, turning from this special subject, I address, as I feel I ought to do before I conclude, one or two special words to those of my hearers who are about to engage themselves in the pursuit of the study of medicine. I have promised to read no homily, and would venture merely to offer you one or two words of exhortation.

Let me assure you, then, if you have not already realised the fact, that your business in this school is, measured by its future consequences, a most solemn business. Let me assure you that, in truth, the whole course of your future life will be to a great extent, if not altogether, influenced by the line of action which you follow out here during these years of studentship. Believe me, it will not be the mere acquisition of a given amount of knowledge, such as may suffice to gain you the legal right to practise your profession, which you will obtain here, if you occupy yourselves well. It will be something far beyond this. It will be the fixing and the forming of your future character; it will be the establishment of steady, industrious, and laborious habits, which will hang to you through life, and be the surest groundwork of your future success in life; and it will be that inestimable prize of a high moral tone of mind, which you will win if you honestly perform your duties here. The character which you acquire here will be the die from which your future actions through life will take their impress. The evil and the good which men do not only live after, but live with them. Every vain and idle hour of a student's life I might, in this sense, liken to the broken surface of a smoothly flowing stream; a mere superficial and passing irregularity it seems to be, disappearing with the violence which produced it. But it is not so. The laws of mind and matter have here similar actions. The ripple of the water represents a motion which is a lasting and effective power. The visible signs of the perturbation may have disappeared; but the irregular motion thereby excited still exists—altered in kind, and elsewhere operating, it is true, yet ever an effective force. And just so is it with those diviner laws which preside over the moral life of man. Every violence done by him to his better nature is a disturbance whose tremulous waves will never cease to exercise, to the last hours of his life, their baneful influence on him.

Let me tell you, moreover, that the practice of medicine is a stern and rugged business; and whoever ties himself to it, as to the business of his life, must not, therefore, expect to float calmly down the stream. You must be prepared for struggles and ready to encounter hardships, and to meet with disappointments and temptations; and now is the time for preparation to meet the struggle successfully and manfully. There is no profession, I believe, which brings more trials, and I may add more consolations, to the conscientious man; there is none in which a want of conscience and a want of honesty

are so often repaid with what the world calls success; and there is assuredly none in which the performance of his daily business can better give a man the full satisfaction of a well-employed life. The business of the physician is ever to assuage the woes of humanity; never to make the worse appear the better cause.

And, gentlemen, if I allude especially to this dark side of the profession of medicine, it is because I would earnestly bid you now brace yourselves for the future occasion, by training your minds to an unswerving and honest performance of the work cut out for you here. So study now, that you may become hereafter honest and scientific practitioners of medicine. The greatest safeguard which you can possess against the contagious influence of the quackeries and bad practices which beset the profession, both from within and from without, is a well grounded and scientific knowledge of your art. But such a knowledge you never will attain, if you miss the golden opportunity which now lies before you. It is a consoling fact, that men of science do not practise quackery in medicine. The most successful of the quackeries of the day, homœopathy, is a striking illustration of this fact. I never heard of a homœopathist possessed of a name known in the smallest corner of the wide world of science. Of the great makers of impossible cures, and of the successful operators in the broad field of human credulity, there is not to be found a man who has done a single deed, or made a single discovery, tending to the progress of medical knowledge, or who has left behind him a name honoured by any whose praise is of price. Where is the individual of them who has a reputation to leave behind him, such as the meanest member of our profession would care to have as a legacy? We look in vain for the good thing that ever came out of these quackeries. We see the names of Harvey, and of Jenner, and of a host of such like worthies, inscribed on the edifice of medicine; and we mark that at all times men of our liberal profession have disported and distinguished themselves in the different fields of knowledge. Our profession has produced illustrations in chemistry, in botany, geology, mathematics, theology, in every branch of human learning and study; but we look in vain for one single example in this way, which might serve to throw some slight relief over the dark shadow and disgrace of quackeries. Be then scientific, honest, and conscientious students now, and you will lay the surest foundations for becoming honourable and scientific practitioners hereafter. As men of science, you can never honestly fall into the deceits of charlatantry; and as men of science, you will find it hard to let your moral sense grow dumb in that direction. The voice of self-interest may tempt you in many a form; you may have to choose between the hard path of an ill-requited but honest labour, and the ready road which leads to a certain sort of popular repute and professional dishonour. Get ready, therefore, for the battle of an honest life, by doing your work honestly here. If, indeed, I were asked how you might best act now so as to ensure welfare in after-life—not welfare in its restricted and ignoble, but in its perfect sense—I should say, keep the law of duty now ever before you. Let it be your never failing pillar of light. Study conscientiously—religiously, as the Frenchman forcibly puts it. And when you have

