On the study of medicine and the duties of the student : an introductory lecture delivered at Saint Bartholomew's Hospital, on Monday, October 2, 1848 / by William Baly.

with the author's kind regards

ON THE STUDY OF MEDICINE AND THE DUTIES OF THE STUDENT:

AN

INTRODUCTORY LECTURE

DELIVERED AT

SAINT BARTHOLOMEW'S HOSPITAL,

ON MONDAY, OCTOBER 2, 1848.

BY

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PREFACE.

THE custom of opening the Medical Session at St. Bartholomew's Hospital by an Introductory Address, affords the Medical Officers and Lecturers the opportunity of publicly acknowledging how much they owe to the Governors for their liberal support, and for the interest they uniformly display in the prosperity of the School. On the recent occasion this duty devolved on me; and I cannot print this Lecture without again offering, for my colleagues and myself, our warm thanks to the Governors generally, while, at the same time, I express our sense of the honour conferred on us by the attendance of the Right Honourable the Lord Mayor, President; James Bentley, Esquire, Treasurer; and other Governors, at the opening of the present Session.

W. B.

October 10, 1848.

AN

INTRODUCTORY LECTURE,

&c.

GENTLEMEN,

IN the course of study you are about to pass through, with the object of preparing yourselves for the profession of Medicine, much is already done to facilitate your labours. The order in which the different branches of knowledge are to come before you is fixed; the means of studying each are provided; and teachers, likewise, whose duty it will be to demonstrate to you those facts, and to instruct you in those principles, with which it is most important that your minds should be stored. It remains that you should have a right notion of the part which devolves on yourselves in the work of Medical education; and it will be my aim this evening to impart to you just views on this subject, or, at all events, to warn you against the more dangerous errors regarding it.

I need hardly tell you, that the part you have to per-

form is an active one; that a strenuous and sustained effort of your minds is necessary, since the amount of knowledge you have to acquire is vast, the time allowed you for amassing it comparatively short, and the purpose to which it is afterwards to be applied of the greatest moment, both to yourselves and to the public. A right direction of your exertions is scarcely less necessary, in order that of the time devoted by you to study none may be wasted; and, as the prime requisite for an advantageous expenditure of your labour seems to be a clear apprehension by you of the relations subsisting between the several departments of Medical education, and especially of the part which each of the accessory sciences contributes to the Science of Medicine, I propose, in the first place, to occupy your attention with this subject.

The Science of Medicine comprehends a knowledge of the various disturbances of the healthy state of the human constitution; of the causes by which they are induced, and of the means by which they may be removed. And a little consideration brings to mind, the vast extent of the research which the possession of this knowledge presupposes. In order that the changed conditions of the body in disease should be recognized, and the nature and extent of the changes be appreciated, a previous acquaintance with its state in health is of course essential. The first step, therefore, in the study of Medicine, as a science, should obviously be an inquiry into the structure, composition, uses, and actions of the human frame and its different parts in their healthy condition. This inquiry, which is to form

the basis of all your subsequent studies, is divided into two chief sections, Anatomy and Physiology. But in their prosecution, aid is soon required from other departments of knowledge. The mere forms and mechanical relations of the different parts of the body are taught by Anatomy. But, when the inquiry is directed to its composition, we learn that its materials, reduced to their ultimate elements, are the same as those of all the lifeless mass of the earth,—that we are literally formed of the "dust of the ground;" we learn, too, that these elementary components of the human body have the same properties, are subject to the same laws, as the elements of dead, or inorganic matter, and are capable of being acted on by the great forces of inorganic nature, heat, light, and electricity; although, while they form part of our living frame, they are brought into new combinations, and made subservient to new purposes, concurring with the forces of external nature in the production of new and wonderful results, the phenomena of life.

You will see, therefore, that before you can well study the composition of the flesh and blood of which we are formed, either in health or in disease, you must have been previously instructed, by Chemistry and Physics, in the properties of all matter, and in the laws of action of those great forces of nature, which bring about and regulate the changes constantly going on in the inorganic world.

