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AN INTRODUCTORY ADDRESS

DELIVERED ON

WEDNESDAY, OCTOBER 1, 1873,

THE OCCASION OF

THE OPENING OF THE SESSION 1873-74 OF THE WEST MINSTER HOSPITAL MEDICAL SCHOOL,

BY

GEORGE COWELL, F.R.C.S.,

Fellow of the Royal Medical and Chirurgical Society; Surgeon to, and
Lecturer on Surgery and Ophthalmic Surgery at, the Westminster Hospital; Assistant
Surgeon to the Royal Westminster Ophthalmic Hospital; Surgeon to the Victoria
Hospital for Children; Consulting Ophthalmic Surgeon to the East London
Hospital for Children; Dean of the Westminster Hospital
Medical School.

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THE MOST NOBLE THE PRESIDENT

AND

THE GOVERNORS

OF THE

WESTMINSTER HOSPITAL,

THIS ADDRESS IS HUMBLY DEDICATED BY THE AUTHOR,

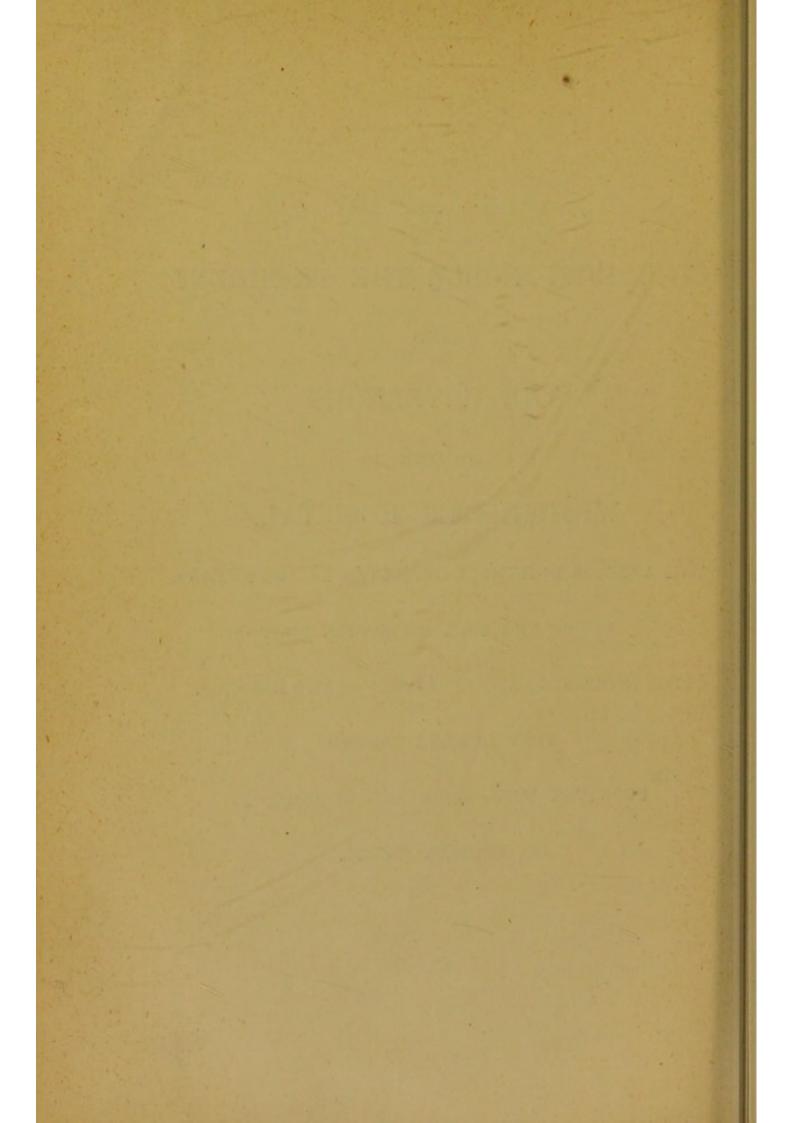
UNDER THE FULL IMPRESSION THAT

THE INTERESTS AND REPUTATION OF THE HOSPITAL

VERY LARGELY DEPEND

UPON THE WELL-BEING AND SUCCESS OF

ITS MEDICAL SCHOOL.



INTRODUCTORY ADDRESS.

Dr. Basham and Gentlemen,—It is related of Mr. Abernethy that, on entering the theatre of St. Bartholomew's Hospital on the occasion of his delivering the introductory lecture, he cast his eyes over the crowded benches and said, "God help you, gentlemen! what is to become of you all?"

