

**On some of the circumstances which have retarded the progress of medicine : an introductory lecture delivered at King's College, London, on opening the medical session of 1849-50 / by Arthur Farre.**

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William Ferguson Esq. F.R.S.  
with the Author's kind regards



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ON SOME OF THE CIRCUMSTANCES WHICH  
HAVE RETARDED THE PROGRESS  
OF MEDICINE :

AN

INTRODUCTORY LECTURE,

DELIVERED AT

KING'S COLLEGE, LONDON,

ON

OPENING THE MEDICAL SESSION OF 1849-50.

BY

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## LECTURE.

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MR. PRINCIPAL AND GENTLEMEN,

Among the various duties which have heretofore devolved upon the Dean of the medical department, not the least agreeable has been that of receiving you here, on occasions like the present, with that cordiality of feeling which it has ever been the desire of the professors to promote between themselves and their pupils.

This welcome task has of late years been undertaken by the Dean of the year; but it having been determined that the office of Dean of the medical department shall become a permanent, instead of an annual one, we have now returned to our former practice of affording to each professor in rotation the privilege of assembling you here, and of addressing you on matters relating to your common interests.

The occasion is one which gives opportunity for



choice from so wide a range of subjects, that it is difficult to decide in what manner and of what materials an hour's discourse may be best composed.

But in considering how I could best fulfil the duties, with which I am this day charged, I have come to the conclusion that no better subject could be chosen than one that should have reference to the improvement of our profession. And as what Lord Bacon has observed of medicine in his time, may be safely averred of it now, "that it can never be improved until its imperfections are pointed out" —I propose as a subject, "The consideration of some of those circumstances which especially in our times have contributed most to retard the progress of Medicine."

Men are much divided in opinion as to the rank which medicine ought to hold among the various departments of knowledge. Some consider it entitled to rank as a science; others view it only as a conjectural art; while most, seeing how closely it borders upon the neighbouring sciences, and how much it draws from their principles and discoveries, agree to accord to it the title of an imperfect science, and, speaking of it in conjunction with the art, designate it the Science and Practice of Medicine. In these terms are included *all* the branches of the healing art; and in this sense I wish to be understood as employing them throughout this discourse.

Now let us for a moment examine the claims which medicine has to any or all of these titles.



And for this purpose, without at all intending to waste your time or attention by entering upon matters of early history, which the curious may prosecute for themselves, allow me for a little while, to direct your mental vision back into the gloom of some twenty-five or thirty centuries, and let us see how medicine then stood.

In the *Asclepiæ*, or Temples of Health, presided over by the order of Priest Physicians, medicine, in its origin and early progress, could be no other than a simple art—deriving no aid whatever from science—existing, in fact, before science dawned, or authentic history began.

What remedial measures were adopted in those temples we have but limited means of accurately ascertaining. We know, however, that certain exercises and ablutions were practised; that attention was, to a certain extent, paid to dietetics, and that not only were the effects of medicines carefully noted down, but the symptoms and issue of every case accurately recorded by the *Asclepiadæ*, who became, by these means, great adepts in the art of prognosis.

Such were the Temples of Health; and from one of the most important of these sprang the Coan Sage, to whom the combined suffrages of all succeeding generations have agreed in according the title of “Father of Medicine.” And well does that title appear to have been deserved, when we consider what Hippocrates did for medicine. Witness his



works on Epidemics and Prognostics—the former abounding in most accurately recorded cases; his admirable remarks on diet and its relation to medicine, and his observations on air, water, and localities, in reference to health.

Now, it has often puzzled learned men to explain how, from the darkness which appears to have preceded the birth of Hippocrates, so much light should have been suddenly shed on the path of medicine by one man's efforts alone. But this wonder applies in no greater degree to Hippocrates than to any other mighty genius whose appearance constitutes an era in history, and serves to shed lustre upon succeeding generations.

It must be remembered, too, that Hippocrates was instructed in polite literature and philosophy of the age by men of classical celebrity. He enjoyed free access to all the treasures of observation collected in the Temples of Health during many generations, and the period of his existence was one of the most memorable epochs in the intellectual development of the human race. He had for his contemporaries, Pericles, the famous statesman; the poets Eschylus, Sophocles, Euripides, Aristophanes, and Pindar; the philosopher Socrates, with his distinguished disciples Plato and Xenophon; the venerable father of history, Herodotus, and his young rival, Thucydides; the unrivalled statuary, Phidias, with his illustrious pupils; and many other distinguished names, which have conferred immortal honour on the age in



which they lived, and exalted the dignity of human nature.\*

Hippocrates is, indeed, accused by Celsus of having separated medicine from philosophy. But in so doing, when we consider what the philosophy of those days was, we see that he could not have rendered medicine a greater service. For "philosophy, whilst it had freed medicine from the delusions of superstition, had substituted the errors of hypothesis in their place. And the important office, which the father of medicine conferred upon the art was, that setting aside *à priori* arguments, and looking only to facts, he discarded both superstition and hypothesis, and substituted the results of actual observation in the room of both. Thus at least he attempted to place medicine upon a philosophic basis.