While Anatomy will teach you the structure of the human frame, and Chemistry will prepare you to understand its composition, it will be the province of

Physiology to inform you of the uses and actions of its different parts. It will show you how "fearfully and wonderfully we are made," demonstrating to you that our body is truly a piece of mechanism, formed of numberless parts, all acting and reacting, and mutually dependent, on each other; that every part not only is admirably adapted to the office it has to fulfil, but is conformable in structure and use with the general plan and purpose of the whole machine. As a mere matter of science, this is worthy of being remarked. For the belief that each part of the body has its use or purpose, guided our immortal Harvey to his great discovery. And the principle, that each part is conformable with the plan of the whole body, was the leading idea in the mind of the great Cuvier, when from fragments of fossil bones he reconstructed antediluvian creatures, and recalled, as it were, into existence a vast extinct creation. The philosophic spirit which animated Cuvier's mind, lives yet in a few worthy successors in the same department of science, of whom one, and the greatest one, ought to be especially honoured by us, not merely because he has done so much to raise English science to the highest place in the estimation of all civilized nations, but also because he was himself a pupil, and for a short period a teacher, in this school, and has on every occasion evinced a warm interest in its prosperity. I scarcely need name Professor Owen.

Besides this principle of the adaptation of every part to a purpose, there is another leading truth to be taken as your guide in the study of the structure and functions of the animal body; the truth, namely, that the

plan developed in each species of animal,—for example, in man himself,—is only a modification of an ideal type, which has a far wider rule in the animal creation. Guided by this principle, Physiologists have traced the analogies of corresponding structures in different animals, and have, sometimes, been enabled to discover the uses of parts of the human frame, before unknown, by reference to their more highly developed condition in other creatures.

Both the principles now pointed out are main objects of study in the science of Comparative Anatomy and Physiology; and both are beautifully exemplified in the comparative anatomy of the skeleton. In our museum you will find a large number of perfect skeletons of animals, and of skulls separated into their component bones, in accordance with the principles laid down by Professor Owen; and in them you will perceive how the same parts of the archetype are maintained in the several species, but are, in each species of animal, modified in form and position, conformably with the purpose and conditions of its existence. The separated skulls and many of the skeletons to which I refer, we owe to a recent gift of the Treasurer of the Hospital, to one of those acts of liberality by which he is constantly seeking to render our means of teaching complete, and laying on us fresh obligations of gratitude.

But, when you have become acquainted with the composition, structure, and functions of the different parts of the human frame, you will yet have to learn the mode in which these different parts, and the whole

machine they constitute, were originally formed and are maintained: in other words, their development, growth, and nutrition. In this department of Physiology, which has an important bearing on the doctrines of disease, you will meet with one of the most beautiful illustrations of the uniformity of nature's laws, and of the manifold results nature loves to produce by simple means. I allude to the fact, that both in the animal and in the vegetable kingdom, the first formation of the embryonic being, the subsequent development and growth, and the permanent nutrition of the body, are, in a great measure, dependent on the agency of microscopic bodies called cells, which are every where similar in their more essential characters. Here then we derive aid in our study of the human body, even from the observation of vegetable life, from Vegetable Physiology,—a department of Botany.

But in these processes of growth and nutrition we have to observe, not merely the changes of form and the multiplication of parts, but also the simultaneous changes in composition; and here again we must seek aid from Chemistry. Chemistry, too, enables us to compare the matters taken into our bodies in the form of food, with the blood into which they must first be converted,—with the materials of the different solid parts of the body,—and with the effete matters which are constantly being cast off. It thus teaches us which are the more essential of the various articles of food, and it besides unfolds to us the important fact, that the material of our frame, and of every living being, is constantly undergoing changes, while the form remains

permanent; and that the actions of the different parts, the sum of which constitutes life, are dependent on this change of material.

