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QUEEN'S HOSPITAL,
BIRMINGHAM.



INTRODUCTORY ADDRESS,

DELIVERED AT THE

OPENING OF THE SESSION 1870-71,

BY

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From the Author.

ADDRESS.

GENTLEMEN,

In discharging to-day the pleasing duty which has been entrusted to me of opening the Session by an Address, allow me to congratulate you and the public of this great town on the very gratifying prosperity of the Queen's Hospital Medical School—a prosperity measured not only by the usual standard of a large number of students, but by the higher and better test of efficiency, as proved by the distinguished success of the pupils at their final examinations both here and in London.

Without further preface I offer a cordial welcome to all those students whom I see around me. Many are old friends; others are here for the first time. These I would more especially welcome, trusting that between them and us will rapidly grow that kindly intercourse so essential to the successful prosecution of our mutual labours. I congratulate all on the choice of their profession.

The study of medicine involves a knowledge in its most comprehensive sense of the structures and functions of man, and, in its search for means to relieve and cure disease, leaves no part untouched of the entire domain of human knowledge. The discovery of new truths in the science forms a never-ending source of intellectual pleasure, and

their application in the art calls into constant exercise the finest feelings of our nature. It is this union of intellectual activity with the power of relieving suffering which has attracted to our ranks many of the greatest thinkers, as well as the warmest-hearted, among men.

As the student proceeds step by step in his difficult progress through arduous and almost limitless fields of enquiry, he is cheered by the conviction that these studies do not end merely in the solution of some abstract problem, of which he may be proud as a feat of intellectual strength, but which is barren of practical results; but that every difficulty overcome, leads him nearer to that proud position where his intellectual superiority asserts itself, in his higher capacity for relieving the pain and curing the disease he sees around him. In short, we seek after truth, and rejoice in its discovery, not only for its own sake, but the rather because it may be made the means of priceless benefits to man.

To descend to the more material considerations relative to your profession; as a means of securing an honourable independence, it has many advantages. There are few, if any, occupations in which careful industry and personal exertion have a better prospect of success.

Few may have the capacity to attain great distinction among their contemporaries, but all, without exception, may achieve positions of substantial comfort and independence, apart from that reliance on patronage or accident, which so often saps the self-respect and embitters the life of the aspirant in other professions. Again, it requires small capital, and offers many varieties of career both to the man of science and of practice. Though few attain by it to great riches, all may avoid poverty. If you dread the anxieties and uncertainties of civil practice, you may join

the army or navy; or should you wish to avoid the severe struggle which the crowd of competitors occasions at home, the world is open to you. Medical truth and practice are the same everywhere, and the services of the doctor are welcome to all, irrespective of country or creed.

But while dwelling on the advantages of the career you have chosen, I must not allow you to remain in ignorance of the difficulties to be surmounted before that high position can be achieved, for which I trust you will all strive. I should regret to think that any here could be contented with a common place mediocrity; always aim high, and though you may not reach the pinnacle to which you aspire, you will be nearer its summit than he, who sits down self-satisfied after breasting the first hillock in his path.

I warn you therefore that Medicine is a difficult study. This difficulty consists in the extreme complexity of its phenomena, both as a science, and still more, as an art; which I will endeavour to make clear to you; first, by entering a little more fully into the relative position of the several sciences, and their bearing on medicine; and secondly, by pointing out to you the important relation which subsists between Medicine as a Science, and Medicine as an Art; or in other words, wherein consists the connection between the theory and the practice of your profession.

The Sciences do not constitute an anarchy, nor even a republic, but a strict and well-ordered hierarchy—every intermediate science building on the results of the preceding, and becoming in turn a foundation for the next in order. Thus, Mathematics stands first, as an introduction to all science. There is no existing body that does not admit of being numbered, and measured; there is therefore none whose phenomena are not complicated with Mathematics. To it succeeds Astronomy—being the first which treats of