I need not carry you through the intermediate periods of history to show you in what way medicine has either advanced or fallen back in proportion as it has adhered to, or receded from, the ground upon which Hippocrates endeavoured to place it. How it has now degenerated into an art, now struggled to emerge into a science. To the latter title, I have said, it now often claims to be exalted. But it can approach this desirable point only in proportion as its observations and reasonings are conducted in the true spirit of philosophic inquiry. All its observations must be observations of facts; its

\* Works of Hippocrates by F. Adams, LL.D., vol. i. Sydenham Society.



conclusions must be fair and legitimate inductions. But, what is a fact in medicine? and what is an observation? To the different interpretations which men have put upon these questions, may be traced, in a great measure, the impediments which medicine has hitherto, and especially in our own times, suffered. Now these impediments, we shall find, are attributable partly to the nature of the subject, partly to the erroneous modes in which men too often set about acquiring a knowledge of medicine, and partly to the manner in which the public view and receive it.

And first, let us inquire, what is there in the nature of medicine which prevents it from being placed upon an equality with the strict sciences— notwithstanding that it is of far higher antiquity than many, if not all of them, and that so many men of the highest eminence, and distinguished for their intellectual endowments, have given up their lives to its cultivation? The reply to this question, in the first place, is, that the subjects with which medicine is conversant, do not admit of the same mode of treatment, nor do they afford the same opportunities and facilities for observation and experiment that are offered by the other departments of natural knowledge.

Whoever seeks to apply *too strictly* the method of philosophic induction to the study of medicine, will find himself often greatly disappointed in the result. Nor can it fail to be otherwise. For let us consider the difference in the materials for



observation, and the mode in which they are presented to our notice, in medical, as compared with other investigations.

In medicine we cannot select our opportunities for observation, but must take them as they arise. So that do we desire to note a particular fact, we may wait a dozen years, nay, a whole lifetime, before the desired object presents itself to our expectant view.

Again, when we would begin our experiments or observations, we find that we cannot witness the entire process, but only portions of it—so that much is necessarily left to conjecture. In this respect physic requires a very liberal, active, and penetrating genius, because the observer being often obliged to confine himself to simple probabilities, will be unable, without an extreme share of penetration, to trace them to their highest degree.

Further, we cannot deal with *animate* in the same way that we do with *inanimate* matter—for neither is it subject to the same laws, nor is it amenable to the same modes of treatment; nor can we take it under our own control, since it is governed by certain vital processes, of which it must be confessed we are mainly ignorant, and is further under the influence of mind which refuses to yield itself to man's government.

Such, then, from the nature of the subject, are some of the circumstances that must, for the present at least, prevent the pursuit of medicine as



a science, from being conducted upon the same rigid principles of philosophic inquiry, which we elsewhere apply with so much success. Yet it is from this very uncertainty that those who practise medicine successfully, claim their greatest honour. 'For where there is no possibility of error, no praise is due to the judgment of what is right.'

But this does not constitute the greatest impediment to the advancement of medicine as a science. I need not, therefore, longer dwell upon this point, but proceed to consider the next source of impediment, as consisting in the faulty mode in which men too often set about the acquisition of medical knowledge. And now permit me to vary in some degree the tenor of my argument, for as I have in view the offering of useful advice, rather than the binding myself too strictly in the trammels of a logical discourse, I shall, while I touch occasionally the errors to which I have alluded, occupy your time also with the consideration of the means by which these errors may be best avoided.

I begin, then, with what mainly concerns you now—with your present studies and immediate employments. And first, let me remind you of the warning aphorism of Hippocrates: "Life is short—Art long," is the exordium of the father of physic.

But if an entire lifetime is so short, compared with the period requisite to mature and perfect any art, as to justify the remark in reference to medicine, that "it must be regarded rather as the child of



Time than as the offspring of Genius," how important is it for you who are able to give, it may be only three or four years, to the cultivation of that knowledge, which it has required so many centuries to amass, to spend that short period to the greatest advantage. To arrange for yourselves at the very outset such well-considered methods of study, as will enable you to take full advantage of the very large opportunities here afforded to you.

It is true that a certain course of study is marked out for every one, varying according to the period of time which is to be devoted to this purpose, and the nature of the qualifications which it is in view to obtain. To a certain extent, also, attention to the subjects after a given order, is made in a measure compulsory upon all—and so far little is left to your own choosing. But remember that this is but fixing the outline or boundaries of the work which during the status pupillaris you are called upon to perform. The manner of the performance, so that it does but exhibit a sufficient degree of attention, and desire for learning, is all your own.

Do not, however, misapprehend me. Let no one suppose that it is a matter of indifference to the professors of the several departments whether their pupils acquire little or much knowledge. On the contrary, you will find that by every available means, whether of example, of advice, or of friendly warning, your teachers will endeavour to urge you on to the full



and profitable employment of that time, which, if now misspent, can never afterwards be regained.

But here let me give you one caution regarding lectures. The student who relies upon lectures alone, will find himself but very imperfectly instructed in his profession. For their true use and aim is not so much to teach, as it is to point out to him what he ought to learn. To lead and guide, but not to constitute his studies. To draw him on by well-considered steps from one subject to another, smoothing the difficulties, simplifying and preparing the way for those more difficult modes of study, with which he is afterwards to be engaged,—but not supplanting them.