Thus is completed our idea of a living being. And, if we now reflect on its distinguishing characters, we shall see in them proofs of a "final cause," or purpose, which are not discoverable in inanimate nature. In inanimate nature, the purpose of any arrangement of parts, as far as we can perceive and understand it, ends in the production of order and uniformity of action, such as we see in the beautiful mechanism of the planetary system; and the mutual actions and reactions of the parts on each other result entirely from their unvarying physical properties. But in living bodies the materials, without losing their physical properties, are brought together in new combinations and forms, so as to constitute tissues and organs which have the evident purpose of producing, as new results, the vital actions essential to the completeness of the whole design. I notice this difference between living beings and dead matter, because from it flows this other distinction between them, so interesting to us,—that disease is peculiar to living beings. For disease consists in the disturbances of those secondary or vital properties and actions, and of the peculiar composition and structure designed to produce them; while the physical properties of the ultimate material elements remain unaltered. And in inorganic nature, where only the unvarying physical properties exist, no disease can occur.

And here let me remark, how great a problem your

studies thus far will have suggested to your minds! You will have learned the differences between dead matter and living beings; will you not be led to ask, What is life? This is, perhaps, one of those problems, of which the solution is to remain ever hidden from us in our present state of existence, as "beings darkly wise." It has engaged minds of the most exalted power, and is still an unsolved enigma. But though we never determine what life is, the investigation of its laws is a subject worthy to exercise our highest intellectual faculties. By it we are led to the contemplation of all animated nature, in the endless variety of forms presented by the vegetable and animal kingdoms. Every where we find the laws of vitality the same, and we recognize the unity of the principle of life pervading this world. And when, at the same time, we regard the grandeur of the scale of God's works, and the uniformity of design evinced in the whole of our planetary system, we are led to believe that, if the other worlds which roll with this earth around our sun be adapted for the existence of an animated nature, the same principle of life we study here, reigns in them likewise. Indeed, if, as some astronomers believe, those myriads of bright points which bespangle the heavens, all form part of one vast system revolving around one central sun, this proof that one mechanism regulates the whole universe, would leave it impossible for us not to conceive, that so also one life lives through the whole.

The immediate object of our study, however, is Man; and Man regarded not merely as a living, but as

a thinking being likewise. Of man's mind, Physiology teaches us much, in regard to its relations to the body; and it is in this point of view that we have especially to study it. And here, the first thing we observe is the adaptation and subserviency of the body to the mind. The whole form of the body, the mechanism by which its various movements are effected, voice and speech produced, and the senses enabled to convey a knowledge of external things to the consciousness, are adapted to the powers of the mind; to the exercise of those intellectual faculties by which man is qualified to rule over the rest of the creation, to investigate the truths of science, and to apprehend the majesty and wisdom of the great Artificer of the universe; and not less to the expression of man's love and pity for his fellow-creatures, and adoration of the God whom he feels to be infinite in goodness as in power. In respect of these faculties, the mind of man is wholly superior to his body. There are other feelings, of a selfish nature, which have for their immediate object man's apparent good in this world, or his corporeal pleasure. These also his body is adapted to express and gratify; but, on the other hand, these selfish feelings, and especially the sensual desires, are implanted in man, for the purpose of protecting and maintaining his corporeal frame, and of ensuring the continuance of the species; and they are, in this respect, therefore, subservient to the body.

Now the latter class of man's mental endowments are designed to be subject, together with the body, to the higher intellectual faculties and feelings, and to that independent power of the mind which we

call conscience. But the disposition of the mind, as of the body, may be disordered; the lower passions may gain predominant sway. This is a moral disease; but its effects are manifested in the body. Compare the countenance of a Newton, a Milton, or a Cuvier, with that of one who has left uncultivated the higher faculties of his mind, and has given uncurbed dominion to the more selfish feelings of his nature, and to those passions by which man has affinity with the brutes that perish, till the soul has

> "Link'd itself by carnal sensuality
> To a degenerate and degraded state,"

and you will have evidence that the action of the mind can modify the forms, and, therefore, in some measure, the nutritive functions, of the body. But of this truth, and of the influence of the mind over all the corporeal functions, you will meet with many more distinct proofs in the course of your studies. They will all be worthy of your attentive consideration; because, in disease the influence of the mind on the body is constantly manifested in the exaggeration, perversion, or failure, of these, its natural modes of influence. It will also be an important subject for your observation, that the manifestations of the mind are dependent on its instrument, the brain; and that this organ being in the relation of mutual dependence with other parts of the body, as they are with respect to each other, variations in the actions of those parts may, by affecting the brain, influence the mental manifestations.

