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ON
THE RESOURCES
OF
KING'S COLLEGE, LONDON,
FOR
MEDICAL EDUCATION:

BEING
THE LECTURE
DELIVERED AT THE OPENING OF THE MEDICAL CLASSES IN THAT
INSTITUTION,

On the 1st of October, 1852,

BY
ROBERT BENTLEY TODD, M.D., F.R.S.

FELLOW AND CENSOR OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON,
PHYSICIAN TO KING'S COLLEGE HOSPITAL,
AND PROFESSOR OF PHYSIOLOGY IN KING'S COLLEGE, LONDON.

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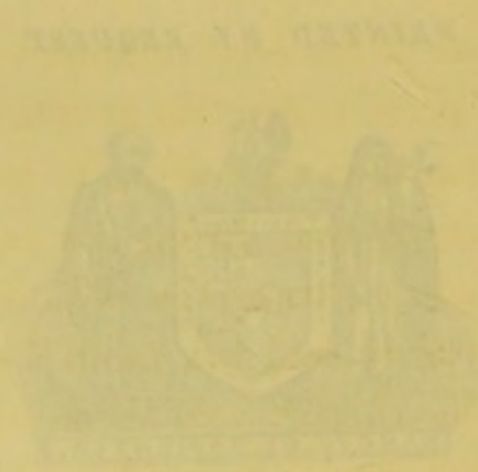


LONDON:
JOHN W. PARKER AND SON, WEST STRAND.

MDCCCLII.

THE RESOURCES
 OF THE
 MEDICAL PROFESSION
 IN THE
 TREATMENT OF
 THE
 NERVOUS SYSTEM

ROBERT BENTLEY TODD, M.D. F.R.S.



JOHN W. LITTLE AND SON, PRINTERS
 LONDON

ON
THE RESOURCES,

ETC., ETC.

GENTLEMEN,—As I revolved in my mind how I might best employ the time allotted to the address with which it is our custom annually to greet all who assemble in this theatre—some coming to commence their medical studies, others to renew them—it occurred to me that a very long time had elapsed since a similar pleasing duty had devolved upon me. And in comparing dates, I found to my surprise, that that period comprised no fewer than fifteen years—little less than one-fourth of the ordinary time allotted to man.

In that period, it has been permitted me to witness the rise of the noble Institution in which we are now assembled: it has been my fortune to watch it in its infancy, to know it well during its early struggles, and still to retain my connexion with it, now that it has reached maturity, and has established the fullest claims to public support and confidence in all its departments; but not least in that of medicine, in which it has been the means of introducing into medical education various improvements, which must

continue to exercise a most beneficial influence on the medical profession.

In looking back upon that time, our first thoughts are naturally directed to those with whom we have been associated. It so happened, that not long after the occasion on which it was my lot to deliver the opening Lecture from this place, the College lost, by various causes, the services of some of its most distinguished Professors; and had it been established on a less sure foundation, and were it not that the breach was quickly filled by men of the energy and calibre of their successors, the Institution, then in its infancy, would scarcely have survived the shock which it experienced.

Some of my former colleagues were compelled to leave us by the claims of other duties—but of these, two still aid us by their counsel. Others, alas! have yielded to the ‘inexorabile fatum’—cut off by the mysterious dispensation of Providence in the midst of a career of usefulness. To one of these I cannot refrain from making a passing allusion, for of him I could indeed say,—

‘He was my friend; the truest friend on earth.’

How well can I recall his open manly countenance, which at once bespoke for him the favour and good-will of all who came in contact with him! Although between seven and eight years have now elapsed since he was suddenly removed from us, he

still lives fresh in the recollection of all who had the privilege of knowing him well. The zeal and admiration of his friends have perpetuated his memory in this College, in connexion with his favourite science; and the foundation of the Daniell scholarship will prove a monument 'ære perennius' to our first Professor of Chemistry.

During the period to which I have referred, various changes have taken place with reference to the arrangements for teaching in the medical department of this College; I propose, in briefly detailing these changes to you to give you some insight into the nature and extent of its resources for Medical Education, and to point out to you the advantages you will enjoy here.

It has been the design of the authorities of the College to give to the instruction afforded here the most solid character; to place within your reach not only the means of being taught, but also every facility for learning—having in view the important object that this College should not be merely a theatre for teaching, but one also for learning and for study; and that you shall be not mere pupils, but students; and (if you have not already done so) that you shall here lay the foundation of those habits of study, which you will need throughout your professional career.

Fifteen years ago, and for some years later, it was the custom to require of the students of medicine, attendance on long courses of Lectures, some of which

commenced in October, and did not terminate till May. And the attendance upon several such long courses was crowded into a very short space of time; so that in one day the student would often have to attend six or seven Lectures, each of an hour's duration. The sum and substance of Medical Education seemed to consist in walking the hospital and being present at a certain number of lectures in each Session.

That such a system as this was very inadequate to *educate* (that term being used in its highest sense) young men for a calling so important to the general community as the Medical Profession, I need not stop to prove. It will suffice for me to remark that the necessity of devoting nearly the whole day to attendance upon lectures, inevitably led to one of two evils; either the pupil became the mere copyist of the dicta of his teacher, he had no time for thought or reflection, he was entirely dependent on another for whatever he learned;—or his powers of attention being overtaxed, he was compelled to neglect some subjects in order to find time to attend to others, or in disgust was led to neglect all. And thus the system of teaching by oral Lectures—which had been so long pursued in our medical schools, and which has many advantages, and much to recommend it—was in a fair way of falling into discredit.

By an arrangement which originated with the Court of Examiners of the Society of Apothecaries—a body from whom have emanated many most judicious

and useful regulations for Medical Education—the various courses of Lectures have been distributed over a larger space of time than heretofore. Several of those which had hitherto been given in the winter only, are now transferred to the summer, and the subjects are thus more equally distributed between the two portions of the medical session.

The professors, too, have found it expedient to condense their courses, so as to comprise their subjects within fewer Lectures, and in some instances, when a second course was required, to treat of portions of the subject only in alternate years.

By these means, the labour of the student in attending Lectures has been much diminished; and, now, if he follow the plan laid down for him by the College authorities, and which you will see set forth in the Calendar, he will not be called upon to attend more than three Lectures in the same day,* and thus he will gain more time to devote to his private studies or practical observations in the hospital or dissecting-room. And I am happy to be able to announce that very lately a change has been made in the arrangement of the Lectures, by which much more time than has hitherto been allowed, may now be allotted to the pursuit of practical Anatomy, one of the most important subjects which can occupy your attention.

And this leads me to refer to a recent addition to

* See the *King's College Calendar*.

the means and appliances for gaining knowledge which are to be found here. I allude to the institution of a laboratory by which the opportunity of obtaining a practical knowledge of Chemistry and Chemical processes is placed within your reach. As you have hitherto studied Anatomy for yourselves in the dissecting-rooms, with the occasional guidance and assistance of an experienced teacher; so now, and for some years past, the students of the College have had the best opportunities of performing for themselves all those operations which are in most frequent use in the Chemical laboratory, for the purposes of analysis or research, and they may pass through, under the best guidance, a course of training to fit them to make experiments and analyses for themselves, and for recording with accuracy and precision the results of their labours.