But to make your courses of study fully serviceable to you, there must be also discipline; and without discipline, we do not profess to offer you instruction. Now, it is of the first importance that you should have a right comprehension of your duties in this particular, both with regard to your teachers and also to yourselves.

Discipline to a sensible man never means control. He sees in it only that order and regularity which are established for the general good, and in which each member of the community is proud to take a part. I need not dwell upon the details of such matters, because the more immediate superintendence of them will devolve upon the permanent Dean, Dr. Guy, whom you must regard as, what I am sure



indeed you will find him, your counsellor, adviser, and kind friend. Every one, then, who enrolls himself as a student of this College, gives thereby an implied compact that he will abide by its customs and regulations.

And we deem it no unreasonable expectation that he should make *these* matters of prime consideration, that he should lend himself heartily to the work of duly fulfilling the course and order of the studies upon which he has entered—and that in all this he should exhibit the conduct and bearing of a Christian and a gentleman. Nay more, are we not justified in expecting that no inconsiderable number will leave a lasting memorial of their residence here, by adding themselves to the number of those distinguished students whose names we are proud to recount as shedding lustre upon this, the home and seat of their instruction.

If, gentlemen, this praise rested upon no other evidence than that which the records of the College alone afford, we might be accused of partiality for those whose education it had been our occupation and pleasure to direct.

But there are some who have also distinguished themselves before other tribunals—and to those we feel that we have a duty to perform, and no unwelcome one it is! The duty of publicly expressing our gratification at seeing our Alumni heading the list in the struggle for university honours and distinctions.



No inconsiderable cause for gratification is it to find that in the last examination for medical honours in the University of London, the whole of the first gold medals, four in number, and both the exhibitions, were obtained by two King's College men.

Gentlemen, we do not hesitate to hold up to you Charles Pardey and George May, as men whose success may well stimulate your exertions; and if your desire is also to maintain the character of King's College, we can offer you no better advice than that you should "go and do likewise."

Now, as I have ventured to recommend discipline in regard to conduct, let me also advise you in reference to the equally important subject of discipline in regard to mind—that training of the intellect which every one of you who expects to excel in his profession must impose upon himself. "If ever it is of advantage to think rightly, it is so at your age, when the mind is fresh and ductile. Postpone this discipline, and time will bring with it changes from which you will not be exempted. It will bring with it rooted prejudices, and modes of seeing things after your own ways; your position in life, and your associations, will give a colouring to events; and you will find that you have not escaped the thralldom of habits, but have only acquired inefficient ones;—that your mind has been moulded by circumstances, instead of by principles—that your views of science and scientific advancement are oblique—that your



laborious industry is unproductive, because immethodically or falsely exercised—and that your years have slipped away without enriching the intellectual stores which were entrusted to you ;”\* you have been

“ Lowering buckets into empty wells,  
And growing old in drawing nothing up.”

But I must revert to more practical studies. Those in which, ceasing to be listeners or mere spectators, you enter upon a more practical part of your career, and become yourselves in a measure the actors in the scene of your studies. And, first, let me speak of *Anatomy*,—the neglect of which has, in my opinion, contributed more than anything else to retard the progress of medicine. I do not speak here of present neglect, for anatomy never was so extensively or so highly cultivated as it now is ; but I refer to past times, even up to a comparatively recent period, when dissection was very little regarded, and when morbid anatomy was only beginning to be cultivated, and microscopic anatomy was unheard of and unknown.

Contrasting those times with the present, we cannot help regarding microscopic investigation as constituting the most interesting feature of the day. But how slow was the profession in general to admit this as a legitimate means of investigation ; nay, so

\* Introductory Lecture by Robert Ferguson, M.D. 1836, p. 18.



general at first was the dislike, or rather, I may say, jealousy of this method of observation, that a medical man who was provided with a good microscope really felt that he had a somewhat dangerous possession, and was compelled to be cautious how he employed it, lest it should be thought that he was departing from the duties which he owed to his profession.

The opposition, however, which the microscope had to encounter was no greater than other useful inventions have been fated to struggle against, before they have passed into general employment. It rested upon no stronger basis than the occasional deficiencies of bad instruments, and the errors of incompetent observers. Time soon corrected both of these, and the thirst for knowledge excited by the exquisite appearances revealed by the microscope, was fostered and kept alive by the rapid improvements in the instrument—the observer and the artist mutually entering into an honest rivalry, and endeavouring to outstrip each other; the one, in finding objects of such surpassingly delicate organization as to baffle the efforts of the optician to define—the other, in bringing his glasses to such unrivalled perfection, as to open the field anew to the keenest and most practised observer.

Now this was no vain and profitless contest. It could not fail to have its beneficial effects; for whilst every new discovery in minute anatomy added to our stock of knowledge, in a field hitherto unculti-



vated for any useful purpose, the voice of opposition became so rapidly silenced, that in the course of a few years it has literally died away. The turning point of this desirable change may in no inconsiderable measure, I think, be traced to the formation of the Microscopical Society—a society which, founded by one of our own profession, was no sooner established than it was joined by between one and two hundred members, many of whom belonged to medicine.