We have thus taken a general view of the constitution of man, as it is revealed to us by Anatomy and

Physiology, with the aids afforded by Chemistry and Physics, the Comparative Anatomy and Physiology of Animals, and the Physiology of Vegetables. And if we now imagine a human being entirely conformable with the evident design of the Creator, and still bearing the stamp of His image, with a body perfectly developed in all its parts, harmonious in its actions, and completely subject to the mind, while the lower mental powers are under the control of the higher, and these occupied with the most elevated conceptions, may we not, without exaggeration, exclaim, in the words of Hamlet, "What a piece of work is man! How noble in reason! How infinite in faculties! In form and moving how express and admirable! In action how like an angel! In apprehension how like a God! The beauty of the world! The paragon of animals!"

But the department of your studies to which I must now briefly refer, brings before you the reverse of this picture, and shows you the various multitude of diseases and injuries by which this fair form is marred, its faculties disordered.

Medicine, Surgery, and Midwifery, which are occupied with the practical part of medical education, all have for their object to investigate the disorders of our frame, their causes, and the means best adapted to their cure. All three teach, in the first place, the same fundamental doctrines of disease, or principles of Pathology, and in elucidating them, necessarily make constant reference to the Anatomy, Physiology, and Chemistry of the healthy body. For there is disease of structure, disease of function, and disease of composition;

and the nature and degree of these several forms of disorder in particular cases, can be estimated only by comparing them with the structure and composition of the body, and the functions of the body and mind, in their normal or healthy state.

In like manner, a constant reference to the knowledge gained in other departments of medical education, is necessary in the investigation of the causes of disease. For the causes of disease, in many instances, you will find to have been objects of your study in Chemistry and Physiology. The air we breathe, and the food we take for our sustenance, when they fail to have the composition which those sciences will have taught you is adapted to our physical constitution, become causes of disease; and man may produce disease within himself, by neglecting or abusing the exercise of those corporeal and mental faculties, which you will previously have studied, by the aid of Physiology, in their state of harmonious action in health.

In the cure or treatment of disease,—in other words, in the endeavour to restore the harmonious action of the living machine, the main object of medicine, after the removal of the cause, is the application of remedial means appropriate to the disorder. The various remedial means constituting the *Materia Medica*, are derived from all the kingdoms of nature, the mineral, the animal, and the vegetable. Here, then, there will be demanded a fresh application of your knowledge of the elementary sciences, especially of Botany and of Chemistry, in relation to organic as well as inorganic substances. To prepare you for using remedies, however, you must

know, not merely the source whence they are derived, and their properties, as ascertained in the laboratory of the Chemist, but also their powers of action on the living body in health and disease. This latter knowledge, constituting Therapeutics, is based wholly, or for the most part, on observation and experience; it is empirical. But the selection of appropriate remedies in the individual cases pre-supposes a knowledge of the seat and nature of the disease, of the processes set up under favourable circumstances by the self-preservative and restorative powers of the body, and of the kind of actions by which these processes may best be promoted, or supplied. It pre-supposes, therefore, a knowledge of Physiology and Pathology.

The art of using remedial agents for the relief of disease and suffering, is the main end of your medical education. But there are other purposes for which you will occasionally be called on to apply your professional knowledge. Such are the promoting public health, by the detection of the causes of disease on a large scale, and the indication of the best means for their removal; and the aiding in the administration of both the civil and the criminal laws. These uses of medical science are taught by Forensic Medicine, in the study of which you will constantly meet with striking instances of the mutual connexion subsisting between the different branches of medical knowledge.