In the present day we do not suffer from the same plethora of candidates aspiring to enter the medical profession. I do not know that it is especially a matter for congratulation, but it is a recognized fact, that, whilst the population of the country has increased with marvellous rapidity, and whilst the number of medical schools has nearly doubled, the numbers of the profession have not increased in the same proportion, and are relatively much less than they were in the days of Abernethy. We have at all events no cause for anxiety on behalf of all those who enter now, as to the prospect of their finding sufficient scope for the exercise of their profession.

But on these occasions we are also accustomed to see intermingled with the younger faces of those who are in various stages of professional development, the faces of former students and of old friends, who rally round us, and by their presence bear witness to their regard to our school and to their interest in those that come after them. Before such an audience as this, I have, by the kindness of my colleagues, the honour of inaugurating the commencement of another year of medical study. As long as medical schools have existed it has been the custom to do this by the delivery of an introductory address. That this custom has held its ground for so many years is, I take it, a proof of its usefulness and of its popularity. We have proof to-day that an introductory lecture is recognized as one of the best means of bringing together and introducing to each other, the students of former years, the present pupils now returning from their long vacation, and those who are now for the first time entering

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our ranks. It is an opportunity for resuscitating old friendships and forming new ones, and thus tends to keep up that clanship and esprit de corps which leads fellow students and men of the same school to stand by each other in the uphill fight through which so many have to pass before they attain professional success. The introductory lecture affords also an opportunity of commemorating and holding up to example departed glories in the persons of colleagues who have ceased to take an active part in the work and teaching of the hospital and school, but whose ability and industry have at the same time achieved an individual success and shed a lustre on the institution with which they have been connected. It enables old students who are familiar with the things that were, to become to some extent conversant with things that are. And, lastly, it presents an occasion for conveying some advice and encouragement to those who are about to face the rugged path of medical education; an occasion for lauding and testifying our pride in a profession, formerly and even still so much abused, so moderately appreciated, so inadequately paid. These objects mark very much the line which the feeble remarks I have to make this evening ought to take; but I cannot help feeling that the very frequency with which these introductory addresses are given, ten being delivered annually in London alone, renders the task no easy one. The ground is so well trodden that one naturally shrinks back in dismay, so impossible does it seem to find anything new wherewith to secure your attention, so painful is it to repeat and hear mere common platitudes, so unsatisfactory to utter and receive nothing but the most self-evident truisms.

But, gentlemen, I want you all to consider that this is no ordinary occasion. You who are still students here, and you who take your seat in this theatre for the first time this evening must bear evidence by your work and industry that the Westminster Hospital Medical School is springing into new life, and that its quasi dormant energies are waking into full vigour. You who are Westminster men are proud of your school, your Alma Mater, but you who come here for the first time may like to know something

of its history, and it may not be uninteresting to all of us if I digress into a little, I had almost said, archæology.

First then as to the hospital. I need not say that it did not always possess the present commodious building. The hospital owes its origin to a meeting which was held at St. Dunstan's Coffee House on the 14th of January 1715, nearly 159 years ago, and first opened its doors at a small house in Bird Cage Walk under the name of the "Publick Infirmary for the Sick and Needy." At this time the only hospitals which existed for the medical and surgical relief of the sick poor were St. Bartholomew's and St. Thomas', both having been established and carried on by the religious houses of their respective neighbourhoods, and created royal hospitals soon after the suppression of the monasteries in 1537. Westminster is remarkable as being the first which was founded by the voluntary contributions of the public. Guy's Hospital, founded by the munificence of one individual, was not established until a few years later. After nearly five years work in Bird Cage Walk, as an institution for the administration

of relief, the hospital was opened for the reception of in-patients, with 30 beds, and with an entrance from Petty France. So rapidly did its usefulness develope that, in 1724, having been in existence little more than 9 years, it opened its wards in Chapel Street with 60 beds. At this time the celebrated and courtly Mead, Queen Anne's physician, whose monument is in Westminster Abbey hard by, was physician to the hospital, and two years later Cheselden, the famous lithotomist, the teacher of John Hunter, became one of its surgeons, a post which he held for 15 years. His portrait hangs in the Board Room, in which we shall presently assemble. Another 9 years passed, and in 1733 the hospital was removed to a still larger building in James' Street, but before this removal was effected, there was a great controversy amongst the governors, some of whom preferred a house near Hyde Park Corner, called Lanesborough House. A majority having decided upon the house in James' Street, the minority seceded and established a rival institution at Lanesborough House. This was the origin of St. George's Hospital.