Gentlemen, I have a very strong feeling with regard to the value of microscopic investigation. I believe that it will prove to be even in our day the most powerful auxiliary that has ever yet been afforded to medical research—that it will do as much, or even more, for medicine, than the telescope has done for astronomy. Indeed, the cases are nearly parallel. In both, there is a region which lies beyond the power of unaided vision. The one apparently as infinite in space, as the other is in minuteness. Into these regions it has pleased the almighty Author of nature to permit us to penetrate, and there to regale our delighted vision with new proofs of his omnipotence. Nor can we view this permission as having been given for any other than the highest purposes—to stimulate man's curious searching spirit—to give a keener edge to his inquiring inclinations—to shower on every step by which his ingenuity advances, the reward of a thousand beneficial discoveries—to crown his efforts by extending his useful-



ness to man—to lead his soul to the contemplation of his God.

If any or all of these be motives, let nothing deter you from the inquiry after truth. If the wit of man has gained for his limited faculties a new accession of power, be sure that nothing but prejudice can oppose its employment. Use then these new powers “for the benefit of man,” apply them to the purposes of your profession; endeavour to search out and unravel by this new aid the intricacies of our organism; examine it in health and in disease; probe the sources of its maladies, and seek to discern the elements that tend to its destruction. In this way only can you hope to advance our knowledge of morbid processes and morbid changes; and, as far as anatomy and physiology are concerned, to place your profession upon a surer and wider foundation.

But, gentlemen, whilst a new impulse has thus been given to anatomical investigation, by the discovery and application of more efficient means of research, and whilst a new responsibility rests upon us for their due employment, we must not make our brethren in the ages immediately preceding ours altogether chargeable with the consequences that have resulted to our profession from the imperfection of anatomy; because a very little reflection and inquiry will show, that even up to our own times, anatomy has greatly suffered from causes extraneous to the profession, some of which must indeed always



operate more or less forcibly to the prejudice of anatomical investigation, inasmuch as they are inseparable from the influence of the finer attributes of our nature.

I cannot altogether quit this subject without alluding to a circumstance, just now of peculiar interest. Our land is being swept by a pestilence which has already carried away many thousands of victims, not sparing our own ranks. How has science exhausted its highest efforts in endeavouring to determine the source and nature of this plague! How has ingenuity been constantly occupied, yet failing at all points in discovering a remedy! Now, however, we seem to be arriving at some views which may be found to throw a complete light upon the first at least of these requirements. I need not perhaps more specifically allude to this very recent discovery, as many of you may be aware of its nature, than by saying, that with the aid of the microscope, certain corpuscles have been observed in the excretions and bodies of those who have died of cholera, and also in the air and water of cholera-infected districts. These, as far as investigations have yet proceeded, appear to be peculiar to the localities and subjects of the epidemic. Now, to say more than this at present, would be to overpass those strict boundaries which the laws of scientific investigation impose upon observers. We must yet wait for further confirmation of these most interesting observations before we receive them as acknowledged and un-



doubted truths. Tested, however, as they have been by most competent observers, they come to us with a force which compels our earnest attention; and should these observations tend to an explanation of the real nature of the disease, as I think they may, the discovery will be one of the most interesting and important events that has ever occurred in the history of medicine.

The records of epidemics constitute, perhaps, the most valuable portion of our annals; but where shall we find any account that has hitherto explained in a satisfactory way the exact cause of these fearful visitations? The ancients ascribed them to the anger of their gods, but sought for no explanation of a physical nature. In our day, whilst we acknowledge and bow before the Hand that directs the scourge, still, stimulated by the desire of doing good, and of employing to the highest extent those faculties with which we have been blessed, we hesitate not in our endeavour to penetrate the dark secrets of nature, and there to seek an explanation of the malady which has afflicted us.

But let us not hastily conclude, that should these prognostics prove true, we have now for the first time received a physical explanation of phenomena, in which we still acknowledge a yet higher source. Should any one doubt the propriety, or even probability of such an explanation as that which is now offered, let me invite his attention, or rather his re-



collection, to those fearful demonstrations of Divine vengeance which the *most* ancient of histories records; and there trace, in those handfuls of ashes which, sprinkled towards heaven in the very sight of the offending monarch, became a fine dust, penetrating to *some* portions of the land, yet sparing *others*, the intelligible instruments by which an epidemic may be swayed.

And now let me follow you to the hospital, and see how you will acquit yourselves in this new field of observation. What a vast source of knowledge is now opened up to you! All that you have yet learned is but ancillary to what you are now beginning to investigate. I speak, therefore, no longer of previous studies, of lectures, or demonstrations, or dissections; the first object of these is accomplished when you have acquired sufficient knowledge to guide you to the investigation of disease.

And to this investigation you will indeed find all your previous acquisitions necessary; Anatomy, Physiology, Pathology, Chemistry, Materia Medica, Botany; but why attempt the enumeration? these, and all that you have learned in lectures, of the principles and practice of the Healing Art, must now be applied to the business of studying disease, not as heretofore, in the abstract, but now with tangible and living examples of what you have before been only mentally contemplating.