In this cursory review of the several departments of medical education, my primary object has been to show that they are all mutually allied, and that an acquaintance with all is necessary to prepare you for

the practice of medicine as a scientific art. But another purpose may, at the same time, have been served. You will, I think, have learned something of the relative importance of the different subjects of inquiry to which you have to apply yourselves, especially in the first year of your sojourn here. You will have perceived that Anatomy and Physiology are the foundation of medical science, and that they must be learned perfectly, if you hope ever to investigate with success the seat and nature of disease, or to bring the other elementary branches of your medical education to bear with effect on its cure. You will have learned too, that Chemistry and Botany, though merely subsidiary to medicine, are to be studied as sciences; that a thorough understanding, not of all their facts, but certainly of their fundamental principles, must be gained; and that such mere scraps of the knowledge they teach as have an obvious relation to the practice of medicine, as an art, will be useless in your study of medicine, as a science. Lastly, you may have remarked that an inquiry into the *Materia Medica*, and Therapeutics, appears out of place in the first Winter Session. The information you gain in that course will, however, be found of great value at a subsequent period of your education, when it must be your chief business to investigate disease in the wards of the hospital, and to observe there the operation of remedies, and the principles which regulate their use.

But it is not enough that you should know the bearings of the different branches of medical science on each other, and their relative importance. You must

adopt a right method in their study. I remarked at the beginning of this address, that a strenuous and sustained effort of your minds would be required; and I shall only express the meaning of those words more exactly, when I say that your intellectual faculties must be constantly active in collecting the truths of the sciences included in the plan of your education.

Now, in the medical sciences, as in all the natural sciences, the truths consist of particular facts, of general facts, of causes and their effects, and of the most general laws of nature, expressed by theories; and the particular facts of a science are like the letters of an alphabet, which must be perfectly learned before the words and sentences they form can be read and understood. Before you can have right notions of the general truths of any medical science, you must gain a precise knowledge of its particular facts; and you can do this only by close and accurate, and repeated observation.

I scarcely need tell you, that in the study of Anatomy you would never really learn the structure of the body, if you trusted to the descriptions given in books, or even to the demonstrations of your teachers. You must dissect for yourselves, and closely examine, and attentively observe, the size, and form, and position, and all the physical characters of every part of the human frame. And while you thus familiarize yourselves with the more gross anatomy, you must neglect no opportunity of examining with the microscope the minuter structures. Such opportunities will be abundantly afforded you.

And when the time shall arrive for your minds to be directed to the knowledge of the body in the state of disease, great accuracy of observation will be even more necessary than in your preliminary studies. Various means are prepared for your education in the truths of Pathology. The lectures on the theory and practice of Medicine and Surgery, and on the diseases of women and children, will teach you the principles of Pathology; and will also tell you what are the pathological facts to be observed. But I must warn you, that neither these lectures, nor systematic works on the same subjects, can impart to you any actual knowledge of the facts themselves. These must be learned by your own direct observation in the wards of the hospital, and in the "dead-house;" and those facts which constitute the phenomena or symptoms of disease during life, will both need and merit the most close and most frequently repeated exercise of your observing powers. They merit this on account of their importance; for the assemblage of the symptoms is in most cases all that can be known with certainty of the disease during life, and while its cure is possible; and they alone furnish the indications for its treatment. The symptoms need this close and repeated observation; for they consist of various modifications of the states and actions of the body, of which we have cognizance through our senses of sight, hearing, and touch; and widely dissimilar significations as to the nature of the disease, and, perhaps, opposite indications as to its treatment, belong to symptoms having so close a superficial resemblance, that the sight, the hearing,

and the touch, must be educated by long practice, before the power of discriminating between them will be gained. You have now, in this great Hospital, an opportunity, such as the large majority of you will never have again, of studying the symptoms of disease in all their modifications,—of comparing and contrasting them, and of discovering their shades of difference. Let me urge you to use this opportunity well; to be constant in your attendance in the wards; and, while there, to keep your minds active in observing.

The Governors of this Hospital have determined that a record shall be kept of all the more remarkable cases of disease and injury occurring within its walls. This resolution has the important purpose of accumulating a large number of histories of particular specimens of disease; by the analysis of which, at a future period, new and valuable truths may be discovered. But it will serve also the great use of exercising the observing faculties of those who record the particular cases, and of impressing the facts on their memories. And it is for this reason, especially, that I strongly recommend you, when sufficiently advanced in your studies, to co-operate in carrying into effect the plan of the "Registration of Cases."