A portion of the staff seceded at the same time, but Cheselden and Mead remained staunch to the mother hospital. In James' Street the institution remained for 101 years, but the building having become dilapidated and the accommodation insufficient for its requirements, the requisite money was collected, and in 1834 the patients were removed into the present building under the superintendence of the house surgeons in office at that time, Dr. Basham, our present senior physician, and Mr. Hancock, he who was last year the president of the Royal College of Surgeons. A short time before the opening of the new building, no less than four of the surgeons of the Westminster Hospital were members of the Council and Court of Examiners of the College, Mr. Lynn, Sir Anthony Carlisle, Mr. Anthony White, and Mr. Guthrie. The physicians at this time were Sir G. L. Tuthill, Dr. Bright and Dr. Hamilton Roe.

The staff of the hospital made no attempt to establish a medical school until the opening of the present building in 1834, when in the face of much opposition on the part of a portion of the staff, and many of the Governors of the hospital, Mr. Guthrie, and Mr. Hale Thompson, the assistant surgeon, succeeded in establishing a school in Dean Street, and on Wednesday, October 1st, at eight o'clock in the evening, exactly 39 years ago at this moment, Mr. Guthrie himself delivered the first introductory address of the Westminster Hospital Medical School. The lecturer on anatomy and physiology, for these subjects were at that time united, was Dr. Todd, who afterwards became the distinguished Physician to King's College Hospital. Sir George Tuthill and Dr. Roe were active at the time in endeavouring to establish an opposition school, but failed in the attempt, in consequence of the refusal of Mr. Liston to accept the post of lecturer on surgery. The school lived down this opposition, and was eventually recognised and supported by the staff, but although it was, in course of time, accommodated within the hospital buildings, it has never fully succeeded in gaining the affection of the Governors.

Since its establishment in 1834, the school has seen many changes, but it has had the good fortune to number amongst its teachers some of the foremost men in the profession. Of late years it has depended much upon the hospital staff, and it is impossible now to leave this retrospective portion of my address without alluding to the losses the staff has sustained during the past year, in the honourable retirement of our senior surgeon, Mr. Barnard Holt, and of one of our physicians, Dr. Radcliff. The gravity of the loss is diminished by the fact, that, from the calls of practice, both had ceased to take an active part in the work of the medical school, but the great services they have rendered in the past, both to the hospital and to the school, the good and useful work which they have performed in advancing the science of the profession, and as an example of the latter, one may mention more especially, the mode of treating one of the most troublesome of maladies. stricture of the urethra, introduced by Mr. Holt, command our gratitude and admiration. We can only hope that their names, which have been so long associated with the hospital. may for many years continue to adorn our consulting staff. The vacancies which their retirement has caused have been filled up by the appointment of Dr. Allchin, who is already well known to you as an indefatigable worker and successful teacher in practical physiology and pathology, and of Mr. Thomas Bond, who although not previously a teacher in our school, comes to us with a halo of university honours, and an already acquired practical and scientific reputation.

And now I may be allowed to say a few words about the changes in our school. It is impossible too much to magnify the importance of clinical study, and it is the boast of a small medical school, that there the opportunities of clinical study are very much greater than is possible in a large school where only a tithe of the students can obtain clerkships, and dresserships, and where in going round the wards, each student is but a unit of a large crowd. With a view to the development of systematic clinical teaching, it has been decided to appoint special lecturers on clinical medicine, and clinical surgery. the former capacity we have fortunately secured the services of Dr. Basham, the senior physician of this hospital, and who was for 23 years our distinguished lecturer on medicine.

Mr. Holthouse, who has also rendered good service to our school, who has this year retired from the chair of surgery, and who has recently succeeded Mr. Holt as our senior surgeon, has accepted the post of lecturer on clinical surgery.

These appointments will not prevent the regular delivery of clinical lectures by the other members of the staff, and the whole will be so arranged, that one will be delivered on every Wednesday, Thursday and Friday during both the winter and the summer session. A list of them will be placed on the notice board at the commencement of each month.