And which of these examples will you select for the commencement of your studies? What class of



cases shall first occupy your attention? These are matters which you may decide for yourselves. Do you make Surgery your chief object? you will then probably commence in the wards devoted thereto. Or does Medicine claim your first attention? there will be no lack of cases to supply your wants.

But these are not the points upon which I would address you. I regard medicine, whether clinical, surgical, obstetrical, or forensic, as one science; to be studied only in one mode: and it is upon the right mode of studying, rather than upon the particulars, or details, or order of study, that I shall here prefer to speak.

And, in the first place, I must beg you to observe that the mode of teaching medicine, so far as this can be done by lectures, is by laying down general doctrines and principles relating to entire classes of diseases and remedies, whilst particular facts are mentioned only as far as they serve to illustrate those principles, or as they are clearly deducible from them.

But, in commencing to study for yourselves, you must now observe the opposite and more natural mode of proceeding from particular facts, to establish or to confirm general principles. Now I shall presently endeavour to show you in what way the mind should be disciplined, in order that it may lay up for itself a store of useful knowledge; how it should endeavour to drink in truth untainted by error; how also, in the anxiety to avoid error, it



should not fall into the opposite extreme of rejecting the truth.

It is true that in the beginning you will have the aid of your teachers; that in every case which comes under your notice, you will do little else than play the part of observers; and that you will gradually be inducted into the arts of observing, of distinguishing, and prescribing.

You will reap also the greatest advantage from those bed-side observations and clinical instructions with which your visits at the hospital will be interspersed.

And if many hours daily spent in the anxious desire to make the means of clinical instruction there existing fully available to you, when but a portion of that time would suffice to do full justice to the patients—if care and anxiety to develop to the fullest extent the resources of the hospital, and to lose no opportunity of showing to you interesting cases and instructive operations,—if these and other efforts to promote your instruction, which you will experience in the course of your pupilage, at the hands of the Physicians and Surgeons of the hospital, can serve to excite you to industry and train you in good habits, then I am satisfied that you will experience them to the fullest extent.

But time will bring new opportunities and new employments; and thus in various ways, as clinical clerks, or as dressers, or in some other capacity, you will gradually exchange your former business for



more active duties, and learn to feel that now, at least, some responsibility devolves upon you. And that you may neither waste nor misapply these opportunities, I shall here advert as briefly as possible to the circumstances which I think most likely to lead to that untoward result, reminding you at the same time, that, as my object is to warn you against errors rather than to recommend any special scheme of study, you must not here expect me to refer to matters which would be foreign to that intention.

If I were to ask any of you what is your object in attending the hospitals, you would probably answer, to gain experience. But if further I were to follow you to the bed-side, and observe the mode in which each of you set about the matter, I doubt not I should find you proceeding in different ways, and some, at least, in such a manner that the looked for experience could never be attained.

“Let us,” says Locke, “suppose the mind to be  
 “as white paper, void of all characters, without any  
 “ideas,—how comes it to be furnished? Whence  
 “comes it by that vast store which the busy and  
 “boundless fancy of man has painted on it, with an  
 “almost endless variety? Whence has it all the  
 “materials of reason and knowledge? To this I  
 “answer in one word—from *experience*; in that all  
 “our knowledge is founded; and from that it ultimately derives itself. Our observation employed  
 “either about external, sensible objects, or about the  
 “internal operations of our minds, perceived and



“reflected on by ourselves, is that which supplies  
 “our understanding with all the materials of think-  
 “ing. These two are the fountains of knowledge,  
 “from whence all the ideas we have, or can natu-  
 “rally have, do spring.”

Such, then, is experience; but practically experi-  
 ence is too apt to be regarded as the simple produce  
 of the senses, whilst the understanding seems to  
 come in for a much smaller share in the operation.  
 Yet, unless both the powers which contribute to  
 produce experience, are equally employed—that is,  
 unless observation and reflection are made mutually  
 to assist each other, the experience which results can  
 be of no real value, or rather, it may be said to be  
 no experience at all. False experience, then, is that  
 which results from the use of observation without  
 adequate reflection, or of reflection with insufficient  
 observation, and both these kinds must be equally  
 avoided.

Now, in endeavouring to acquire this experience  
 for yourselves, I hardly know which of these two  
 errors you are the more likely to fall into; but  
 whichever bias (if either) your mind should unfortu-  
 nately take, you may be almost certain it will retain,  
 and thus tinge with a false colouring all your subse-  
 quent acquirements. One or two illustrations of the  
 consequences of this bias must here suffice.

A man who uses his observation only, and never  
 reflects on what he sees, cannot be said to have ex-  
 perience, but only to acquire habits. He may,



indeed, amass a certain quantity of information. He may make a large collection of cases, for example, and take great pains in recording all the symptoms which he observes; and these laborious and pains-taking compilers are sometimes useful to others who may have genius to turn their labours to good account; but to themselves these labours are almost entirely useless. Because having no ideas of method or arrangement, or plans of any sort, or views of general principles, they can discern neither the resemblances nor the differences of things. For although facts afford the only solid foundation for true science, yet when disconnected they convey but little instruction.

Thus a man who observes, but does not reflect, contributes little or nothing of value to his profession. All that can be said of such an one is, that he does not advance the science of medicine. But the man who falls into the opposite extreme of reflecting without adequate observation, positively retards our progress, and that in many ways.