But you have not merely to accumulate particular facts in your minds, by observation. In every department of your education you have to learn the natural relations of those facts, and the general laws respecting them. These are the principles of the different sciences, and to teach these is the great use of lectures, and of books, to you as students. For this

purpose, you will find both books and lectures indispensable. But the lectures are superior to books, inasmuch as they admit of more complete illustration. In most cases they combine actual demonstration with description, and they follow the order which will be most convenient to you in actual observation. You will do well, therefore, to take the lectures as your chief guides in your studies, and to use books as subsidiary to them. But here, again, your part in the work of education is an active one. In learning from books or lectures, you must observe and reflect on, and labour thoroughly to understand, the grounds of the classification of facts; the proofs of the dependence of effects on their causes; and the whole train of reasoning by which general laws are established. Without this exertion of your intellectual powers in the study of the natural sciences, you will never obtain a conviction of the truth of their principles. While, if you thoroughly master the truths of those sciences, not only will you have them at your command, and ready for application in your subsequent studies, but your minds will, at the same time, have been so disciplined, as to be able, with comparative ease, to grapple with the difficulties which oppose the discovery of general truths amongst the complex and varying conditions of disease. You will have gained a habit of steady, correct, and active thought; and this will be an inestimable gain. For such a habit, combined with a precise observation of facts, and a sincere desire to learn the truth, will avail you more, and is indeed more essential, in every department of scientific inquiry, than any mere formulæ

or methods of study. This was felt by the greatest practical philosopher England ever produced, Sir Isaac Newton. For when he was asked how he made his sublime discoveries, he simply answered, "By always thinking about them." We know, too, that John Hunter's wondrous acquaintance with nature's works and nature's laws, and the improvements he was thereby enabled to introduce into the science and art of Surgery, were the result, first, of untiring industry in observation, and secondly, of patient and laborious thought.

And if such were the means by which the genius of Newton or of Hunter asserted its pre-eminence, you may be sure that the most highly gifted of you cannot dispense with similar means, if they hope to attain distinction among their fellow-students, or future celebrity as scientific cultivators of their profession. But this also you may regard as certain—that industry in observation and reflection will ensure to all who practise it both success in their present studies, various and difficult as those studies are, and future prosperity, with the happiness flowing from the possession of knowledge, and from its exercise for the benefit of their fellow-men.

In all I have said it has been my aim to impress you with the conviction, that the science of your profession cannot be learned without strenuous exertion on your own parts. Your labours, however, will not be unaided. Whenever you meet with difficulties, do not hesitate to seek special help from your teachers, whose great pleasure will be to aid your advance in the path they have before trodden. Many of those whom it is my

pride to call my colleagues, were formerly my teachers; and of their kindness in ever lending a guiding hand when needed, my own experience has given me the best assurance. But I confidently promise you the same help from all; for I know that all of us are animated by a common desire to fulfil to the utmost of our powers, the high purpose of the offices confided to us, and to show our own attachment to this noble Institution, by earnestly promoting the important object which brings you hither; trusting that when your period of pupilage shall be completed, and you shall perhaps be scattered widely through the British Empire, you will not only prove yourselves worthy of the school, which a succession of great names has made illustrious, but will also be the more zealous for its honour, from the remembrance that we, who may still be labouring here, were your friends as well as the directors of your studies.

We have this year to congratulate ourselves on the accession of a new colleague, whose sentiments, I am sure, respond to those I have just expressed. The Governors of the Hospital, in acceding to Dr. Rigby's desire for a coadjutor in his lectureship, have, by the appointment of Dr. West, given us another proof of their determination to exercise their powers for the real good of the school, and have placed before you another example of the rewards which never fail to crown the efforts of persevering labour, when it is combined with high principle. Dr. West commenced the study of his profession in this theatre fifteen years ago, resolved to devote all his energies to the cultivation of

his own mind, and the pursuit of knowledge. He soon became distinguished among his fellow-pupils; and he has since steadily advanced from eminence as a student, to the very high position he now holds in the estimation of the whole profession; owing all his success to his untiring industry, and to that honourable and upright conduct, without which the brightest talents, and the most varied learning, would want their best lustre.