And I am happy here to notice that an additional laboratory, specially for organic analyses and for microscopical researches, in connexion with clinical medicine, has been established by Dr. Beale near the College and Hospital—a laboratory extra-collegiate,—but which I am informed has the full approval and sanction of our learned Professors of Chemistry.*

Again, provision has been made to afford to the

* Since this lecture was given, Dr. Beale has announced a course of six practical demonstrations, chemical and microscopical, on subjects of the utmost importance in connexion with the investigation of disease, and of which every advanced student will find it his interest to avail himself.

students the advantages of direct teaching by tutorial instruction : a medical tutor has been appointed in the College ; and although his Lectures were at first destined only for the resident student, they are now open to all ; and all may, from the earliest period of their career, receive his assistance ; and those who avail themselves of his instruction early, may be saved from the necessity of undergoing, at a later period of their career, a process of cramming (too often pursued of necessity), which is quite as unfavourable to the healthy nourishment of the mind, and as unlikely to store it with good and sound knowledge, as is an analogous process of cramming to promote a healthy state of the bodily frame.

But of all the changes which have been effected in our College within the last fifteen years, the most valuable and important, and that which has been accomplished at the greatest cost of money and exertion, is the establishment of a Clinical Hospital in connexion with the College.

Let me observe that by a Clinical Hospital I mean one in which (while every attention is paid to the care and comfort of the patients,) the fullest facilities are afforded to the medical students in attendance for observing and watching disease, and obtaining instruction in the methods of investigating it, and in the means of diagnosis and of treatment, and in which every opportunity is taken to investigate the causes and the nature of the various maladies and accidents which

have come under observation. Of such a hospital no part should be lost for clinical purposes; and every one engaged in giving medical and surgical assistance should consider himself as engaged in the twofold duty of caring for the sick and of explaining to those who watch his practice the grounds of his diagnosis and the *rationale* of his treatment. And I would here remark that a hospital worked in this spirit, is that which, above all others, offers the greatest advantages to those who take refuge within it. The presence of a class of intelligent students visiting the wards daily, affords the best security for regularity of attendance, care in discriminating disease, and the due and discreet application of remedial measures which are placed within our reach.

It is difficult to conceive a public Institution capable of conferring greater benefits than a hospital conducted on such principles and with such objects. Its benefits are not limited to the present persons, nor to the present time, nor are they confined to the locality in which it is placed. The student educated within its walls carries with him, perhaps, to distant climes, the skill and knowledge there acquired, to do good to many yet unborn. The poor man, rescued by its bounty from poverty and disease, becomes afterwards an active and a useful member of society; or, if his malady be mortal, he receives in the hospital the spiritual aid which will fit him for his awful change; and the physician and the surgeon are daily gaining

the experience which will best qualify them to teach others, and to exercise their skill among the higher classes of society.

The vast advantage of this addition to our means of teaching, cannot be fully appreciated, save by those who, like myself, were engaged here before its foundation. To discuss questions of physiology, and apply them to the elucidation or the formation of pathological doctrines; in other words, to compare the vital changes of a healthy function with the vital changes of the same function in a state of disease; and to do this without having the opportunity of referring to actual examples of such perversion of function, and of observing the signs which denote it and the changes which accompany it;—I say to attempt this, under such circumstances, was much the same as if the Professor of Chemistry were to try to explain some important chemical doctrine without the aid of experiment; or, as if the Professor of Anatomy were to describe all the details of the body without his preparations and dissections.

The remarkably short time in which the hospital was founded, when once an opportunity fairly offered for the purpose in 1839, now thirteen years ago, shows how fully the non-medical public, taking a plain common-sense view of the question, recognised the necessity of connecting such an institution with the College to make it a complete School of Medicine. And not only was our hospital quickly established, but

it has been ever since so liberally supported that, although it has had to provide for a large annual expenditure — rarely less than £4500 — it has never been, at any one time, seriously in debt, and its managers have contrived to invest in Government securities all the money left it in legacies, with the design of forming an endowment fund.

But still more; the crowds of applicants for relief, and the increased number of students attending the wards, have rendered it indispensable to provide a new hospital, on an enlarged scale.* This undertaking,

* I have been favoured with the following description of the new King's College Hospital, by Mr. Thomas Bellamy, its architect.

The building will be entirely insulated. Its eastern front abutting on Carey-street, its south front upon what is at present Grange-court, but which will ultimately be a new street (in continuation of that about to be formed north of the new Record-office), its west front upon Clement's-lane, and its northern or entrance front upon the open space formerly used as the burial-ground of the parish of St. Clement Danes.

The foundation is for the most part of gravel.

The disposition of the plan is that which may be called the hospital proper, and the out-patient department.

The first, *i. e.*, the hospital proper, consists, on the ground story, of an entrance-hall, 33 feet by 29 feet; reception-room, 24 feet by 15 feet; male and female bath-rooms, each 24 feet by 10 feet; public office, 21 feet by 15 feet; secretary's private office and board-room; professor's room, resident officer's apartments, a pupil's room, dining-room for the resident officers, a dispensary connecting with the out-patient department, a private-room for the dispenser, a ward for male accidents, 70 feet by 24 feet; nurse's rooms with all requisite conveniences.

This story is 14 feet high.

The basement story, which is also 14 feet high, comprises a kitchen, 34 feet by 31, and its appendages; offices and store-rooms,

beset as it has been with difficulties of no ordinary kind, is now, I rejoice to say, in a fair way of very speedy completion. Here again, the most munificent aid has been afforded us by the public, and the project

servants' and dining halls, and various apartments and cellars; six private wards for peculiar cases; a room for patients' clothes after purification.

There are also two spacious residences, of two rooms each, for the dispenser and house-steward.

On this story, but raised 3 feet above its floor level, there is an airing court for patients, approached from the ground story.

The first story is 15 feet high, comprises two wards side by side, each 70 feet by 24 feet, for thirteen beds each; two wards side by side, each 34 feet by 24 feet, for six beds each, which may become one ward for twelve beds; a sitting and bed-room for the nurse; a day-room, 24 feet by 23 feet, for patients; bath-rooms, sculleries, and water-closets.

The foregoing are in that portion of the building which abuts upon Carey-street.

The western portion of the building comprises one ward, 85 feet by 24 feet, for twelve beds; two wards, each 30 feet by 26 feet 6 inches, for six beds each; a day-room, 24 feet by 20 feet; nurse's sitting and bed-room; bath-room and scullery; a residence for the chaplain or matron.

The arrangement of the second and third stories, which are 15 feet and 14 feet high respectively, is precisely similar to that of the first story last described.

The roof over the portion of the hospital which abuts upon Carey-street, and that over the principal staircase, is so constructed, as to include within it a spacious dormitory for night nurses, with a lavatory and scullery.

The whole of the wards are intended to be warmed and ventilated by means of open fires and windows alone; the latter being glazed with double glass, with a space between pane and pane, and being centrally opposite to each other, both longitudinally and transversely, throughout the entire building.