The lectures on surgery will be given by Mr. Pearse 1 and myself. Mr. Richard Davy, long known to you as a demonstrator, has succeeded Mr. Pearse as commander-in-chief of the anatomical department, and Mr. George Brown has been appointed to assist Mr. Cooke in the dissecting room, where you will also have the assistance of Mr. Jaquet, the first holder of the scholarship in anatomy and physiology in this school. Dr. Allchin will continue to teach practical physiology and

¹ Mr. Pearse has since resigned this post, as also that of Surgeon to the Hospital.

histology during the winter session, and in addition he has been appointed to deliver, in the place of Dr. R. J. Lee, the lectures on pathology and morbid anatomy during the summer session. By this arrangement you will have the advantage of being taught healthy and morbid histology by the same teacher. Lastly, Dr. Anstie, the lecturer on medicine, will give instruction in electrical therapeutics, and Mr. Bond will, during the summer session, give a short course of lectures on diseases of the skin.

Some modifications have been effected in the system of prizes. They have been introduced gradually, and I hope now that a condition of permanence has been reached, and that we have succeeded in establishing the happy mean between an abuse of the prize system on the one hand and a neglect of offering due incentive to work on the other. The list includes an exhibition in anatomy and elementary physiology, and the Davy prize for diligence in the dissecting room, for first year's men; a scholarship in anatomy and physiology for second year's men; prizes for clinical medicine and surgery for third year's men; and the blue ribbon of the school, the

Chadwick prize for general proficiency for third and fourth year's men. In addition to these prizes certificates of honour are awarded for each class throughout the whole period of education. I need say nothing about the resident hospital appointments, clerkships and dresserships, all of which are open to competition, but I should like to say a word about the object of the entrance scholarships which have been established, and one of which has this year been awarded to Mr. George Trewman.

These scholarships will, I hope, from year to year attract to us some good men, men who have not simply been content to acquire sufficient knowledge to pass the necessary preliminary examination, but men who have taken the first step in learning how to work and who have already acquired a love for work. There can be no doubt of the wisdom of requiring a sound preliminary education before entering upon medical study. It was not without astonishment that I heard the ex-president of the College of Surgeons of England, enunciate, in the last Hunterian oration, a contrary opinion. The reason that Mr.

Hancock gave was that the establishment of the preliminary examination had abolished the old fashioned apothecary, who with his shop and unambitious tastes, was "par excellence" the poor man's doctor. If preliminary examinations achieve nothing more than the severance of the remaining links which seem to unite a noble profession with a retail vending of drugs, a bond which has done much to depreciate, in the eyes of an often unthinking and unreasoning public, the dignity which appertains to our calling, we shall have reason to be satisfied. But its object is much greater than this. The study of classics and mathematics trains the mind, the reasoning powers. The two subjects are generally wisely combined, but I think that in most cases classics affords the better training of the two and developes a wider, a more expansive form of intellect. Just as we develope the body by the proper exercise of its various muscles, so must the mind be developed by early training its reasoning powers. No one would dream of teaching a man the art of fencing, until he had been put through a course of gymnastics to develope to some extent a precision and

ease, and rapidity of movement; and can it be wise to put a man to study a profession which requires, more than any other, the facile use of the reasoning faculty, without first training those faculties by the gymnastics of preliminary education? And every year the possession of a well trained mind is more imperative. Medical science, and I use the word in its broadest sense, is a rapidly growing science. The number of subjects and the magnitude of them increase year by year, and may well appal the student who faces them for the first time; and I am afraid they appear more appalling still as we dive into them and try to master them. It is impossible for the student to estimate the amount of work that lies before him, until, in succession, he acquires some knowledge of the various subjects. For a time he feels that the more he learns the more there is for him to learn. And must not he who has yet to learn to think, be lost in such a maze?

But I do not wish that the remarks I have made on this subject should frighten and deter the student who has hitherto somewhat neglected this preliminary training. John Hunter was a carpenter before he joined his brother and entered the medical profession. From no fault of his own his schooldays had been neglected; but, later, together with anatomy, he studied Latin, and thus he drilled his mind to use and guide his genius. We know what a giant he became. Yes, such a student may find some consolation in the fact that by perseverance he can do something to make up for time which has been lost, and little by little master the details of the profession he is ambitious to enter.

"Many strokes, though with a little axe, Hew down and fell the hardest timbered oak;"

but "many strokes" mean good honest work, performed with a will and with a distinct object in view.