Success is sure to reward the efforts of industry. But it would be a grievous error to imagine that the desire of honour or wealth, has been the sole motive of those whose attainment of distinction by right means, makes them worthy of your emulation. Higher principles of action have spurred them on. They have been conscious that the cultivation of their intellectual faculties to the full measure of their opportunities was their bounden duty. They have found both the opportunity, and the means, for this self-culture in the study of man's nature, in health, and in disease, and in the several sciences accessory to medicine; and they have experienced in the prosecution of these studies, a twofold incentive to continued labour—the pure enjoyment which always attends the exercise of the higher mental powers in the search after truth, and that ennobling pleasure with which the mind is filled, while contemplating by the light of science, the beauty, harmony, and grandeur of the creation. In the study of the science of medicine, they have not been unmindful of the office it should prepare them to fill,—that of ministering to the preservation of God's most precious gifts to mortal man, life, and health; and they have felt deeply its responsi-

bilities, knowing the happiness they might dispense if skilled in their profession, the misery they must cause if ignorant. Motives such as these would, I know, develop themselves in the minds of most of you in the course of your education; but it were better, that they should be rightly conceived by all at its outset. Let me, therefore, beg of those whose study of medicine commences here to-day, to read and ponder on all that is said with so much eloquence in a lecture on this subject, fortunately in print. I mean the lecture on "The motives to industry in the study of medicine," which was delivered in this theatre, two years since, by Mr. Paget.

The acquisition of knowledge, and the cultivation of your intellect, are not, however, to engross all your thoughts and care. I should ill, indeed, perform the duty entrusted to me this evening, if I left you with such an impression on your minds, omitting all mention of the still higher obligations of your position. Let me, then, exhort you, not merely as men, but especially as students of Medicine, to be earnest and watchful in guarding and strengthening your moral nature. For, assuredly, there is no walk of life in which moral excellence is more needed than in the one which is hereafter to be yours. In your future vocation of saving life, restoring health, and relieving suffering, you must be ever ready to sacrifice your own ease, pleasure, or worldly profit, and even to risk your own health and life for the sake of others. Selfishness, then, must have no place in your breasts. The secrets, and the most valued treasures of man's bosom, the life

and purity of those he dearly loves, will be confided to your care. If your honour be sullied, or your nature debased by any low and sensual vice, you will be unworthy of this exalted trust. Neglect, then, no means which may aid in preserving the purity and upright attitude of your minds, and in fostering all your more generous sentiments. The constant occupation of your time with improving studies will be a great safeguard to your morals, for vacuity of thought opens a way for the entrance of vice. The influence of good precepts and examples, and the dictates of your own conscience, will, likewise, do much; but all these will be insufficient, unless the controlling power of conscience be strengthened and supported by religion. For no one who has watched the workings of his own mind, can doubt that true religious faith and feeling are the only real security against the treacherous assaults of our passions, and the withering influence of selfishness.

If you enter on your labours here with right principles of thought and action, sincerely desirous to fit yourselves by moral as well as intellectual culture for the high duties of your future profession, the very studies you are about to pursue will tend to strengthen those principles, and to keep alive all the best feelings of your nature. In the study of the natural sciences, the object of your search will be truth, pure, unmixed, sublime truth; and your minds, elevated and expanded by such a pursuit, will hardly stoop to enter the low and devious ways of cunning and deceit. While constantly reminded of the infinite power, wisdom, and

benevolence of God, you will as constantly feel your own insignificance and unworthiness.

Nor will lessons of temperance, patience, and practical virtue be wanting. In this Hospital you will witness, on the one hand, the evils which result from a weak or vicious indulgence of the sensual passions and appetites; on the other, the calmness and resignation with which bodily suffering may be borne, and death itself confronted, when the conscience is clear, and the mind sustained by "sweet hopes and high imaginings" of a future and better state of existence. And on every side, you will see Charity at work, ministering to the wants of both body and mind,—soothing, healing, blessing. And this spectacle, I would hope, will not be lost to your improvement; but while it leads you to meditate on your own present dangers and future destiny, will teach you to regard the patients in this Hospital as objects of pity and kind sympathy, and thus foster in your hearts the true spirit of charity, which is the soul of all other virtues.