A sage being asked how he had derived his knowledge, replied, "From the blind, who never place their feet till they have tried the firmness of the soil: I observed before I reasoned, and I reasoned before I wrote." It would have been well for physic if this rule had always been observed; our time would not then have been spent, as much of it is now, in correcting the errors of our predecessors, and in endeavouring to unlearn what a previous age



has advanced. Now these errors may, in the first place, be traced to the unwillingness which we in general feel to submit to the slow, but at the same time, sure method of proceeding in cases of philosophic inquiry by cautious induction. So slowly do our facts come in medicine, that we become impatient of the restraint, and endeavour, by a shorter road, to arrive at a knowledge of general principles, and to deduce general laws from insufficient or imperfect data.

Let me take one illustration. A clever physician, now deceased, announced to the profession his discovery of the fact, that spasmodic croup depended upon pressure of the recurrent laryngeal nerve; and in proof of this assertion, he exhibited some specimens of morbid parts, in each of which the nerve was distinctly seen, imbedded in hardened masses of glands.

Now the facts were so evident, the explanation was so simple, and the inference seemed to follow so easily and naturally from the premises, and offered just that sort of explanation of the phenomena of the disease, which fell in most completely with what we know of the anatomy of the parts, and of the symptoms of the disease, that a large portion of the profession hailed the announcement as an interesting and important discovery.

But it was subsequently found, that not only was the combination of enlarged glands with spasmodic croup not a constant, but that it was not even a common



occurrence—at least, that a great many cases occur without this combination. Thus, without waiting for a larger number of examples which would either have confirmed or refuted the doctrine advanced, an attempt was made to establish a fact as general, which not only was not true of all the individual cases, but which did not belong to any, having no real connection with the disease which it was made to explain.

So, also, the experience which we trust to from the testimony of others, is liable to the same imperfections with our own; and we are too apt to admit supposed facts in medicine, without a sufficient examination of the authority on which they are based. Men often mistake impressions for facts, and record that as the result of their observation, which is no other than the offspring of the imagination. Thus every part of natural history, and medicine above all others, is overwhelmed with facts which have no actual existence.

There is still another error of the same kind, but differing in some respects from the two that I have mentioned. This is the partial statement, or partial reception, of facts collected with a view to support particular doctrines. In no way do we see this mistake so constantly occurring as in the attempt to make certain classes of disease appear to depend upon one particular condition, or to assign to certain classes of remedies, or even to individual medicines, an efficacy which does not really belong to them.



“There is a certain intoxication that usually  
 “attends the supposed discovery of general principles  
 “or useful inventions, which renders men of warm  
 “and lively imaginations altogether blind to every  
 “difficulty that lies in their way, and often makes  
 “them artfully suppress them. The suppression of  
 “facts that appear to contradict a favourite hy-  
 “pothesis, is not, however, always owing to want of  
 “candour in the author. Sometimes he does not  
 “see them, sometimes he despises them, and some-  
 “times he conceals them from the fear of giving  
 “people an unreasonable prejudice against what he  
 “deems an important discovery.”

Now we cannot help regretting the self-deceit which thus prevents the mind from becoming the recipient of the entire truth; for not only has this failing a most injurious influence on the progress of medicine, but when concerned in the employment of remedies it tends to diminish that confidence which a more cautious and candid mode of investigation could not fail to inspire. Every day unfortunately furnishes fresh examples of this wide-spread error. The first that we are ready to discover in others—the last that we are willing to admit in ourselves.

“Oh wad some power the giftie gie us  
 To see oursels as ithers see us,  
 It wad frae mony a blunder free us.”

But which of us may not with advantage apply this wish to his own case?



Let these examples suffice to point out the kind of errors into which you are likely to fall in your first handling or dealing with facts.

Your next endeavour must be, after having acquired an extensive collection of well-authenticated facts, to arrange and classify these, according to their apparent relations, and to endeavour to deduce from them general facts, or general principles.

It is in this way, and with this view, that Nosologies are formed, which are the more valuable in proportion as they proceed upon the recognition of true analogies; but the less so as they depart from a natural and assume an artificial basis. Now, without some kind of general and systematic arrangement of our facts, it is obvious that we cannot make full use of the knowledge that we acquire, but it may be doubted whether, in medicine, nosologies can ever be of the same use that systematic arrangements are in other departments of physical science generally. Some, indeed, discard them altogether, as unprofitable or even hurtful.

Now it is important that you should understand in what the value of these arrangements mainly consists, and in what respects they may be viewed as injurious to the progress of medicine. They may be said to do for you in books what lectures do for you during the early part of your pupillage. They serve to direct your mind to the objects of which you are in search, and to lead you to trace out among them certain general principles and analogies; and



in so far as they answer this purpose, and this only, they may be regarded as beneficial. But in so far as they may tempt you to overlook details, and to merge all facts in general principles, so that you get these by heart, and neglect the others, then they are positively hurtful.