The floors throughout are intended to be fireproof. The maximum

has brought to light some splendid instances of disinterested and self-denying generosity; men of moderate incomes, and still working for their daily bread, have not hesitated to contribute £500, or £1000; and one noble-minded individual, withholding his name, has advanced towards this object no less a sum than £5000.

quantity of cubic feet of air for each patient is 2550; the minimum quantity, 1855 cubic feet.

The operating theatre and chapel, with their connected rooms, form the upper story of the out-patient department, and are on the level of the first story of the hospital proper.

They are each 35 feet square, and 22 feet 6 inches high. The theatre is capable of containing 300 pupils.

The post-mortem theatre is on the ground story, 28 feet 8 inches by 17 feet, and 16 feet 6 inches high; immediately under it is the dead-house, with a communication, apart from the other accesses to the hospital from without, by Clement's-lane.

The out-patient department, approached from Grange-court (but will be ultimately from the new street in that situation), consists of two waiting-halls, each 34 feet 6 inches square, for male and female medical, and male and female surgical patients; clerk's office, closets, &c. on the basement story (14 feet high.)

On the ground story (14 feet high), communicating by iron stairs with the basement story, are two smaller waiting-rooms, into which the patients are drafted, so as to be opposite to the physicians', the physician-accoucheurs', and the surgeons' rooms, and surgeries; and next adjoining the exit hall, at the eastern end of which is the dispensary, where, having received their medicines, &c., they pass out of the building by another door, without retracing their steps, or mingling with new comers.

From the ground story of the out-patient department, there is a private staircase to the operating theatre, for readier access than could be had by the principal staircase.

And on the basement story is a steam-engine-room: the engine being intended to supply water for the warm baths, to charge the cold water cisterns, to work the lifts, and perform all laboratory processes.

Now I mention these things not to glorify ourselves or our hospital, nor even the generous individuals who have so largely promoted this work; but simply to prove to you what importance is attached by non-professional men to the association of a Clinical Hospital with the College. These men, some engaged in trade, others in professions, understand the practical business of life too well, not to see that without a good hospital you cannot have a good medical school. They know that, in order to become a banker or merchant, something more is needed than mere capital; the candidate for such a profession must be trained well, and go through the drudgery of a counting-house, before he is competent to take the position of a British merchant. To be an officer or a soldier, you must submit to a severe ordeal of drill and exercise. So, also, must the lawyer labour in an office where he can see the details of cases and of legal practice. And all this irrespective of the previous reading, the theoretical views and speculations, which are connected with their various pursuits. Not less, then, is it to be expected that a man can be fitted for the practical duties of the medical profession, unless he has worked diligently and earnestly for a considerable period within the wards of the hospital. Let me add, that they who postpone this work to a late period of their studies, or who attach little importance to it, do themselves great injustice, and will undoubtedly have to regret such indifference all their lives.

And now, Gentlemen—having pointed out to you all that has been done of late years to place within the reach of the students of this College every possible facility for instruction and for study—let me recount to you what incentives exist here to induce you to avail yourselves diligently of these advantages.

Many, I know, are too much animated by the love of knowledge to need any other stimulus to exertion; but even such men often find their resolutions strengthened and their efforts directed by having some additional object placed before them. But it is no discredit to others to say that, having as yet but tasted of the crystal stream which flows from the fountain of knowledge, and having, therefore, little or no experience of its refreshing and invigorating qualities, they are prompted mainly by the hope of reward, to fill their pitcher at its source, and to cull the flowers which flourish so luxuriantly around its path.

At the period to which I have already alluded, certain rewards were given for proficiency in the various classes; one or more prizes, consisting of a medal and books, were awarded to those students who distinguished themselves most at the examinations at the close of each session; and minor prizes, in the shape of certificates of honour, were conferred on those who fell short of the highest place.

But although these prizes, on the whole, exercised a beneficial influence, they were not without disadvantages, which, in the opinion of many, counter-

balanced the good which they were intended to confer. It was too often found that the zeal to attain the prize on one subject, engendered the neglect of others; and thus the design of the institution was in a great measure frustrated. The neglect of special subjects of study at an early period of student-life, necessarily imposed a greatly increased labour at a subsequent period, or led to their total abandonment.

It became then a desideratum to find some means of at once guiding and rewarding diligence and talent—means which would induce men to pursue their education not in the mere spirit of routine, but with a view to a higher standard of mental culture and of scientific attainments, to lead them to adopt a course of education rather than to follow a routine of lectures. This want was supplied by the foundation of our present Medical Scholarships.

Endowments of this kind had long existed for the encouragement of Students in Arts at our Universities; and it is well known that these have been most useful, not when they came as a matter of course to founders' kin, or to natives of some particular counties, or when obtained by mere interest, but when they were conferred as a mark of distinction, either on men who had exhibited great merit at special examinations, or had acquired a high character in their university career.

It is not a little remarkable that, numerous as are these exhibitions at our Universities, so few should

have been established for the encouragement of any special branch of science. And it can hardly be said that the few which exist at Oxford and Cambridge for Medical Science, are given in a way calculated to promote the study of medicine, or to call out the young men of ability and talent who may be devoting themselves to that particular pursuit. It is due to this College to say that here, for the first time, were established Scholarships for Medical Students, conferred exclusively for merit, and attainable solely by examination.

I hold in my hand the paper which contains an address, signed by the medical professors of that time, in which the foundation of medical Scholarships was first brought before the attention of the Council. To it I find attached, among others, the names of Watson, Daniell, Robert Ferguson, Partridge, Royle—men whose recommendation could not fail to have the greatest influence. This paper bears the date of February 21, 1838; and in April, 1842, the first scholar (not only in the medical, but in any other department of this College) was elected. And as a proof that this endowment was not only well bestowed, but was afterwards well employed, it is no small gratification to me to be able to state, that the first election fell upon a gentleman who is now associated with his former teachers in this school, and who has, in the short space of ten years, made his name famous in connexion with a series of researches of the most

valuable kind, upon the diseased states of an organ of the body second to none in its influence upon the general health and constitution.

The success which attended this first endowment, led to the establishment of others a few years later—destined for students at an earlier period of their career—for students of the first and second years.*

There is a feature of all these scholarships to which I must briefly refer. Although they have been especially intended to promote medical knowledge, to guide the student in his scientific pursuits, and to reward him for, and encourage him in the further diligent prosecution of them, the terms and conditions of the endowment demand the cultivation of other and higher knowledge; they reflect the great principle upon which this College was founded, “that every system of general education for the youth of a Christian community should comprise religious instruction in the Christian religion as an indispensable part.” In other words, they recognise, as indeed do all the arrangements of this Institution, the great truth that ‘man does not live by bread alone.’

Thus, then, it is expressly provided, that none can be candidates for these scholarships but those who have passed a previous examination in the Sacred Scriptures—in that admirable summary of Christian

* Vide *King's College Calendar*.

doctrine, the Church Catechism—and in some portions of a book perhaps the most valuable and profound of its kind, which was ever written—Bishop Butler's *Analogy of Natural and Revealed Religion to the Order and Course of Nature*—the production of one of the ablest thinkers of his own or of any other day.