gained this conscientious, this religious knowledge of your profession, and have, as members of society, to bring it into practice, use it ever conscientiously. Be, at all events, brave and on the square with your conscience to the last. Your success in life may not equal your hopes or your deserts. It is not in man to insure the success of this world. The best and the wisest of us may fail in the struggle. But we have our consolation even then. To gain the world's applause, and to snatch its fleeting spoils, is not man's sole and proper business here. Immortality smiles forth on the scene, and beckons him ever on in the race for those eternal honours, which the world can neither give nor take away—the prize which all may strive for, and no one strive in vain. So long, gentlemen, as you steadily obey the dictates of that inward monitor, you may, like the ancient knight of chivalry, when all is lost in the battle, still proudly boast that nothing is lost, honour and conscience being to the last without reproach.

LAST DANISH CENSUS. The whole Danish monarchy has a population of somewhat about 2½ millions. The increase of the population during the five years immediately preceding the census was between 5 and 6 per cent. The largest town is Copenhagen, with 155,000 inhabitants; next, Altona (45,000); then two with between 15,000 and 20,000 (Kiel and Flensburg), five between 10,000 and 15,000 (Odense, Schleswig, Aarhuus, Rendsburg, and Aalborg), and 14 between 5,000 and 10,000 inhabitants. The average population on a Danish square mile (about 18 English) is 2,532. The increase in the population by births has, on an average, been at the rate of 165 children to every 1,000 women between 20 and 50 years of age. Out of the above number of children one in every 10 or 11 has been illegitimate, and between 4 and 5 per cent. stillborn. Twins have been born in one case out of 69, three children once in 5,783 births, and four children at a birth have come into the world only once in 211,062 cases.

THE FOWLS WE EAT. We have domesticated some nine species of birds, to the advantage of the public diet, chief of which is the common fowl, never mentioned in the Old Testament or the Homeric poems, and which, probably, came to us through Persia from Hindostan. Chanticleer and his dame were known at Nineveh; they were represented on Syrian monuments; and they are heard of in Greece, a little later than the battle of Marathon, from Theognis. But neither Helen nor Iphigenia ever tasted the wing of a chicken. Whether in the wild or domestic state, they were wholly unknown on the continent and islands of America, and they owe their presence there to Columbus, as in New Zealand to Captain Cook, and in Australia to later navigators. We ourselves declined to eat them in the time of Julius Cæsar, though even then we cherished them for cock-fighting, like the Mahomedans and Malays. The gallinæ we got from Africa, pheasants from Asia Minor, and peacocks somewhat later through Persia from India. The turkey (so miscalled) is the gift of the New World, and the small fowl designated bantam really comes to us from Japan. Of course, Shakespeare's carrier in *Henry the Fourth* is guilty of a slight anachronism when he complains that "the turkeys in his panniers are quite starved." As to pigeons, ducks, and geese, these are the mere scum of Mr. Crawford's fleshpots, of which he has various things to say, contemptuous but pleasant. "The domesticated birds are very far from having proved of equal utility to man with the domesticated quadrupeds. Their strength is nothing, their tegument of small comparative value, and their flesh more or less a luxury, viewing the comparative cost of rearing them."