All that a medical school can do to enable the student to learn his profession is to classify his work, and to guide him in the use of the reasoning powers that he possesses, and to teach him to think and reason out for himself the subjects that lie before him. The object of a medical school is not simply to cram the student with just sufficient information as will

enable him to pass through his various examinations, but to train him to be fit to exercise his profession with benefit to his patients and credit and satisfaction to himself. To do this it is taken for granted that the student will work. That the majority of students do not work is, I am sorry to say, amply proved by the existence of what are called grinders, and by the great demand for small manuals, books which contain the essentials of a subject, condensed and tabulated and ready to be committed to memory with the least possible trouble during the last weeks or months before examination. How much of this extract of science, I should like to know, is remembered six months after the examination has been passed, and how much self-reliance and independence is possessed by him who has so miserably wasted his time, so mistakenly neglected the opportunities which can never return? Depend upon it, success, self-respect, confidence, all depend upon good honest work. Each man must get up his work for himself; and if it is to be of any use to him he must digest it and assimilate it himself. By far the best way to do this is to make full notes

of each subject. Not only have your notebook at hand at lecture, when you will often hear statements of individual experience, and details of practice which you cannot find in books, and which you will soon forget unless you make short notes of them, notes which you can fill up from memory during your evening work, but also have the note-book by your side in your hours of reading. Nothing so assists the memory as making full notes, an analysis as it were of what you read, and tabulating the facts for yourself. But by far the best notes of all are those of individual cases, taken from day to day at the bedside of the patient. These will do more than all to train you for the exercise of your profession, by developing and strengthening in you the faculty of observation, and by teaching you to recognize and appreciate the value and import of the symptoms that arise. Men who have such note books as I have mentioned possess treasures with which they would not part,—old friends, brim full of facts, and containing reminiscences of days gone by and proofs of days well spent.

Such work as this will also create in you

an enthusiastic delight in your profession and will tend and foster it when created. "Those," said Dr. Knox, "who have arrived at any very eminent degree of excellence in the practice of an art or profession, have done so by a species of enthusiasm in the pursuit of it. They have kept one object in view, amidst all the vicissitudes of time and fortune."

The great secret of success in this way was well laid down by Archbishop Manning, in the address he delivered last year to the students of the London Hospital. It is comprehended in three words,-Intention,-Attention,—Intensity. Intention because it is necessary you should form some idea of what you are going to do. Many men fail in every profession, and they fail because they have never made up their minds what they were going to do, and consequently wasted their time over an indefinite field. Attention is like the lens which converges the rays of light to a focus. Intensity is the force and vigour of application of the mental powers. All three depend upon the will. If the will is wasted by injurious habits of life, which enfeeble both mind and body, what you achieve will

be comparatively valueless; but if your will be cultivated by reason and you apply your reason to your profession, there is nothing which you are capable of attaining that you may not attain.

The work of a student during his first winter session will be chiefly confined to work of a purely scientific character, but work which is of the utmost importance to him, for it is the foundation upon which his whole professional education must rest. It is a self-evident proposition that if the foundation be weak, the whole superstructure must also be weak and uncertain. It is only if the foundation be well laid and complete in all its parts that the subsequent storeys of the edifice can be satisfactory and secure. You cannot fail to have recognized how true this is of your school days, which some of you have only recently left, and it will thus be more easy for you to realize how much your future success, or the reverse, will depend upon your recognition of it now. The dissecting room is the place where the first year's student should be constantly found, not wasting the time in noisy or frivolous amusement, not attracting from his

work the attention of his fellow-student, but steadily and perseveringly availing himself of present opportunities, and keeping constantly in mind the great object in view. "How absurd," said Abernethy in his Hunterian oration, "should we deem the conduct of a mechanic, whose business it was to rectify the errors of any complex machine, should he merely provide himself with the finest and fittest tools for the purpose, and neglect to learn its mechanism, by which alone he can be able to discern the causes of error, or stoppage of its different movements, and consequently what is wanting to be done to render it again perfect and useful. Yet equally absurd would be the conduct of medical men, were they to study botany, pharmacy, chemistry, and natural philosophy, search indeed through all the paths of nature, and the stores of art, for means of cure, and yet neglect anatomy, by which alone they can be able to distinguish the nature of the difference between health and disease, and consequently what is requisite to reconvert the latter into the former, which is the only circumstance that can render medicine a science."