But without wishing to detract from the good that they may do, I must also point out another objection to which nosologies are not unfrequently open. One who sets about compiling a nosology amasses such a quantity of learning, that the mere framework necessary to contain it, becomes so cumbrous and overloaded, that it too often tends to hide the stores which it was constructed to reveal. Knowledge, in fact, is not only stored up, but is absolutely put away.

On the other hand, those who, in order to avoid this error, aim at simplicity of arrangement, are apt to pass into the opposite extreme, and to mar the value of the facts which they record, by bending them to the system; and in this effort to reduce many diseases to a common standard, deprive them of their value as isolated facts. Diseases, in short, are here treated like the guests of that ancient Attic robber, on whose couch all travellers were alike compelled to repose. Fortunate was it for those whom the couch fitted, but woe to all whose stature failed to accord. The short were stretched, and the tall were shorn of redundant limbs, in order to procure uniformity in the result.



We are not, however, just now in danger of running on into either of these extremes, for the business of compilation seems, for a time at least, to be suspended; and our present occupations consist chiefly in the study of what are called "*specialities*." That is to say, the various departments of which the profession has usually been deemed to consist, seem to be gradually subdividing themselves into smaller sections, each of which is investigating some special form of disease, or studying the pathology and treatment of some particular organ. This disposition to devote attention to particular studies appears to have imperceptibly crept over the profession in our day. And so it is, that there are few of us who, when the name of a particular physician or surgeon is mentioned, do not almost involuntarily connect with it the notion of some disease or organ with which it has come to be associated.

Now pathologists say that this is just what is wanting to advance the progress of medicine—that the labour of observing should be a divided labour—and that until we can thus work out the details which relate to the pathology and treatment of every organ and part of the body, we can make no real progress. Now I think we may well pause, before we admit the correctness of this doctrine—indeed, I very much doubt whether the practice, now become so universal, will not rather in some respects retard us.

For we cannot separate the parts of the body as we do the objects of natural history, and regard them either in their pathology or treatment in an isolated



form. "The eye cannot say unto the hand, I have no need of thee," any more than the brain or heart, for example, can be viewed as independent of the stomach.

This mapping out, therefore, of organs and parts of the body, and assigning their care to different hands, has practically this unfavorable result—that it leads to the too exclusive consideration of the diseases of these particular structures, as things apart from the rest of the body, and not as essential portions of a whole. In some ways it is difficult to avoid this, because as soon as the public learn that a physician or surgeon has made any special observations, or has published any particular views, they naturally wish to consult him with regard to diseases in which they may be personally interested. And as it very often happens that in these cases the public reverse the acknowledged rule, and regard "the prophet *as without honour save in his own country,*" so a man's practice becomes in time chiefly limited to cases of a particular kind.

Let me give you an illustration of what I mean, by relating the following occurrence, which I believe is by no means a rare one:—A woman brought to me at the hospital a strumous child, whom I immediately perceived to be suffering from ophthalmia. I was about to direct my attention to the eyes, when I was stopped by the mother, who informed me that it was not for that purpose she had consulted me, as "his eyes were under Mr. A——." Turning, there-



fore my attention from the forbidden ground, I was about to examine the child's limbs, when I was again interrupted by the vigilant mother: "His limbs, sir, are under Mr. P——." "Why, then," I inquired, "have you brought him to me?" "For his stomach, sir, his stomach."

Now we cannot help thus reflecting upon the results of a system which leads to the different organs being separated and carried about to different professors of our art; here an eye, there a limb, and there again an intestine, till we begin to think that it must have been something of this kind which Adrian meant when he caused it to be inscribed upon his tomb, that "it was the great number of physicians that killed the emperor."

Now I am far from wishing to undervalue in the slightest degree the labours of those who may have thus gained the highest reputation, or to suggest that that reputation is not most amply deserved; but I beg you to observe that I am speaking not with reference to individuals, but with reference to the effect which the system or practice must ultimately have on the science of medicine. And this effect, in so far as it may lead to views of disease and views of practice, apart from the *general* consideration of morbid and countervailing actions, must, I think, in that degree be injurious.

Now, gentlemen, there are yet many other points regarding modes and objects of study, to which, had it been possible, I should have wished to direct your



attention. There is, however, one consideration, relating not so much to the mode, as to the end or purpose of those studies, which, before I pass to a very brief notice of the remaining point that I have in view, I must not omit to offer you.

You are doubtless satisfied that in selecting Medicine you have chosen an honourable and noble profession. The best and wisest men have ever so regarded it. But remember that with each of you rests the responsibility of upholding it in that light, in the eyes of those with whom you may be brought into contact. Men will properly interpret the view which you may entertain of it, through the medium of your own conduct; and that again will be regulated very much by the habits of thought and action which may have pervaded your early periods of life. Let me, then, while the mind is still plastic, and your habits are as yet mainly unformed, invite your consideration of those more exalted purposes at which medicine, whilst pursued and practised as a means of honourable subsistence, should still ever aim. These, together with the impediments which beset the path to knowledge, and are apt to lead the mind away from the ultimate purposes of its attainment, have been so ably pointed out by Bacon, that I cannot do better than present them to you in his own vigorous and striking language.