For my part, gentlemen, I must confess that I look upon this previous examination, and the mental culture which it enforces, as one of the most important features of our scholarship scheme. It has been often urged against the medical profession, that many of its professors were sceptics, and that a large proportion of them were indifferent to religion. Whatever truth there might have been in this some fifty or one hundred years ago, there can be no doubt it is a libel upon our profession now. And even in former days, the Browns, the Hallers, the Boerhaaves, the Cheynes, the Heberdens, and, in our own day, numerous living names, afford brilliant exceptions, and show that the highest attainments of science are consistent with a firm faith in Christian doctrine and the full development of the religious life. Nevertheless, I would ask, is it to be wondered at, that men who are of necessity in the habit of looking at second causes only, should acquire a sceptical turn of mind if, in their early professional education, no notice is taken of the Great First Cause, nor of the all-important truths which He has vouchsafed to reveal to mankind?

I say, then, that the candidates for these prizes will

have no reason to regret, even if they have been unsuccessful in the objects of their ambition, that such a previous course of study has been imposed upon them—a course which is well adapted to prepare their minds and their feelings for their professional studies, and for the peculiar duties in connexion with the sick and the dying, which will afterwards devolve upon them.

Can any one object to, or do otherwise than rejoice at being required to pursue a course of reading, of which the Sacred Scriptures form a prominent part—those writings which formed a favourite subject of study with a Newton and a Boyle; and respecting which the latter has left on record the following remarkable declaration:—

‘I use the Scriptures,’ said Robert Boyle, ‘not as an arsenal, to be resorted to only for arms and weapons to defend this party or defeat its enemies; but as a matchless temple, where I delight to be, to contemplate the beauty, the symmetry, and the magnificence of the structure, and to increase my awe and excite my devotion to the Deity here preached and adored.’

Nor ought you to complain of having to renew your acquaintance with the Church Catechism; for in it are stated, with an admirable perspicuity and conciseness, and with dogmatic precision, all those essential truths which form the substance of our faith and the grounds of our hope.

And in digesting the pages of Bishop Butler's admirable *Analogy*, not only will the foundations of your faith be deepened and rendered more secure; but, through the intellectual exercise which it necessarily involves, you will find your reason and conscience enlightened and directed: you will acquire clearer notions of the mystery of your own existence, of your relation to that unseen Being 'who fills all things and quickens all things,' of the nature of the living Soul, 'that invisible, impalpable Spirit, which comprehends all his being with an universal consciousness, and is itself comprehended only of God;' and you will see with more certainty, how our present life is indissolubly united with that which is to come; and how the habits, and thoughts, and actions of the one must exercise the most potent influence in determining the state and condition of the other.

There are many, doubtless, who would urge against these scholarships the objections that the requirement of a previous examination of the kind I have described, shuts out from competition all who are not members of the Church of England, and therefore gives an exclusive character to these scholarships. It is quite true that these scholarships are virtually limited to members of the Church; but, then, it will be recollected that this College was specially founded for the education of the youth of the Church of England, and that all its endowments were made in the same spirit

and with the money of the members of the Church. Yet inasmuch as non-matriculated students who dissent from the doctrines of our Church, whether Roman Catholic or Protestant, are admitted to our classes, I see no reason why wealthy members of such dissenting communities should not found similar endowments, either with or without restriction; nor am I aware of anything in the constitution of the College which would lead its governing body to reject such an endowment.

Within the last few months a considerable and most important addition has been made to our exhibitions. A venerable clergyman, 'whose praise is in all the churches,' and who has been particularly distinguished by his efforts to promote religious education, and especially that of medical men, anxious to use the means at his command during his lifetime, has given to this college no less a sum than £5000, for the purpose of founding additional medical scholarships.

Some of these scholarships are for students about to commence their attendance on the medical classes—and their immediate object is to encourage a good preliminary education: that which is so important in all classes of life—but especially for those destined to practise a liberal profession. The subjects of examination include (besides Scripture history and the Church Catechism) portions of the Greek and

Latin classics, English history, mathematics, and the French and German languages. Power is given by the Founder to increase or modify the subjects of this examination as further experience may suggest. I should hope, that the present list may be looked upon as a minimum; and that if a change take place it may be one of augmentation. Logic, for instance, may, as it seems to me, be added hereafter to the subjects of examination with much advantage.

However this may be, all will, I doubt not, agree with me in thinking that the student who has not a fair knowledge of most or all of these subjects, enters upon his professional pursuits at a considerable disadvantage, and loses much which tends to sharpen and invigorate the intellect. The early study of mathematics, even to the moderate extent required for these prizes, affords a good means of training to habits of accurate thought, and gives a knowledge of the science of number upon which you will have constantly to draw. And, not to dwell upon the vast disadvantages under which men labour who have not had the benefit of a classical education, let me remark that a knowledge of modern languages is becoming daily more important, especially of those named in the list—for it is in France, and Germany among the continental nations, that the human intellect is most busily employed in the cultivation of all the arts and sciences.

Let, then, the munificence of the great and good Dr. Warneford be the means of laying down, at least for

those who come to study here, the normal course of education preliminary to their professional studies. It is not improbable that means may yet be found to increase the number of these scholarships; but even should it remain as at present, I cannot doubt that there will be, year by year, a brisk competition for them, and that thus a goodly, and I hope an increasing, number of men, with a good preliminary education, will be annually brought to work in the field of medical sciences.

A second class of these new Warneford Scholarships embraces objects scarcely less important than those to which I have just referred. They are intended specially for students of the second year, who by residence in College avail themselves of the full advantages of the collegiate system; and who, by their orderly and correct conduct, give full support to the authorities of the College, in maintaining the efficiency of the collegiate system; for I must tell you that it is the disorderly conduct of the idle, the careless, or the dissipated, which mars the great advantages of the College life to the industrious and the studious.

These are in a great measure CLINICAL scholarships; they are intended to reward and encourage men who have worked, and are willing to continue to work, in the wards of the hospital. The candidates must have fulfilled the usual conditions, as regards the previous examination, annexed to all similar endowments.

The fitness of men to hold these honourable posts

will be tried by ascertaining what they know of all that has been going on in the hospital, by testing the vigilance with which they have watched the cases that have come under their observation, and the diligence with which they have followed the clinical instruction given them.

Let me here remark, gentlemen, that of all the endowments which I have mentioned, none are, in my judgment, so valuable to their possessors as these Clinical scholarships. The perfectly educated physician or surgeon must be not only a man of learning, but also a man of action. He must be familiar with all the phases of disease, and be ready to act upon every emergency. Even those who naturally possess the greatest amount of sagacity, admit the necessity of frequent, nay constant opportunities of watching the symptoms and progress of diseases; and they, indeed, are those who most eagerly avail themselves of them.

Thus, then, while the junior scholarships, founded by Dr. Warneford, point out what should be the nature and extent of your preliminary education, these serve to indicate what, after your first year of medical study, should most constantly engage your best attention—namely, the earnest pursuit of practical knowledge within the wards of the hospital.