In the dissecting room, then, the first year's

man should be at home, in the wards a stranger. I wish I could say that he had no business in the wards at all. At present this can only be said when the student enters at a medical school for the whole of the period of four years. Unfortunately many students have disposed of one of their four years before coming to a medical school, and as the colleges of physicians and surgeons require three winter sessions attendance in the wards, a counter attraction exists which too frequently allures the first year's student from his proper work, and affords a ready excuse for neglecting what is to many the less interesting and more difficult part of medical study. Much has been done of late by the examining bodies to separate the study of the more purely scientific branches from those which are more practical. It is not many years since one examination in all the subjects, at the end of his curriculum, afforded the student the means of enrolling himself amongst the ranks of the profession. Now all this is changed. The subjects are divided between a primary and a practical examination. But the change will not be complete until the course of study

is as widely separated as the examinations. I trust that the day is not very far distant when the college of natural science will be distinct and separate from the medical school. A few colleges in London would suffice for teaching anatomy, physiology, chemistry, zoology, natural philosophy, and botany, and then the hospital school proper would not be entered until the student had become more or less well grounded in the subjects I have named, and had passed his primary examination. How much more valuable would then be two years of hospital work; how much more fitted would the student be to understand and profit by all that he heard and saw in the wards and in the post-mortem room. With how much more interest and intelligence would he be able to follow lectures on medicine and surgery, and their special branches; on pathology and the other subjects which it is necessary for him to study, than is possible now for the second year's student, who has to spend his time rushing from the dissecting room to the wards, and from these to the lectures on medicine and surgery. The University of London has done good service in

bringing about this division of work. That body has, however, instituted three examinations instead of two. The preliminary scientific in natural philosophy, inorganic chemistry, botany and zoology, an examination which unfortunately seems to be unnecessarily severe, for it eliminates all but intellectual giants. The first M.B. in anatomy, physiology, materia medica and organic chemistry: and the second M.B. in pathology, therapeutics, surgery, medicine, obstetric medicine, and forensic medicine. The line of division to which I have alluded is well observed, but owing possibly to the existing arrangements of the schools, a certificate of having attended hospital practice before passing the first M.B. examination is at present admissible.

As far as our own school is concerned, the course for those who come to us for four years is quite clear: they should have nothing to do with the wards; but for those who come to us for three years only the rule we wish to lay down is this: that first year's men should as much as possible confine their attention to the subjects of anatomy, physiology and chemistry, and should attend the surgical out-patient

room, where they should in rotation act as dresser to out-patients for three months, and also comply with the College of Surgeons regulation of being individually engaged at least twice in each week, for another period of three months, in the observation and examination of patients, under the direction of the assistant surgeon. This will be sufficient to occupy their attention, and it will be well that their visits to the wards should be exceptional, for they will show that they are neglecting their own proper work. They have to look forward to their primary examination, and the study of the subjects for the pass examination should be deferred as much as possible till the former has been passed.

The College of Surgeons has this year published for the first time a return of the results of the examinations which have taken place during the collegiate year 1872-73, giving the proportion who passed of the students who presented themselves from each medical school. And I may mention in this place that Westminster stands third in the list for the primary examination, and stands first as to the proportion who passed of those who

presented themselves for the second or pass examination. In the latter examination, I am glad to say that all the Westminster men were successful. And I may risk the assertion that if our younger students will not attempt to attend hospital practice further than I have named, but will concentrate their energies upon the proper subjects of their study, they will still further improve the position of our school with regard to the primary examination.

Physiological knowledge has made great advance during late years, and the same may be said as to the study of pathology and morbid anatomy. By the advance of the one, we become better and better able to understand the functions of the various organs and structures of the body; the more extended our knowledge of the other the more familiar we become with the natural history of disease. And further, it will follow that the better our acquaintance with these two subjects, the more simple our mode of treatment will become. Our knowledge of therapeutics has unfortunately not kept pace with our knowledge of pathology. The days are past, indeed, when by

combining in one prescription a multitude of drugs, so that like a modern "mitrailleuse," by scattering a large number of shot one may chance to take effect, but I am afraid that now many have gone to the other extreme and deny the efficacy of drugs. The study of therapeutics is rendered obscure and difficult in two ways. The habitual use and efficacy of moral treatment, and the presence in the human body of a power, call it a tendency to health or what you will, which without treatment, or in spite of it, will gradually, so long as no organic disease exists, tend to a reestablishment of healthy function. There is a story of Sir Samuel Garth, physician to George I. which is a humorous recognition of this fact, even in the days when drugs held full sway. Garth coming one night to the Kit Cat club, of which he was a member, declared he must soon be gone, having many patients to attend; but some good wine being produced he forgot them. Sir Richard Steele, who was of the party, reminded him of the visits he had to pay, when Garth immediately pulled out his list, which amounted to 15, and

¹ Timbs' "Doctors and Patients."

said, "It's no great matter whether I see them to-night or not, for nine of them have such bad constitutions that all the physicians in the world can't save them, and the other six have such good constitutions that all the physicians in the world can't kill them."