real existence. Then follow Physics and Chemistry, which close the list of those Sciences which occupy themselves with the laws relative to inanimate matter. The higher Sciences are those which discuss the phenomena peculiar to living beings. Physiology stands at the base of this series, and serves as a fitting introduction to the great sciences of Medicine, Sociology and Morals. Therefore, as every problem in Medicine involves for its successful analysis, a knowledge of the physical and chemical phenomena which are blended with and inseparably associated with the living functions, a greater or less complete acquaintance with the wide range of knowledge indicated above, is necessary to every well-informed medical student. I say a greater or less acquaintance advisedly, because as Medicine is the sum or complement of so many Sciences, and so many Arts, were it necessary that every medical man should become a proficient in all of them, the profession would soon become extinct. Fortunately this is not required, and we are indebted to the matured wisdom and experience of the heads of our profession for those landmarks which guide us across this wide expanse of knowledge, and which by indicating the pathway the student should take, saves him from that feeling of hopelessness which this limitless extent of learning opening upon his view might otherwise occasion.

We have indeed much cause to be grateful to those, who amid the anxiety and toil of professional life have devoted much valuable thought and time to the difficult question of medical education;—difficult, not only from the number and complexity of the subjects to be mastered, but also from the shortness of the time available for their study. I am not going to discuss the various views which have been advanced from time to time on this head; sufficient for you to know, that the curriculum laid down for you

by the authorities (though it may not be perfect,) embraces such a training in Science and Art as will not fail, if followed honestly, to fit you well for any career the profession may have to offer you.

At a moment when the question of Medical Education is being discussed with unusual interest, and when we are undoubtedly on the eve of important legislative changes, I have been strongly tempted (having myself given much thought to its consideration) to seize this opportunity of making it the subject of lengthened observation; but as much difference of opinion obtains in respect to this question, and I have to remember that my own views may not be shared by others equally interested with myself in your welfare, I reserve my thoughts on this subject for some more suitable occasion.

Let us return from this digression, and pass to the second part of our subject; and in doing so, I would address myself more especially to those before me who will soon have completed their collegiate education, and who, in the course of a few months, will leave us to take that place among their fellowmen, and in their profession, for which the studies of the last few years have been a fitting preparation. To them the question naturally arises, "How can they bring the scientific information which they have acquired practically to bear upon the daily exercise of their profession?" To this I would reply, that medicine comprises two kinds of knowledge, the theoretical and practical, or in other words, the science and the art. It is very important that you should clearly appreciate the distinction between these two kinds of knowledge, as well as the relations which connect them. The science knows, the art does. The science embraces all our knowledge bearing on the nature and treatment of disease; the arts of medicine

detect, cure, and prevent it. For example, the science of consumption teaches all we know of the causes, seat, symptoms, and progress of tubercular disease of the lungs; the art says give cod-liver oil in phthisis. In chlorosis, the science informs us of all we know of its causes, symptoms, and morbid changes. The art of medicine says, give iron as a remedy. The art of medicine thus consists of a series of rules of action directing us how to cure or prevent the disease, which the science has enabled us to understand.

But we are reminded that there are many arts which are followed daily with much success where the practitioner is in part or even wholly ignorant of the science or sciences on which they are founded. For example, let us take photography. The photographer uses certain chemical solutions and employs certain optical instruments, in accordance with the rules which have been taught him. These rules are founded upon the sciences of optics and chemistry; but the photographer may and does for the most part succeed in his art, though perfectly ignorant of the sciences on which it is founded. The student then may naturally ask why should we spend so much time in acquiring the science of medicine in order to practise the art? We could prescribe cod-liver oil, iron, and quinine in the several diseases in which they are useful, although in ignorance of the reasons which suggest their employment. That this cannot, however, be done with safety is obvious from the following considerations.

When the science on which the art is founded is perfect, the rules which form that art are certain, and admit of universal application; and the more nearly the science approaches perfection the fewer exceptions do we find to the rules in the arts dependent on it. Thus

