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[It is exceedingly gratifying to us to lay before the readers of the Journal, the introductory discourse delivered by Prof. Bigelow, at the opening of the present lecture term, in the Mason Street College. We solicited permission to publish this excellent paper, which has been kindly granted. Dr. Bigelow is extensively known as a medical author, whose writings are destined to exert an influence in after times. The College, we understand, was never more prosperous, the class being uncommonly large.—Ed.]

INTRODUCTORY LECTURE,

Delivered at the Medical College, Boston, November 6th, by Jacob Bigelow, M.D., Professor of Materia Medica and Clinical Medicine.

I AM about to address myself to an audience of young men, a class of persons who, in our new and active country, assume an influence, and wear a responsibility, unknown in the older communities of Europe. The sparse character of our population, the call for active and efficient men, the sure market which exists for talents, and even for common ability and prudence, have given a national precocity to our youth, and a readiness in adapting themselves to new and difficult spheres of action. I have heard foreigners speak with surprise of the arrival, in distant parts of Europe or India, of American ships commanded, not as is usual by weather-beaten veterans, but by beardless striplings. The signs of our mercantile houses bear often the names of very young men, and the avenues of our professions are so crowded with them, that perhaps no regulation is more liable to be infringed than that which requires that professional candidates shall be 21 years of age. Young men figure in the ranks of our military corps and swell our political meetings. Their voice is heard among us in the periodical press and in the halls of legislation.

These precocious habits of our country have of course been felt in the medical profession. In most of the schools of Europe, medical honors are not conferred until after a noviciate of four and more frequently five years, during which an extensive circle of sciences is obliged to be mastered, and to be approved by a series of strict examinations. Not only are the essential branches of medicine required to be fully understood, but they must be preceded by a knowledge of the subsidiary sciences, and must also be confirmed by practical and clinical experience.

With us, on the other hand, the short period of three preparatory years devoted to regular study and lectures, may be said to constitute nearly the sum total of a medical education; for the collateral requirements are so small that their acquisition is often effected during the same three years which are applied to the other branches. And a young man who has learned to read and write, issues from the village school, or perhaps from the counter or the plough, and in three years is licensed, and declared competent, to exercise the multifarious profession of medicine and surgery in all its departments. As it often happens in

this and similar cases, the newly-approved candidate sends forth his anxious glance, directed not always to his own deficiencies or the means of supplying them, but to that common goal and object of a young man's inquiry, which is to fill up the measure of his practical aspirations—an opening. By the timely decease of some elderly practitioner, or by the fortunate discovery of a rising settlement in some distant State, or on some promising water power; he finds himself, perhaps at short notice, installed, under virtue of the acquiescent silence of the small community in which he lives, the constituted physician of the place. In one month, perhaps in one week, he may be called upon to diagnosticate organic lesion in a case of life and death, or to treat the most formidable convulsive disease. He may be summoned to tie the femoral artery, or to decide and deliver in a case of placental presentation. There may be no consulting physician within many miles, at least none who can arrive in season for the emergency.

The safety, then, and probably the lives of the unfortunate constituents of this young man, will depend upon the question whether he has, or has not, been truly educated, whether his mind and hand have been adequately trained for the great occasions that await him. It is not enough that he has suffered three years to expire while taking his ease in the office of a city physician, nor that he has passed a corresponding time in following the rounds of a country practitioner. It is not enough that he has carelessly read the works of approved authors, and has squeezed through the customary academic examination. If he has done only this, it is more than probable that failure awaits on himself and disaster upon his patient. But if his studies have been methodical and conducted with an eye to practical application, if he has concentrated his attention upon necessary points, if he has felt the earnest interest which, more than anything else, imprints truth on the remembrance; if he has gathered up and arranged his resources in reference to coming emergencies; if he has gone over in anticipation the difficulties of his profession, and planned his own mode of extrication—then he will find that inexperience does not involve failure, and that youth is not an insurmountable barrier to success. He will recollect that the most eminent physicians, and the most successful operators, have had their first cases. He will perhaps also remember that some of the most distinguished men in history have emerged from obscurity while yet in youth; that not only warriors like Alexander and Napoleon, but statesmen like Pitt and Fox, and philosophers like Davy and Bichat, had achieved some of their proudest laurels at the very entrance of manhood.