In giving you this detailed statement of the various incentives to study which are provided for you here, you will not, I am sure, imagine that I am actuated

by any other object than that of availing myself of a powerful argument to urge you to avail yourself diligently of the splendid opportunities now within your reach. Is it, I would ask, likely that great pains would have been taken to provide the large funds necessary for these endowments, if it were not most important for yourselves, and for the profession of which you are about to become members, that you should make yourselves familiar with all these branches of study? Is it likely that for any other purpose a good man like Dr. Warneford, who is looking about for the most useful objects on which to bestow his bounty, would have devoted so large a sum of money to found these scholarships?

Let me remark, before I leave this subject, how much that simple proposition, made but a few years ago by the Medical Professors of this College, to found these scholarships, has been the means of effecting. It has led to the foundation of not less than twenty scholarships devoted to medical students, upon which the large sum of £520 is expended annually.

I have already told you that the application of exhibitions to the encouragement of medical students was almost a novelty, and the introduction, or, more correctly, the revival of them, was due to King's College.

It is extremely gratifying to find that similar exhibitions are being established in other schools in London and elsewhere; for it is impossible that they can be

attended by other than the best effects. Indeed, in the endowment of a scholarship for preliminary education, we have been anticipated by the authorities of St. Thomas's Hospital; and we are not ashamed to follow in the wake of an institution with which so many distinguished names have been and are connected.

It is impossible to estimate fully the benefits which these endowments, and others like them, must hereafter confer upon the medical profession, or the extent to which they must influence its fortunes. They must, in the first place, bring to our schools an increasing number of men who have been induced to undergo a higher preliminary education. Secondly, they will afford the means for a more extended medical education than students are commonly contented with at present; and thirdly, they will direct them to the subjects to which they may, with most profit and advantage for the future, devote their time and attention. Nor are the moral advantages of such endowments to be lightly esteemed. The acquirement in early life of such a status as that of a College scholar, confers a reputation which must be maintained unsullied.

But, in the institution of any similar endowments, here or elsewhere, care must be taken to provide that they be given *solely* for merit. They must not be established for the benefit of poor scholars, or to entice men with insufficient resources and untried abilities, to enter the medical profession—a profession in which

the advance to whatever of fame and fortune it bestows, is proverbially slow. They must be made the means of educating a goodly body of skilled workmen, to labour in the vast fields of medical science, whence many a rich ore is to be dug, and which still need much culture and good husbandry to bring them to yield abundantly for the good of man.

Let me now proceed to offer you a few words of counsel as to the nature of your studies, and the manner and spirit in which you should pursue them.

The course which you should adopt has been laid down and made simple for you in the most complete manner. Nothing is now exacted of you which a man of the most ordinary ability, and of even moderate industry, cannot easily accomplish. If you are asked still to attend lectures, it is because that mode of teaching is on the whole best adapted for the great majority, and is likewise best suited to the particular subjects of instruction. Matters which require demonstration are always best taught in this way; and so, likewise, are subjects to which the personal experience of the teacher can impart a considerable amount of interest. Let any one try to learn for himself anatomy or physiology, even with the best assistance he can obtain from preparations and plates; or let him try to explore the mysteries of chemistry, with the aid of the best laboratory and apparatus. I do not say that he will make no way, but I affirm that

his progress will be slow, and the way will be comparatively uninteresting, and the student will encounter so many obstacles and difficulties, that it will need no small determination and vigour of will to lead him on; and there is too much reason to fear that most of those who attempt such a course will be led to abandon it in disgust. It is true, there are many subjects upon which you may gain all the information you need from your own private studies. Upon these points the judicious lecturer will not detain his hearers, but will direct them to the sources whence this knowledge may be best obtained, and advise them how to proceed for that purpose.

If the method of teaching by oral lectures has suffered in general estimation, it is because of the injudicious attempts to teach everything, and to lead the student to place all his dependence upon the professor. The proper office of the professor should be that of an experienced pioneer—one who has often travelled the same regions before, who knows the difficulties of the route, and who can not only lead his pupils by the least devious paths, and show them where, every here and there, they may turn aside to gain refreshment, but who will also encourage and cheer them as they proceed.

There is another point of view, from which, if we regard the method of teaching by oral lectures, it will I think be granted, that it is not ill adapted for men who are preparing for the medical profession. The

duties of that profession are such, that the acquisition of a complete control over the attention is most important to the practitioner. To no man is it more necessary to possess fully the faculty of concentrating his attention on the details of a difficult and complicated case, and however interesting or important, dismissing from his mind such details, and applying himself with equal care and attention to the investigation of another, entirely new, and representing a totally different chain of symptoms and signs. Each patient who applies to a physician, naturally and reasonably thinks his own case the most important, and has a right to expect that his statement should receive his best attention and consideration. Now it seems to me, that those who desire to do themselves full justice, must be regular and constant in their attendance on lectures, and must exercise their minds in following sedulously the details and arguments of the professor; and there can be no doubt that those who will do this in a conscientious spirit, will from such a training derive much benefit for their subsequent professional duties, and will lay the foundation of future success in the acquirements of habits of mind which cannot fail to gain for them the goodwill of all who seek their aid.

But to secure all the advantages which this mode of teaching offers, regularity of attendance is absolutely indispensable. The occasional absentee from lectures is very little better than one who systema-

tically neglects them. It is in vain that the student can expect to derive real benefit from a course of instruction, if he only applies himself to such portions of it as may suit his fancy or convenience. Let me entreat you, then, and especially those who are now entering upon the first year of their medical studies—let me entreat you to impose it on yourselves, as a positive rule and duty, to be punctual and regular in your attendance, and to allow nothing to induce you to give up even a single lecture. You will soon experience the benefit of observing such a rule, not solely in the steady, and easy, and almost imperceptible advances you will make in knowledge, but in the habits of punctuality and regularity which you will acquire.

In the curriculum which has been laid down for you, you will find a variety of subjects, some more, some less important, to the attainment of professional skill, but none to be neglected or despised. All, however, tend to the end of training your minds to habits of observation and investigation, and to accustom you to judge of, and appreciate the relations of cause and effect. And these objects will be the more completely gained, if you will be not mere hearers of lectures, but students. In following the courses of lectures on all these subjects, you will have abundant opportunity of likewise studying them practically—*anatomy and physiology* in the dissecting-room, *chemistry* in the laboratory, *materia medica* in the well-

stocked museums, botany in the field, and the more practical subjects at the hospital.

All of these subjects have strong claims upon your attention; some, indeed, as chemistry and botany, as a part of general as well as professional education. Such is the interest which attaches to the objects of these sciences at the present day, that a medical man well versed in chemistry and botany carries with him, in such accomplishments, a strong recommendation as a member of society at large.

But you will find it to your advantage in the highest possible degree, to follow the lectures on chemistry, and to study that science practically with diligence at this early period of your career. A good foundation of this kind will hereafter prove a great help to you in other subjects—in physiology, for instance, and in materia medica, and above all in clinical medicine. Moreover, the pursuit of this noble science, as at present taught, includes the examination of certain portions of physics, a knowledge of which is indispensable to the physiologist. The subjects of heat, light, and electricity, are intimately mixed up with physiology, and are constantly referred to in physiological discussions.