astronomy—the most perfect of all the positive sciences, and founded on known fundamental laws—furnishes a fixed code of rules to the art of navigation. A like relation obtains between the science of physics and the art of mechanical engineering; between the science of chemistry and the arts of electro-plating and photography; and he who desires to practise any one of these arts has only to commit to memory its rules, and to follow them accurately, to ensure success. He may mean time be quite ignorant of the science, and this is in truth the position of the great majority of those who profess these arts. But it is far otherwise in medicine. At present the science of medicine consists of a number of groups of biological facts, often unconnected by any known fundamental laws, therefore, though in the greater number of cases, certain effects follow the employment of certain remedies, there are always sufficient exceptions arising from complications impossible to foresee, which serve to remind the practitioner that he has to deal with vital phenomena of very complex and uncertain nature, and compel him to fall back constantly for help and guidance on the science from which his art springs. Thus, to resume the example already cited of the rule of art which directs us to give cod-liver oil in phthisis, we find that in certain complications, such as the presence of acute dyspepsia, bronchitis, or pneumonia, this practice would be injurious, and therefore, unless the practitioner be acquainted with the science, he would be manifestly incompetent to detect the exceptional conditions when present, and to modify the treatment accordingly. Again, in chlorosis: as a general rule iron is valuable as a remedy, but the practitioner who would blindly prescribe this tonic, without due inquiry as to the presence of symptoms which might negative its usefulness, or even render it hurtful, would show a

deplorable want of that knowledge of the science of his profession, without which the practice of the art is dangerous empiricism.

It is the recognition of this great fact, of the complex and varied nature of every pathological condition to which man is subject, which makes us regard with suspicion the majority of so-called specifics. There are doubtless certain drugs which neutralise certain poisons, or correct certain unhealthy conditions of the human body; but unfortunately in the hands of the ignorant or inexperienced, these may be as powerful for evil as for good, from the want of that enlightened and educated power of observation which enables the watchful physician to detect and provide for each unforeseen complication as it arises.

Were the public more cognizant of this truth, it would put a stop to a large amount of evil which now exists. The ignorant and inexperienced would be roused to some sense of the danger of advising their friends to use some medicine, or undergo some mode of cure from which they may have derived benefit, being all the time probably in total ignorance of the complex nature of the ailments which they are more likely to aggravate than relieve; and amateur doctoring would be looked upon as too dangerous a pastime even for the most adventurous.

It is a sincere conviction of the great value of this physiological truth, that induces the man of science, experience and principle, earnestly to warn his patients against the dangers of those "infallible cures" and "universal remedies" with which the charlatan and the knave delude the weak and the unwary. To the clever, but unscrupulous member of the medical profession, it is an easy matter to play upon the credulity of men, and

by specious pretensions (often under the guise of some scientific theory) induce the suffering to rely on promises of relief, the falseness of which are often only realized when life and hope are both alike sacrificed. However wild a theory may be, some disciples will be found to adopt it. I warn you, my young friends, against the temptation which arises from this human frailty. You will see the quack and the charlatan brilliantly successful, the unscrupulous pretender boasting of the crowds that seek his aid; while the high principled and hard-working man of science must often be contented with the approval of his own conscience, and the lasting, though slowly acquired, respect and confidence of the more enlightened of his fellows. In the words of an able writer, "he who wins the race by mere jockeyship is praised and courted to the utter neglect of him who has been distanced by being overweighted with honor, generosity, principle, and truth."

Having now explained to you the important relation which exists between the science and the art of medicine, and the impossibility of successfully practising the art without a more or less complete knowledge of the science, I would like to refer to a few points relating to the kind of knowledge which you should strive to attain, and explain to you wherein lies the difference between living knowledge ready for instant application, and that which is practically dead for useful purposes.

You must be careful in the first place to assign your time and thought to the several subjects in the course of study in measure corresponding to their relative importance, and it would be well not to dip too deeply into such of the collateral sciences, however interesting, as have only an imperfect bearing on medicine. That portion of your lives which is assigned to the technical part of your

professional education is in truth so short that you require jealously to husband every moment of it for devotion to essential studies.

In making this observation I must guard you against supposing that I undervalue the inestimable advantage that may be gained from an extended acquaintance with the more general departments of science and literature. I would like to think that all who hear me now will be students in the full sense of the word all their lives; for there is no protection so complete against the miserable narrow-mindedness which is the reproach of all professions than a large and evergrowing sympathy with the advances of science in all its departments; nay, further, all thought intended for use should be constantly renewed—the seeds of knowledge once planted in your minds must be regularly watered, or the plants will lose that living character so essential to their bearing fruit in practical application. Besides, medicine is advancing with such rapid strides that he who remains contented with the scanty and imperfect acquaintance with the writings of our great thinkers, which is all he can hope to achieve in the first years of his collegiate life, and is not constantly adding to his stores of learning by an intelligent interest in the everflowing stream of medical literature, must expect to be distanced in the race for eminence by all who have a truer sense of the high demands of our profession. I merely wish to guard the young student at this early stage of his career from that discursive and dangerous interest in collateral branches of knowledge which might distract his thoughts and monopolise the time which should be given to acquiring the difficult and essential rudiments of his profession.