Our knowledge of physiology makes us look with horror, too, upon the age gone by, when blood-letting was the first resort in every case of disease or injury, and when with the full sanction of the physicians of the day, it was the custom with multitudes of people to lose a little blood every "spring and fall." The papers announced accidents generally somewhat in this way :- It is with great regret that we learn that Sir Harry ---- was thrown from his horse in the park. It was feared that the honourable Baronet had sustained serious injury; but Mr. Sharpe was on the spot, so that the patient was immediately bled. He was conveyed home, and the accident which it had been feared was a fracture, proved to be only a dislocation.

Such heroic treatment has happily long passed away.

¹ Timbs' "Doctors and Patients."

It has been asserted that surgeons have succeeded to the reputation for the blood-thirstiness which used to characterize every medical practitioner, but I think that, in these days of conservative surgery, surgeons can with a good conscience deny the soft impeachment. And especially can they do so now that a simple plan has been re-introduced amongst us by Professor Esmarch, by the adoption of which, all operations on the extremities may be rendered almost if not entirely bloodless.

The study of physiology has contributed more than any other to link together medicine and science, and thus to exalt the scientific character of our profession, for it has taught us that the phenomena of life are the result of the combination of the natural laws which hold sway throughout the universe. And surely if physiology thus teaches us to interpret aright the deviations from the normal and healthy processes of vital action; if it guides us in placing the diseased body or the injured limb in the position and under the conditions best suited for its restoration; in a word, if it is essential to enable us to become good physicians and good surgeons, shall we

not be simply idiots if we neglect to master it. It is no doubt a subject of some difficulty. It is built up from inductive reasoning. From observations on several individuals, from experiments conducted with the greatest care, we draw our conclusions. Our difficulty is increased by the condition that we have to collect our own facts, to bring them in one by one, and to fit them together. The accuracy of our conclusions will depend upon our reasoning from all the facts, and avoiding what Lord Bacon has warned us against, the danger of attending to only a portion of the facts. This he states has been one of the great bars to the progress of knowledge in general, and it still continues the bane of almost all medical inquiries. All medical science is founded upon inductive reasoning. All the facts which we require to perfect our knowledge are present. Some of the facts are evident to the sense, but some are hidden and have to be discovered by careful and continued observation. Of many of the former we do not know the import because we have not yet discovered amongst the latter, the connecting link which would open our eyes to their

value. And herein is the difference between an exact science such as mathematics and an inductive science such as the various branches of medical knowledge. "A clever man," says Sir John Herschel, "shut up alone and allowed all unlimited time, might reason out for himself all the truths of mathematics, by proceeding from those simple notions of space and number of which he cannot divest himself without ceasing to think; but he would never tell by any effort of reasoning what would become of a lump of sugar, if immersed in water, or what impression would be produced on his eye by mixing the colours yellow and blue," results which can be learnt only from experience. This is why we can calculate the magnitude and course of an unseen planet when we cannot discover satisfactorily the use of a spleen or a supra-renal capsule.

But there is another aspect in which we may view scientific study. We may well ask ourselves the question, are science and religion opposed to each other? It is very much the fashion to say that they are, and such an opinion is esteemed a high intelligence. I would, however, take the present opportunity

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of expressing how strongly I hold an opposite opinion, how completely I am convinced that science and theology go hand in hand, and that being governed by the same laws, are the work of one and the same law giver. It is a curious fact that throughout the early history of science, all the greatest discoveries which in turn were at first opposed as antagonistic to religion, were subsequently accepted as in perfect harmony with it. Science is no doubt the cultivation of human reason, an exploration of the hidden mysteries of nature. Each branch of science has a line of its own, and is, as I said before, built up of the facts which are seized upon by, I had almost said revealed to, many ardent explorers. It is not surprising perhaps, that sometimes one branch of science, sometimes another, should out-step the rest, and that some apparent antagonism should arise between them. It rarely happens that such antagonism cannot soon be proved to have no reality. Theology is also a progressive science, whose facts have been revealed to us, but the full meaning of all of which we do not yet grasp any more than we do those of the sciences to which I have more especially referred. There is, however, an unity of purpose, an identity of design, throughout the whole, to which the idea of antagonism or contradiction is repugnant and cannot long be maintained. It was remarked the other day at Bradford, that it is just as absurd now to judge religion by the facts of science as it was in the days of Galileo to judge science after a religious test; but it seems to me that, in the long run, the harmony of the two is so complete, that we do not fear to submit either to the scrutiny of the other. What we do fear is, lest we mistake the speculations of scientific men, the theories of those who have allowed their imagination to carry their thoughts far beyond the conclusions that their facts will warrant, into the unseen world of fancy. Let us not mistake these, I say, for true science, let us not receive them without question, for a calm and careful consideration will ever convince us, that, just as the concurrence of the various conditions, necessary to the most ordinary phenomenon, inclose the most irresistible proofs from natural evidence, of unity of design and consequently of the unity of the Creator, so true is it that conclusions which are contrary

to, and at variance with, revealed truth, are visionary and worthless.