But it is in order that you may be able hereafter to work at *organic* chemistry, that I would most strongly urge upon you to avail yourselves thoroughly of your present opportunities. This branch of chemistry,

although as yet by no means in a satisfactory state, is still sufficiently advanced to throw much light on several points, hitherto obscure, in both physiology and pathology. The analysis of the fluids of the body, in health and disease, is gradually developing a rational humoral pathology, which offers a far more intelligible explanation of the phenomena of disease than we have hitherto been able to assign. Let me refer you to one or two interesting facts recently brought to light by the agency of organic chemistry, which will serve to point out to you the way in which chemical analysis bears upon practical medicine, and in which we shall have to pursue it in our clinical studies.

It has long been known that sugar, a product of the vital chemistry of plants, and that particular form of sugar which is found in the grape, is sometimes generated to an extraordinary amount in the human system. It is found in the blood, where probably it is first formed; and it makes its escape thence through various secretions, in the bile, for instance, but especially in the secretion of the kidneys. And in thus escaping through the channel of these latter organs (to which it must be brought in considerable quantity owing to the large supply of blood which they receive), it so affects these great filters of the body, that enormous quantities of water are carried out of the system, often five or ten or even twenty times the normal quantity. The burning thirst under which patients thus affected labour, is a most interesting example of those *compen-*

sations with which the observers of natural phenomena are familiar, as occurring in connexion with the failure, or the imperfect development of some physiological process. Although a painful and distressing symptom, it is a most important one for the preservation of life, for it prompts the sufferer to slake his thirst by large quantities of liquid, and so to supply the enormous drain of fluid which is constantly taking place, not only from his blood, but even from the solid textures of his frame, of which water is an essential constituent.

Now although grape sugar had never yet been detected in the animal system in a state of health, it was by no means improbable that such might be the case.* The vital chemistry of animals and vegetables is much the same. Their organic constitution, and the changes which contribute to their growth and reproduction, are much the same. Their vital physics is likewise the same. In the nutrient changes of plants heat is generated, and in those of animals, it is produced in a much greater degree. So also the chemical action which accompanies the growth and nutrition of plants, develops electricity. And in animals, not only are there special organs provided for its generation in large quan-

* It is scarcely necessary to remark that lactine, or sugar of milk, is an element of that fluid, and that grape sugar is sometimes found in the blood after a meal of which starchy matters form a principal constituent.

tity and of great intensity, as the now well-known electrical organs of the Torpedo, Gymnotus, and other fishes, and perhaps the Pacinian bodies, (which were discovered but a few years ago in connexion with the nerves of the human fingers, and with those of the mesentery of cats) which probably fulfil a similar function. But, independently of all this, it is now abundantly proved, by the interesting researches of Matteucci and Du Bois-Raymond, that in the ordinary chemical changes which take place in the nutrition of the muscles and nerves of animals, current electricity is developed, (independently of the particular forces generated by these tissues,) the direction of which can be determined, and its intensity measured. Again, it has long been a subject of interesting observation, that certain animals possess a power of producing light, either by a special organ, as in the familiar instance of the little glow-worm, or by a diffused generation of it throughout their bodies, as in the jelly-fishes, or *Acalephæ*, and even in higher marine animals. Nay, as in some remarkable examples put on record by my friend Sir Henry Marsh, light may be evolved from the body of man himself; light, be it observed, however, visible to ordinary mortals, not needing the magnetic eyes to which alone the odylic light is made sensible. And it has recently been ascertained that many fungi emit light in a manner similar to that in which it is developed by the lower marine animals,

although I am not aware that any special organ for its generation has been discovered in the vegetable kingdom.

If, then, so marked a correspondence exists between the vital physics of animals and plants, it is surely not unreasonable to expect a similar resemblance in the vital chemistry of the two kingdoms, and that materials secreted or generated by the one should be generated by the other.

Accordingly, it now appears, from the researches of M. Bernard, of Paris, (of whose skill and talent as an observer, I can speak most highly from personal knowledge) that *sugar is formed in the blood as it circulates through the liver*. The principal part of the blood of that organ is brought to it by a large vessel called the vena porta; and the blood so brought having travelled innumerable channels of the finest kind, is carried away from the liver by great veins, which conduct it to the heart. Now it appears that there is no sugar in the blood which is being carried *to* the liver; but that sugar exists in notable quantity in that which flows *out of* that organ, and hence there seems no reason to doubt that this sugar is formed by the vital chemistry of the blood, in its transit through the substance of the liver. And from further research and experiment, it seems to be certain that this sugar is thus generated independently of any direct supply of its elements from saccharine food; for it is present equally when the food is purely of the

animal kind, or when it is derived from the vegetable kingdom.

Here, then, is a fact pregnant with results both for physiology and pathology. The fact resolves itself into this: that, in the blood, during its circulation, under the influence of some agency which is still hidden from us, such a chemical action may take place as is capable of generating a substance which has hitherto been known as the product of the vital chemistry of plants, or as occurring only in diseased states of the human frame.

Another even more striking fact has been brought to light by the experiments of the same physiologist. There is a portion of the brain which exercises a special influence upon both the mechanical and the chemical actions of respiration. When this portion of the brain is wounded, however slightly, as by the passage of a fine cataract needle, the effect is not manifested in disturbed breathing, or in altered circulation, or in any very marked perversion of any one of the great functions of the body, but in the development of sugar in the renal secretion; this sugar continues to show itself in the urine so long as the irritation of the brain remains; but as soon as that has ceased it disappears. Thus we have a capital fact, which indicates that a slight injury to a certain portion of the brain, is capable of affecting, in a marked manner, the vital chemistry of the blood.

Let me beg your attention to another very interest-

ing fact. It had been discovered by Redtenbacher in Germany, not very long ago, that in cases of inflammation of the lung or pneumonia, the urine, while the inflammatory action is still present, is devoid of some of its most important saline constituents,—as for instance, of common salt or chloride of sodium. Immediately the inflammation has been resolved, the chloride of sodium again passes out of the system in the renal secretion. Thus the chemical state of the urine becomes to a certain extent an index of the condition of the lung.

Now my friend, Dr. Beale, who not many years ago sat on these benches as a freshman in his College studies, and who had the good sense to apply himself diligently to chemical pursuits, while he neglected no others, has followed up this fact, and has ascertained that in inflammation of the lungs, large quantities of this very salt—this chloride of sodium, which in its normal state ought to pass off by the kidneys—accumulates in the mucous secretion of the lung, which is expectorated, giving it that saltish taste which has often been noticed; and he has also found that at the same time, this salt is found in diminished quantity in blood. It would seem, then, that in inflammation of the lung, common salt is attracted from the blood to that organ, in such quantities that it is found in greatly diminished proportion in the blood, and that it does not at all pass off by the kidneys.

We have seen that sugar is formed in the blood

during its transit through the liver. The blood thus charged with saccharine matter passes at once to the lungs, where in the normal state it no doubt undergoes a process of combustion which contributes to the generation of animal heat. If the respiratory process at the lungs fail, as in inflammation, it might reasonably be expected that this sugar would be found unchanged in the inflamed lung, or in its secretion.