This is all the more important from the fact that there are certain mental powers and qualities, most essen-

tial to the acquisition of the technical part of your education, which cannot attain a high degree of perfection unless cultivated in early life. These powers, if disregarded and allowed to lie idle now, can never, in after years, be roused to the same kind or fulness of activity; they are succeeded by other and different mental characteristics, and therefore if not now utilised must be in a great measure lost, and the mind in so far must be maimed and imperfect. Do not think that you can, as the common saying runs, "make up for lost time," and by proposed steady application in after years retrieve the invaluable treasure of youth, which you now squander; each term of mental life has its allotted work to do, and what is left undone in its own proper season can no more be recovered than the tree from which the blossom has been prematurely shaken can bear the fruit of which that blossom was the promise. The seasons in their appointed order—the rain, the wind, and the sun, combine to bring the fruit to perfection. Deprive the opening flower of any of these seasonable influences, or interfere in the natural order of their succession, no after care can undo the mischief, and a blighted harvest must be the inevitable result.

Let us take for example the power of observation; this is a quality which the young generally possess in a very marked degree. How valuable it is to you in your early studies is so evident that it scarcely requires to be dwelt upon. Your professional usefulness and consequent success depend in a great measure on the cultivated accuracy of this power; without it the medical man is helpless. In attendance in the wards of a Hospital, where this all-important branch of your education is mainly acquired, you are called upon to observe this or that abnormal condition, to detect signs and sounds indicative of different and essential deviations from health, to read quickly and surely the condition of patients from

such small signs and symptoms as would entirely escape the uninitiated or obtuse. This discipline which to the middle-aged man would be most toilsome, is almost playwork to the eager and interested youth who glories in the exercise of his natural powers, and whose quickness of sense, combined with a high facility of observation, give him a readiness in the acquisition of this technical part of his profession, with which no student of advanced years can hope to compete.

Again, mental habits, which will render your studies easier and more useful, can be more readily cultivated in the young. For example, one of the most valuable powers which a student can possess is a facility for arrangement and method, whereby the facts and theories which he is daily acquiring may be so classified in his mind, that they will be easily available and instantly at his command for practical application. It is a mistake to imagine that all facts, however incongruous, may be heaped together in the mind, and that they will then, by some mysterious process, arrange themselves without further effort. Undigested learning is as pernicious to the mind, as undigested food is to the body; only, unfortunately, the bad effects in the former case are not so readily perceived nor so easily removed. Should you be careless of this fact, you will be mentally starved, and the years passed in such so-called study will be in a great measure wasted. Mere memory acts but a subordinate part in mental assimilation, and though it may seem almost paradoxical to say so, a memory may be too retentive for practical usefulness, retaining with too minute fidelity the unimportant details of a subject, which may result in the neglect of general truths which are the more worthy of a permanent place in the mind. It is a wonderful provision of nature, that a power of forgetting enables the man of experience to make those wide and

important generalisations in all departments of knowledge, which would be almost impossible if each trifling feature presented itself to his mind with equal clearness and prominence with the more general truths.

Therefore, in the acquisition of medical knowledge, do not be discouraged if you find yourselves unable to recall minute distinctions and *every* point in the subject you have been studying; be satisfied that you have thoroughly grasped the higher meaning; that your perception of this is clearly defined, and your own experience will soon supply you with those smaller details which are often only illustrative of the more comprehensive truth. I am the more anxious that you should lay this to heart, because I am now speaking to you as men who intend to practise the profession you are studying; and however suitable it may be for the man of pure science to stow away in his capacious brain the accumulated learning of ages, until the practical side of his knowledge is lost in the fascinating pursuit of hypothesis and theory, your information must be ever at your command, and not too burdensome for daily and hourly use; and you must, therefore, for the present (as I have before remarked), dismiss from your consideration those parts of knowledge which do not immediately bear upon the practice of your art.