In alluding to the changes that have taken place in the school I made no mention of my own election to the office of Dean. One has a natural repugnance to talk about oneself. But I may be allowed to say that I have accepted the honour conferred upon me by my colleagues, with great diffidence, fully recognising the responsibility of the office, and my unfitness to efficiently perform its duties. And I refer to the matter now because I am powerless without your assistance. No doubt the prosperity and order of our medical school depend somewhat upon the zealous and careful performance of certain duties, duties for which I am now responsible, but they depend much more upon a diligent and careful discharge of duty on the part of each member of our body. Teachers and students have alike their several duties to perform, and the well being and harmonious working of the whole, must depend upon the way in which each one observes his share. If the teacher be unpunctual, irregular, unpainstaking, the student will be the same. If the student be always

at his post, attentive, diligent, the teacher cannot for very shame be anything else. The converse of these are true also, the two so intimately and completely react upon each other. I need not say how disheartening it is to teach an unsympathising and inattentive class. Yes, the future success and prestige of the Westminster Hospital Medical School depend upon the careful and unflinching discharge of duty on the part of all.

You, gentlemen, who have been students here, can help the old place too. You are dispersed over town and country and often have it in your power to send us cases. Some of you do send us cases already. You can thus assist us to increase our clinique, not only with operation cases, but cases of interest, both medical and surgical, good cases for teaching. I venture to throw out this suggestion in passing, because the surgical side of a metropolitan hospital depends much upon cases sent into the wards by former pupils and others, as unless it happens that the hospital is situated in the neighbourhood of machinery it does not get a large share of important surgical cases amongst its regular patients.

And now, gentlemen, I have done. In the remarks to which you have so kindly and patiently listened, I have endeavoured to show you that the profession of Medicine is a scientific and intellectual one. But it is something more, for it is one that in a large degree calls forth the best feelings of our nature. It is true the prizes of our profession are not numerous. The clergy have thei high posts of dignity and emolument; members of the legal profession can look forward to their judgeships and peerages; men engaged in commerce or manufacture heap up untold riches, but medical men can expect for their work no such reward. A few, it is true, obtain a short-lived popularity, and for the time make large incomes, but it is generally after long years of toil and hope, and when the best years of life have passed away. The great mass of our profession obtain, in different degrees, a sufficiency for the maintenance of themselves and families, and for the indulgence of simple tastes. But beyond this the only reward to which they can look forward in this world is the proud and happy consciousness of having been, in some slight measure, the means of

affording relief to suffering, of having been able to teach others how to avoid disease, or when it is too late for that how to combat it, and often successfully to vanquish it. But it is our lot, too, to be familiar with death, and death it may be in its sudden and awful forms. At such a time it is often our privilege to administer advice and sympathy to sorrowing ones, and to a the recipient of the fullest trust and confidence. There is much in common in this respect between the clergy and ourselves, and without interference with each other in our special work, we can mutually assist each other in the common work of visiting the sick and afflicted. The profession of Medicine differs from most other callings, in that it often does such work as this without hope of pecuniary acknowledgment, but no profession exists in which the execution of its duties so largely brings its own reward, in the consciousness of doing good to others and in the recognition of the promise of Him who said, "Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me." Gentlemen, our profession is a noble one, but it requires in him who

practises it, a character of strict integrity, a heart made bright with purity and love. He who possesses such attributes is one of nature's noblest works, an honest man. Let us then ever remember that if medical men cannot look forward to high honours and reward in this life, still no professional man can look back upon a long life of usefulness with greater pleasure, or with a more perfect consciousness of having aided his fellow man. And may each of us, when we come to the last years of life, thus be able to regard the past, and be able then, as now, to say with Wordsworth:—

"O, that our lives, which flee so fast,
In purity were such
That not an image of the past
Should fear that pencil's touch.

Retirement then might hourly look
Upon a soothing scene;
Age steal to his allotted nook
Contented and serene.

With heart as calm as lakes that sleep
In frosty moonlight glistening;
Or mountain rivers when they creep
Along a channel smooth and deep
To their own far-off murmurs listening."