Accordingly I requested Dr. Beale to examine this point; and he has obtained evidence of the existence of sugar in the matter expectorated from the lungs of patients labouring under pneumonia.

Here, then, are some most remarkable facts, which, without the aid of Organic Chemistry, must have remained concealed from us. It would be quite premature, at present, to attempt to draw any large conclusion from such premises as these, however striking, and however well ascertained they may be; but no one accustomed to think upon pathological questions can fail to perceive that they contain the germ of some great generalization, which may one day reveal to us the whole secret of the mode of production of inflammation of the lungs, and of many of those destructive diseases which do so much havoc among our population.

And if you need any additional arguments to induce you to pay early attention to Chemistry, it is to be found in the fact, that it will give increased interest

and greater facility to your study of Anatomy and of Physiology, the Lectures on which you will have to attend at the same time. Time would fail me, were I to enter at great length upon any detailed statement to prove to you the value and importance of these branches of your studies. Happily the proposition is a self-evident one, that a knowledge of the structure and functions of the frame is an indispensable preliminary to any attempt to study the diseases or injuries of that frame in a scientific manner.

In the noble science of Anatomy, how much is there to excite your admiration and interest! To the practical mind it recommends itself most strikingly by the numerous suggestions which it offers for repairing the various displacements, or other injuries to which the body is liable; while the student of a speculative turn will find in it food unlimited to furnish reflections upon the exquisitely beautiful adaptation of the mechanism which it unfolds.

No other science, not even Astronomy, affords such striking instances of the designs of an intelligent Creator; and the striking unity in the plan of construction of the animal kingdom, especially in the vertebrate division, which the researches of comparative anatomists have unfolded, points in a manner not to be misunderstood to the Unity of the Godhead. The well-directed and well-disciplined mind cannot rise from an anatomical investigation without feelings of admiration and awe; admiration of the infinite

intelligence displayed in the structure of even the simplest organ of the body; and awe, that men should be found indifferent to a Being whose wisdom and beneficence are so plainly displayed in His works.

The celebrated Galen, heathen though he was, thus expressed himself with reference to his anatomical descriptions:—‘In explaining these things,’ said he, ‘I esteem myself as composing a solemn hymn to the Great Architect of our bodily frame, in which I think there is more true piety than in sacrificing hecatombs of oxen, or in burning the most costly perfumes; for I first endeavour, from His works, to know Him myself, and afterwards, by the same means, to show Him to others, to inform them how great is his wisdom, His goodness, His power.’

If, then, a heathen like Galen, could give expression to such sentiments, how incumbent is it on you, who have the light of revealed truth, to act, in your practical pursuit of Anatomy, with becoming reverence to the Creator, when exploring the most perfect of His works; and, in the rooms which have been set apart for this purpose, to refrain from light conduct or trifling conversation. Let me enforce my own advice to you on this head, by quoting a passage from a discourse which many of us heard last year with great interest; the sentiments of which are not the less impressive because they are those of one who is himself among the foremost anatomists of this age:—

‘The dissecting-rooms,’ said Mr. Bowman, on the

occasion to which I have alluded, 'are a scene of study to which no other profession affords a parallel. While they retain their novelty, you cannot enter them without a certain reverential awe, inspired by the thought that you are walking among the dead. An earnest and right-minded man will not too forcibly repress this feeling; nor forget, in that customary place, the honour due to human dust; nor so dismiss his own mortality from his recollection, as to behave with any unbecoming or ill-timed levity. He will strictly apply himself when there to the acquisition of the necessary knowledge, reminding himself sometimes that the dead body on which he operates has once been tenanted by the soul of man; that in all probability the Divine Spirit has once deigned His presence there; and finally, that its scattered elements are destined to be one day reconstructed, and, in a changed and purified state of incorruption, to resume their mysterious but essential part in the life of an immortal being.'

The subjects which will occupy your attention during the first summer session, have the most direct bearing upon the art of therapeutics. They, indeed, teach us—

Scire potestates herbarum, usumque medendi;

and although the great number of details which are to be learned, detract somewhat from their interest to the student, they form a very necessary acquirement for

the practical man, as opening the gates of the arsenal whence he takes the weapons with which to combat the assaults of disease.

With reference to *materia medica*, I will venture to give you this caution; namely, that while, on the one hand, you should be careful not to confide too readily in the virtues assigned to drugs, you should, on the other hand, beware of encouraging a spirit of distrust in the powers of many of these articles, which I perceive is growing up just now very much among young men. Depend upon it, the recorded experience of many years obtained by men of great intellectual powers, and well-practised in observation, is not to be overlooked or lightly esteemed. The extraordinary powers of opium, of bark, of mercury, and of many other articles of the *materia medica*, are established upon evidence as strong as that upon which rest many of the truths which are most precious to us. But these agents may be indiscriminately or injudiciously administered. God has given great and good gifts to man: it is for man to discern how to use these gifts without abusing them. We, in the present day, have great advantages over our ancestors in attaining this knowledge; and a greater responsibility is therefore laid upon us to use those advantages with diligence and discretion. We have a clearer insight into the working of the animal economy, and we have more exact means of investigating disease, and of ascertaining its precise nature; we may, therefore, with

more certainty determine how far the remedial process is promoted or retarded by the treatment pursued.

It is well that you are not called upon to study *materia medica* until you have acquired some knowledge of chemistry and physiology. For it is only by the aid of these sciences, in conjunction with the careful investigation of the natural history of diseases, that we can make trustworthy researches into the influence of medicinal agents on the human body. Researches of this kind ought to be based on an experience not only of great extent, but guided by the light derivable from the sciences I have named; and all conclusions from such researches should rest on an induction from a considerable number of instances.*

Such are the principles which should guide you in the study and the practice of the therapeutic art. Be careful to avoid that mere routine, which, by overdrugging patients, has led many to reject the aid of medicine altogether, and to rest on the broken reed of homœopathic vagaries; observe closely and carefully for yourselves, and while you do not pin your faith too closely to the dicta of any master, pay due regard to

* I cannot deny myself the pleasure of expressing here the gratification with which I have read an excellent work 'On the Action of Medicines,' lately published by Mr. F. W. Headland, a former distinguished student of this College, which indicates, more distinctly than any work of recent times with which I am acquainted, the true method of conducting inquiries into the value of various therapeutic agents.

the experience of those who have preceded you in the same path.

You will not suppose, from what I have already said, that I attach little value to the practical Lectures which you will be called upon to attend in the more advanced period of your stay here. All the instruction given to you must be viewed as but the means to an end—namely, that of fitting you for practice. But no amount of teaching can avail you much for that purpose, if you do not observe and examine for yourselves in the wards of the hospital.