At the bedside a medical man is valued not by the extent of his knowledge, but by the fertility of his resources in relieving his patient, and these two qualities have no necessary connection. On the contrary, I have been personally acquainted with, and I could cite to you well known names of men who have enjoyed the highest reputation for learning, but who were embarrassed, and feeble in the sick room, and who never achieved success as practitioners. Their knowledge was large and unwieldy;

not compact and ready. Such men win a justly-merited fame as the erudite authors of valuable Dictionaries and Cyclopædias, but are not remembered for remarkable cures. A medical man may be said with justice to have too much knowledge when his accumulated stores have passed beyond those limits within which he can grasp them easily, and translate them promptly into remedial action.

You will see then how all-important it is to your success in practice that your knowledge should be quickly available and ready for use. No vague generalities, no hazy impressions as to the value of this or that mode of treatment will serve you in the hour of emergency. All such hesitation indicates want of confidence in your own resources, and a doubt as to the truth of the convictions from which action should take its rise.

In promoting this habit of mind the clinical instruction of the Hospital is invaluable. At the bedside of the patient the student learns how the man of experience instantly utilizes his knowledge for relief and cure; and by the pertinence of his questions, and the quickness of his observations, gathers rapidly a practical understanding of the case, which would but puzzle and mystify him whose mind is overloaded with undigested facts and confused with conflicting theories.

In this respect more is expected of you than of any other professional man. The lawyer, the divine, or the commercial man can retire for reflection, and opportunity is rarely denied him for maturing the difficult problems of his art. Authorities can be consulted, advice asked, and ignorance or forgetfulness may thus be concealed, and the consequences avoided. But no such refuge is within your reach; called upon at any moment to act in emergency, when all knowledge, except what you actually possess, is

valueless, the punishment of imperfect information, or ill-digested study, follows surely and swiftly. You cannot, as the lawyer says, "take time to consider," for before the needful knowledge can be dragged from the dusty caverns of your own memory, or sought for in books, or in the mind of another, the opportunity for using it is irrecoverably gone, and to the sensitive and conscientious man the material loss of the confidence of his patient is almost more bearable than the wound to his self-respect, added to the bitter consciousness of years and opportunities irretrievably wasted.

And now let us take for granted that you have attended to these hints which I have thrown together, and gained such an acquaintance with the theoretical and technical requirements of your calling as will eminently fit you for the position to which you aspire. Is not something more requisite, without which all your previous labour may be in a great measure in vain? Assuredly so, and on this important point I would wish to say a few brief words.

You must have the power of gaining the confidence and esteem of patients, and the tact for securing opportunities wherein to exercise the knowledge you have acquired. It is here that good sense, knowledge of the world, kindness of temper, self control, and moral worth, assert their value. We often see the genuine student by a too exclusive attention to professional studies, and the neglect of those equally important moral and social qualities, lose ultimately the reward he so well deserves. The world is very exacting in its estimate of what a medical man should be, and in the "fierce light which beats" about his position, little errors, weaknesses, and peculiarities (not to speak of graver faults) stand out with a startling prominence. I would, therefore, urgently remind the young aspirant not to forget that his future and

his success will be found in the world, and that he must study its healthy ways, and conform in some measure to its conventional rules, if he would gain that vantage ground from which the highest success can alone be reached. I do not mean by this that he should practise the cunning and wiles of common men, much less that he should condescend to the unmanly position of him who from motives of interest is ever "All things to all men." But while perfectly maintaining his own self respect, he should cultivate the art of making friends, and of gaining their esteem and confidence, a faculty which may be carried even to the highest perfection, by him whose cheek would burn at the mere thought of stooping to the unworthy artifices of the toady and the time-server.

That gentle forbearance with the selfish and irritable; that ready sympathy with the suffering and unhappy; that quiet firmness exercised over the weak and vacillating, command not only the esteem and confidence of men, but may be, and often are, associated with the conscientious discharge of the highest duties.