“ But the greatest error of all the rest, is the mistaking or misplacing of the last or furthest end of knowledge; for men have entered into a desire of



“ learning and knowledge ; sometimes upon a natural  
 “ curiosity and inquisitive appetite ; sometimes to  
 “ entertain their minds with variety and delight ;  
 “ sometimes for ornament and reputation ; and some-  
 “ times to enable them to victory of wit and contra-  
 “ diction ; and most times for lucre and profession ;  
 “ and seldom sincerely to give a true account of their  
 “ gift of reason to the benefit and use of men ; as if  
 “ there were sought in knowledge a couch, where-  
 “ upon to rest a searching and restless spirit ; or a  
 “ terrace for a wandering and variable mind to walk  
 “ up and down with a fair prospect ; or a tower of  
 “ state, for a proud mind to raise itself upon ; or  
 “ a fort or commanding ground for strife and con-  
 “ tention ; or a shop for profit and sale ; and not a  
 “ rich storehouse *for the glory of the Creator, and*  
 “ *the relief of man's estate.*”

The third and last impediment, which I must very  
 briefly notice, originates in the mode in which the  
 non-professional Public view and receive medicine.  
 Their ideas of the nature of disease, and of the action  
 of remedies, are widely different from ours—with  
 which indeed they seem to have little or nothing in  
 common. They embody their notion of diseases in  
 the form of entities, to which they give a ‘local habi-  
 tation and a name.’ And these they appear to refer  
 to, when, in describing their symptoms and sensa-  
 tions, they say, “ *It took me here, I feel it there.*”  
 And their idea of remedy is that of a power or sub-  
 stance which is to have the effect of driving out these



entities, and of leaving the body whole as it was before. But of morbid processes and countervailing actions they have not in general the smallest conception.

Further, they believe that each disease (so understood) has its own proper remedy, and he is the cleverest fellow in their estimation who has the surest specific for each disease, or by one *coup-de-main* can sweep away the whole.

Now this I think may be said to be the foundation of the public mind in regard to its views of medicine, however they may vary in particular cases and individuals. And it is against such a notion in general that we have to contend.

Now if persons who have not been educated to medicine would be satisfied with not thinking upon these matters, but would entrust themselves, as a certain portion only of the public do, with the same implicit confidence to the guidance of their medical advisers, that men do with another profession in regard to the management of their affairs, we should find one of the greatest impediments to the progress of medicine at once removed. But a large portion of the public desire to take an active part in the treatment of their own maladies, or at least to select for themselves the mode in which they will choose them to be treated. I need not observe how widely this opens the door to those numerous bye-ways which tend to corrupt the pure



spring of medicine, and to those still more open quackeries that now everywhere abound. The love of the marvellous, the easy credulity given to bold assertions, and the "illusive flattery of hope," have ever, as they will doubtless continue to do, given encouragement to a thousand inventions.

It would be impossible to determine the extent to which the public encourage empiricism. We have the means of determining the exact amount of this only in one department—I mean that department in which the public decide, first on the name of their disease, and then treat it themselves with a medicine of which they do not know the composition.

The amount of taxes paid annually to the government for patent medicines, exceeds 34,000*l.*, and as the tax bears usually a proportion of one-ninth of the value, and is invariably added, and therefore paid by the consumer, the sum thus represented would exceed 300,000*l.*, as paid yearly by the public for this class of medicine only, a sum far exceeding the united income of all the Hospitals and Medical Charities in this vast metropolis.

The time warns me, gentlemen, that I must close this very imperfect attempt to bring under your notice some of those more significant errors which, in our present day, and in the times more immediately preceding us, appear to have contributed most to obstruct the path of medicine.



The task of pointing out errors is always an unwelcome one, and he who attempts it, however he may feel impelled by a sense of the obligations of duty, sometimes lays himself open to a charge of motives which may be far from his intent.

I trust that nothing which I have said will for one moment convey to you the belief that I entertain aught but a feeling of the highest admiration and regard for the Profession which is our mutual choice, and for the members of which it is composed. But the praises of medicine, or of its cultivators, was not my theme. Long may it be your high privilege to adorn the one, and to discern the excellences and merit the esteem of the other!

But seeing by how many difficulties your present course is likely to be beset, and knowing the advantage which men may always derive from the experience of those who have trod that path before, I have thought I could best discharge the duty which the occasion has imposed, by showing you in what way you are most likely to be useful in your generation, whilst at the same time you should not be unmindful of those that are to follow.

Take for your object the improvement of your profession in its highest and widest sense. View it in its several parts, but view it also as a *whole*. Let your separate labours be guided by the light of science; but whilst you cull from every fair and legitimate source, see that your gatherings may be so made as to be also useful to posterity.



We have lately, as I have said, been made to feel but too painfully the feebleness of our art. There is in it still that dark centre which none of us have yet been permitted to penetrate; but it is surrounded by numerous sciences, which give it now a hopeful light. From that brilliant circle let it be your ambition each to snatch a burning brand, and, penetrating far with it the darkest recesses of the shade, there deposit your contribution of love. And let us hope, that in no distant day there may arise some mighty intellect, which shall gather up those scintillations, and, combining them into one vast torch of truth, elevate it far above the obstructions of ignorance and folly, where it may burn with an unbroken lustre, and penetrate the remotest corner of the gloom.

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