That which we call clinical study, or, in other words, the careful observation and noting of the phenomena of disease at the patient's bedside, every one of any experience will tell you is by far the most important subject which can occupy your attention. In your first year, it is, perhaps, of less consequence that you should devote so much time as subsequently to this object. Nevertheless, I am convinced that you cannot begin too soon to familiarize yourselves with the aspects of disease, and the modes of investigating it: to watch the progress of symptoms, and to learn the various processes employed for cure: to witness the dressing of wounds, and the application of mechanical contrivances to fractures and dislocations. I would say, therefore, to the youngest among you, do not hesitate to employ all your spare time in the wards of the hospital. At first you will find it

difficult to interpret what you see; but by frequent visits, and by attention to the remarks which are made by the physicians and surgeons, you will soon begin to take an interest in all that is going on, and you will thus be gradually prepared for taking a more active part as a clinical clerk or dresser at a subsequent period.

When, however, you have completed your earliest studies, and acquired a fair knowledge of anatomy and physiology, and of chemistry, then it will be your wisest course to devote your attention principally to the pursuit of clinical medicine and surgery; and I will promise you that hereafter, when you will have to treat patients on your own responsibility, you will not regret the time thus spent, even although it may have led you to neglect other things. It is too much the custom to allow even trivial engagements to interfere with hospital attendance, under the very false idea that, as the opportunity for that purpose presents itself daily, the loss of one or two days may be easily supplied.

The practice of taking notes of cases cannot be too strongly recommended, not only for the habit which it enforces, of a close methodical observation; but, for the sake of the records with which it will supply you, which may hereafter be referred to on the occurrence of similar cases in your own practice. Medical precedents, no less than legal ones, are often of the highest value in practice, and frequently fur-

nish invaluable assistance in guiding the judgment of the practitioner, in adopting or rejecting a particular line of treatment, or in forming an opinion as to the probable duration and issue of the case. But such precedents are of much more value when drawn from one's own practice, rather than from that of another.

But in commencing this practice, I advise you to beware of attempting too much. Select, under your clinical teachers, one or two cases, and keep very careful records of them. By following this plan for a few weeks, availing yourselves from time to time of the advice and assistance of the physicians or surgeons, or of some of your senior fellow-students, you will acquire expertness in taking cases, and you may then take notes of a greater number. Do not make your notes hastily, and without due examination and inquiry, and let them, especially in acute cases, be made *daily*, or even twice a day if you have the opportunity; and be very careful not to omit the notice of any signs or symptoms that can have the least reference to the diagnosis or treatment of the case. Be especially particular to note the remedies employed, and the mode of their employment, and the results, whether they may be mere consequences or effects.

In availing yourselves of the great privilege of watching the sick in a large hospital, I trust I need not say to you, *respect the poor man*; let your attendance on him be such as will afford him both consolation

and support, which it cannot fail to do if you evince a spirit of sympathy in his afflictions, and if you act towards him as one of his medical attendants rather than as a mere learner in the wards.

And now, gentlemen, I will suppose that you have completed your career as pupils, and are about to enter upon the responsible duties of your calling, and to become candidates for public favour on the wide arena of professional competition. And I doubt not that there are some here to-day who, having sojourned amongst us for some time, have been just, or are soon about to be, launched into the sea of active life.

Let me, then, exhort you, although you may have ceased to be students *in statu pupillari*, not to abandon the diligent study of your profession. Our art is one of great magnitude, and which involves heavy responsibility. Life is short: your term of pupilage, however diligently spent, barely suffices to introduce you to the difficulties of medical practice. These difficulties can only be combated or surmounted by your own assiduity and diligence.

Nil tam difficile est quod non solertia vincat,

says the Latin proverb; nor are there any qualities which, on the whole, will recommend you more strongly to the favour of others, than the diligent and assiduous discharge of the duties which devolve

upon you. Endeavour to exercise your calling in a humble spirit of science, and of good-will and kindness towards those who seek the benefit of your skill. Above all things, eschew the spirit of trade: aim solely at the good of your patients; and while you bear yourselves with becoming self-respect, and with due regard to the interests of your brother practitioners, whose necessities may be greater than yours, beware lest by any exaction you add to the griefs of those already too much burdened by the trials of sickness. Take care that your prosperity, if you are ever to enjoy it, shall be the consequence, not of mean art or disingenuous solicitations, but of real merit and solid attainments.

Acting in this spirit, you will be in no danger of falling into any of the quackeries of the day, and you will know how to deal with charlatanism. Let it be remembered that, after all, charters and corporations are but poor safeguards against quackery; that it may raise its head within as well as without the walls of the Colleges; indeed, there is no form of quackery which presents an aspect so revolting as that which is exhibited by a legitimate member of the profession. A man who has had the benefits of a liberal education, and who has associated with men of honour and reputation, can only descend to the arts of the quack under the influence of motives of dishonesty and rapacity. Something may be said, in a

spirit of charity, for some of the so-called systems of medicine which are in reality systems of quackery; they are, to speak of them in the mildest way, due to what Lord Bacon has called 'an over-early and peremptory reduction into acts and methods,' or to that great source of error in matters of science—namely, 'the impatientia dubitandi et cæca festinatio decernendi absque debitâ et adultâ suspensione judicii.' But for one who, having been brought up in the halls of science, has no prejudices of early education to contend with, nevertheless stoops to the arts of a quack—for such an one no apology can be offered.

Gentlemen, the medical profession is not one of those which leads to high offices and great distinctions in the State; nor is it one which offers the temptation, except in very few instances, of great wealth and aristocratic titles. And fortunate for its members it is that such dazzling objects are not within their reach. The aim of all the great masters of our art has been to cultivate science and learning; and such pursuits are incompatible with the turmoil and bustle of political life, through which chiefly are State honours to be obtained. This, however, may be said of the medical profession: that there is none in which a larger proportion of its members can obtain a comfortable competence, nor is there any which can obtain a more legitimate influence in society, or can exercise

that influence more effectually for good objects, provided always that its members are well educated, and act with truth and justice to themselves and others.

Let those who complain that they cannot obtain titles and State honours, remember Coleridge's reproof to a similar complaint.

COMPLAINT.

How seldom, friend, a good great man inherits
Honour or wealth, with all his worth and pains;
It sounds like stories from the land of spirits,
If any man obtain that which he merits,
Or any merit that which he obtains.

REPROOF.

For shame ! dear friend, renounce this canting strain,
What wouldst thou have a good great man obtain ?
Place, titles, salary, a gilded chain ?
Or throne of corses which his sword hath slain ?
Greatness and goodness are not means, but ends,—
Hath he not always treasures, always friends,
The good great man ? Three treasures, Love, and Light,
And Calm Thoughts, regular as infant's breath,
And three firm friends, more sure than day and night—
Himself, his Maker, and the Angel Death.

Gentlemen, if I have detained you for a longer period than is usual on an occasion like the present, and if I have ventured to touch on subjects which some may regard as foreign to a discourse delivered from this place, let me plead as my excuse, that I am strongly impressed with the feeling that, in the ordi-

nary course of events, (to say nothing of the unforeseen casualties to which all are liable, from the prince on his throne to the peasant in his cottage,) it is highly improbable that it will ever fall to my lot again to perform the office, which I have now so unworthily fulfilled. I have therefore thought it a solemn duty to speak my sentiments freely on the present occasion; and I have ventured to offer you my counsel, based on an experience of no very limited duration, and dictated by the warmest interest in your welfare.

THE END.

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