Let it not be supposed, however, that I am an advocate for the premature assumption, by young men, of the responsibilities of our profession. Every medical student is to be considered unfortunate, who by reason of poverty, or the stress of other circumstances, is obliged to hurry his probationary period to an early termination. Too much time and attention are not often bestowed on the business of preparation for practice. The oldest and the best physicians have had frequent cause to regret that they were not better educated. But the superficial student, who rarely

has the time and the will to repair his early deficiencies, is haunted through life by a round of perplexity and embarrassment, and degraded by a sense of his own incompetency.

It should be borne in mind that there is no period of life in which time can be so conveniently spared from lucrative pursuits, as in youth. After a man has attained to the age of 30, it is commonly of very little consequence to him, as far as his yearly receipts are concerned, whether he had commenced practice at the age of 21. or of 24. But as far as he may prize a quiet conscience and freedom from anxiety, the later age is incomparably the most secure. I would advise any young man who has completed his education at the end of his minority, that he should devote two additional years, and if practicable a still longer period, to availing himself of such advantages, both in study and practice, as may prepare him for his future duties. And when, as it often happens in our community, narrow circumstances require that a young man should live by his own exertions, this state of things, instead of being a motive that he should crowd himself prematurely into the ranks of the profession, incumbered with debt, and bare of acquirements and of means; is rather an imperative reason, that he should at once begin by resolving to devote twice the customary number of years, if necessary, to the double purpose of keeping himself in an independent position, and of placing himself at length, in point of maturity of knowledge, on a par with his more favored competitors.

It may not be improper, in this place, to offer you some suggestions as to the mode in which students may advantageously appropriate the time of their pupilage in reference to the science which they expect to acquire. Medical literature has become so vast a subject, that the undirected student is apt to be lost in the maze of books and sciences which seem equally to press upon his attention. And he is likely to fall into the pernicious error of thinking that he must read a great deal, even though he remembers nothing. The true object of a medical pupilage should be, not to read, but to study, to observe, and to remember; not to pass superficially over the writings of celebrated men, but to select those compendiums of the several sciences, which contain a condensed view of their essential and elementary facts, which separate the chaff from the wheat, and offer what is fundamental and useful, within a compass which is capable of being impressed on the memory. Most of the constituent sciences which are nominally included in a modern medical education, are now so extensive, that the cultivation of any one of them may afford abundant occupation for a common lifetime. Chemistry is already so vast a science, that a general chemist who knows all the recorded facts of the science, is a character unknown. Vegetable chemistry alone fills ponderous volumes, and is as yet in its infancy. In like manner the *Materia Medica*, though as old as Hippocrates, is still an infant science. Nevertheless, it is already beyond the grasp of any one physician at the present day. It is probable that ten, and perhaps a hundred thousand substances, afforded by the three kingdoms of nature, are capable of exerting an active, or, as it is called, a medicinal influence upon the human body. Of these a

very small part have hitherto found their way into the Dispensatories. Yet the Dispensatories are already so cumbersome, that no student or physician now-a-days reads the one half, or remembers one quarter, or uses in practice one tenth, of the materials which make up their contents.

But what shall we say of the theory and practice of medicine, the literature of which is a vast magazine of rubbish, with a few gems imbedded in it, accumulated in all time since the origin of writing, and in such excess that no country in Europe could probably furnish even a catalogue of its own modern books. The history of this extensive science contains a mixture of much that is bad, with much less that is good. In medical research the still small voice of truth has from time to time made itself heard, but it has as often been drowned by the dogmas of the visionary, and the clamors of the interested. An immense amount of time and labor has in all ages been wasted by students in acquiring theories instead of facts, in learning what it afterwards cost them much pains to unlearn, in committing to memory, not the truths of philosophy, but the popular doctrines of ingenious men.

During the present century a host of theorists and gratuitous reformers have replaced each other on the arena of medical controversy. Now and then a gigantic enthusiast, like Broussais, has acquired an ascendancy sufficient for a time to identify his name with that of modern medicine, and to exact a knowledge of his speculations from all who would not seem ignorant of science. But Broussais lived to see his doctrines repudiated, his lecture-room deserted, and his name on the road to oblivion. A truth in medical science, like the import of the physical signs, for example, will struggle its way through opposition and distrust, into general adoption. But an unfair and unfounded assumption, rarely survives long the life of the individual whose own eloquence and obstinacy were necessary to force it for a time upon the public attention.