Again, in your relations with your professional brethren be always fair and honourable to their interests and their good name. Avoid earnestly that jealousy of the labours and of the success of others, that disposition to misconstrue good, and to suggest bad motives, which so often embitters professional life: it is cowardly, unmanly, and poisons the very springs of that "charity which thinketh no evil." Generous habits of thought and action, in relation to other men, give proof of true wisdom, and are among the noblest results of a refined culture.

Carefully avoid a cavilling and sceptical spirit. Honour your profession: believe earnestly in its great and acknowledged truths. It has been justly observed, "The begin-

ning of all knowledge is faith." The study of no profession can begin with scepticism, "much less should it end with it." Of all blighting influences it is the worst, withering and destroying not only belief in the first principles of our art, but paralysing every power of enquiry, and corrupting at its very source the wellspring of knowledge. This is not the time or place for refuting the charge of impotence brought sometimes by thoughtless or designing men against the remedial power of medicine. The contradictory and diverse opinions that are constantly advanced on almost all subjects connected with the doctrine and practice of medicine, give occasion for the sneer and the cavil from the ignorant and narrow-minded.

Be prepared for this, but let it not disturb your reliance on the stability of those foundations of your profession which future research will only strengthen. As sensible would it be to despise and question the advantages of telegraphy, because the laws of electricity are not yet completely defined and understood, as to throw away the assured and unquestionable benefits of medical art, because its fundamental principles have as yet eluded the grasp of the philosopher.

I cannot resist the opportunity which is now afforded me of stating in the most emphatic terms my abhorrence of those teachers who, unmindful of their grave responsibility, instil doubt and suspicion, as to the very foundations of our art, into the too plastic mind of the young. I have had occasion over and over again to verify the unhappy results of this evil influence in a stunted and blighted knowledge, and in the aimless and spiritless pursuit of a profession in which the unhappy sceptic has no faith and therefore should expect no success. Putting aside the terrible degradation of attempting to practice an art in the pretensions of which ho

has no belief, and in its claims no confidence, how could success be expected or hoped for? It is far better for such a one to fail miserably, as he deserves to do, than to carry about with him that subtle poison of unbelief and deception, which must inevitably infect those with whom he associates.

It is a strange phase of human nature that we are called upon to witness in this our age, that of assuming a contempt for what is high and noble, even if we feel it not. My young friends rest assured that nothing is so barren of all possibility of good as this miserable weakness. One of the greatest and deepest thinkers of our time affirms, "let us know what to love, and we shall also know what to reject, what to affirm, and we shall know also what to deny; but it is dangerous to *begin* with denial, and fatal to end with it. Of unwise admiration much may be hoped, for much good is really in it; but unwise contempt is itself a negation, nothing comes of it for it *is* nothing."

But while warning you against the danger of a earping scepticism, and the shallow folly of indulging in a contempt for the labours of others, it must not be forgotten that a heedless acceptance of, and a too facile belief in every plausible theory that presents itself to your notice is equally unwise. As a rule, all new truths gain practical acceptance only after a considerable length of time, and after having undergone the keenest criticism, and the most searching enquiry. Therefore, while the student can point to hundreds of ephemeral systems which, born in a day, flaunt their little life but to fade and die, because the seeds of falsehood and decay were born with them, the scientific truths which have stood the severe test of time are comparatively few and slow of growth. An impulsive and hasty opinion given on insufficient observation and without due caution and reflection, even in the every day affairs of life, is the char-

acteristic of a fool and meets with deserved contempt; how much more unworthy then is it to give a thoughtless and blind adherence to every fair seeming innovation in the art of medicine, which as I have before stated is from its very nature liable to so many sources of fallacy.

A word of encouragement and I have done. Do not be saddened and disappointed if the success naturally so coveted should be long in coming, and not so brilliant as you had once expected. It is not given to every man to be honoured, courted, and raised above his fellows. Nor is such a one necessarily happier than he who cheerfully does "the duty that before him lies," however simple and humble it may seem.

In conclusion, I desire for each and all of you, a strong clear mind, a heart full of courage and of kindness, and a deep sense of your responsibility, both to God and man—so

"————— falter not—'tis an assured good
 To seek the noblest, 'tis your only good
 Now you have seen it; for that higher vision
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