Your moral strength and purity, thus advancing hand in hand with your increase in knowledge, will themselves aid the growth of your intellect in vigour and expansion. In saying this, I do not allude merely to the time which will be saved for your studies, by the restraint from indulgence in unworthy pleasures and pursuits, nor merely to the undisturbed exercise of your reason, which will be so much favoured by the exclusion of ignoble thoughts, and the repression of tumultuous passions, but likewise to the actual force and enlargement of intellect which will result, if the

mind be freed from the chains of selfishness, and animated by an impartial, disinterested, uncompromising love of truth.

Such then, Gentlemen, are the views entertained by myself, and, I believe, by all my colleagues, with respect to the objects of your labours, and the principles which must actuate them, if they are to lead to that future success and happiness in life, doubtless desired by you, and affectionately hoped for by your friends.

And now, before I conclude, let me tell you, that your course here is watched with great interest, not only by your teachers, whose reputation will henceforth be, in a measure, bound up with your own,—not only by the heads of our Profession, the Presidents of the Royal Colleges of Physicians and Surgeons, Dr. Paris and Mr. Stanley, who honour us by their attendance this evening,—but likewise by the Governors of this Hospital, who, while they neglect no means of perfecting it as a House of Charity, with the most benevolent and enlightened purposes encourage its use as a great School of Medicine. They are anxious that you, who, after being educated here, will go forth to the world as Professors of the "healing art," should really be dispensers of the good you will promise, worthy representatives of those distinguished physicians and surgeons, who from the time of Harvey to the present day, have exercised their skill here in the service of charity, and not unworthy witnesses to the spirit of Christian benevolence which is the animating soul of this Institution. The Governors generally have shown that such are their feelings, by providing the means of medical and

surgical study on a large scale; by founding, and placing under the superintendence of Mr. Paget, a Collegiate Establishment, which offers great advantages in respect of comfort, and great opportunities for the acquisition of knowledge, and the formation of those high principles which are characteristic of true gentlemen; and further, by taking an active part in the ceremony of distributing prizes and honours at the close of each Winter Session. And it is a gratifying and inspiriting fact that those Governors, who, from the nature of their offices, have the largest share in directing the affairs of the Hospital, are also those who give proof of the deepest regard for the welfare of the School. The President, called to his office here only a few months since, has, amidst the honours and toils of his high position as Lord Mayor of London, and during a period of almost unexampled danger to the peace and security of the City, nevertheless found time to evince, at every opportunity, his determination to lend you, as well as ourselves, his countenance and powerful support [1]. The Treasurer, to whom is intrusted the continued government of the Hospital, has an ever-watchful eye for all that can affect the success and reputation of the School; and your obligations to him would be very imperfectly measured, even by the Scholarship, and the two important Prizes, with which he has sought to promote an honourable emulation amongst you. Four other Governors are appointed as Almoners to aid the Treasurer in his onerous trust. And I have to-night the gratification of an-

[1] The Lord Mayor has since expressed his intention of founding a *President's Prize*.

nouncing to you a fact which came to my knowledge only two days since, that at the end of the present session there will be awarded for the first time an *Almoner's Prize*. I am not authorized to name the Almoner to whom you owe the foundation of this fresh reward for industry; but I cannot refrain from saying, that you will well deserve his encouragement, if you pursue the study of your profession, with only half the zeal with which he devotes himself to objects of usefulness and charity.

I mention your obligations to the Governors of this Hospital, with the view of showing you how important must be the work you are about to engage in, since it is an object of care to a body of noblemen and gentlemen, who have no personal interest in it, other than the interest of promoting the good of humanity. And now, Gentlemen, with my concluding words, I would exhort you to carry through this work with an earnestness proportionate to its importance. Let it be your deliberate and solemn resolve to do so. Let no temptation to sloth or idleness, draw you away from the labour of intellectual culture, and the acquisition of sound knowledge; let no inducement to deceit or unworthy gratification entice you from the path of truth and moral rectitude; no lure of personal advantage, or whisper of selfishness deter you from the practice of generosity, and disinterested kindness. Let these be your principles of action, and then, if cases of doubt or difficulty arise, conscience will guide your course aright, provided a still higher Influence than conscience strengthen its voice, and give you the ability to follow its dictates.

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