If we could purge the sciences of pathology and therapeutics from the writings of men who wrote merely because they had a doctrine to establish, or a reputation to build; and could confine these sciences to the results attained by those who sought directly and impartially for the true and the useful; it is probable that the whole subject would be brought within the comprehension, not only of every physician, but of every medical student. And from the recent mode of conducting medical investigations, which has commenced in France, and is gradually gaining foothold in all civilized countries, we may hope in our own day to see near approaches to this desirable result.

Every medical man, whether student or physician, owes a threefold duty, to himself, to his competitors, and to his patients. To himself he owes the cultivation of habits of order and perseverance, a love of honesty and a desire of knowledge. No man is successful in a learned profession, who does not cultivate a methodical disposition of his time. The neglect of an hour, the omission of an engagement, and the postponement of what is necessary for what is unimportant, have ruined many a good intention and many a promising prospect. Lord Chesterfield says that the Duke of Newcastle lost half an hour in the morning, and spent

the whole day in running after it. This is a true expression of the career of a busy but inefficient man. He who is always driven, always in a hurry, always late, and always with deficiencies to be made up, is very likely to be always a failure. It is well known that the responsibilities of society are best and most easily discharged by those who estimate the value of small portions of time, who do things strictly in their proper season and place, who provide against contingencies, and distribute their day in reference to what is, as well as to what may be, required of them.

But the best ordered arrangement of time and the most punctual habits of attention, do not always succeed in our profession, except through perseverance, and often through long suffering. The public, especially in cities, are slow in giving their confidence to strangers and to young men. The late Dr. Physick, of Philadelphia, asserted that during the first three years of his practice he did not pay for his shoe leather; and a late very eminent physician of this city once informed me that he did not earn his own board during three times that period. The conservative principle which retards the reception of young men into lucrative business, is the foundation of their security in after life, for medical practice would not be worth having, in a community, whose love of change should lead them to desert their former friends and counsellors, to run after every new comer. Physicians usually come on to the stage and move off of it, in company with the generation to which they belong. In a large city, a young physician, except under circumstances of peculiar patronage or necessity, does not usually obtain employment from families who are much in advance of himself. But these families and their medical attendants pass away, and he and his cotemporaries become the standing physicians of their time. A preparatory period in the mean time elapses, during which the candidate for future honors has usually enough to do, to perfect his knowledge, to fill the gaps in his experience, and to give proofs to the community around him, that he possesses aptitude for the common affairs of life.

Every physician is an inquirer during life, and continues to learn something up to the last year in which he may happen to study or practise. As the science advances, moreover, every intelligent practitioner is obliged to replace some of his former opinions, with others which he finds to be better substantiated. We should be careful, therefore, not to pledge ourselves unnecessarily to medical opinions which are founded on equivocal or imperfect testimony. The public sentiment attaches a kind of disgrace to frequent changes and recantations, and they ought also to do the same to the course of any man, who for the sake of consistency with himself, continues to maintain an erroneous and exploded opinion. Both these extremes are avoided by the physician who reserves his assent to any new opinion, until the evidence of the case is satisfactorily made out.

One of the most difficult virtues for a physician to cultivate, is a just and proper deportment towards his professional brethren. As in all professions in which men live by their heads rather than their hands, business is liable to be overdone, and a candidate who has not acquired all

the occupation that he wishes, is apt to regard his competitors as stumbling blocks, to be gotten rid of by fair means, or foul. Hence arise the jealousies, calumnies and open hostilities so often entertained, which injure all the parties concerned, and lower the estimation of the profession with the public. Harmony and a proper *esprit de corps*, may uphold the dignity of even an inferior profession ; but the public rarely respect any class of men, the members of which have no respect for each other. A friendly intercourse with those whom we approve, is productive of pleasure and advantage, and a gentlemanly forbearance towards those with whom we do not agree, will show that we are above jealousy. A man is always to be suspected, who tells you that he is surrounded with enemies ; and one who is an habitual calumniator of others, forces upon his hearers the conviction that they in their proper turn are to come in for their share of his animadversions.

I doubt if physicians do not sometimes injure themselves and their cause, by showing too great a sensitiveness in regard to the temporary inroads of irregular practitioners. Quackery, whether carried on by the audacious enterprise of an individual impostor, or upheld by the trumpeting of a fanatical sect, is to be considered a necessary evil inherent in the constitution of society. It exists in every walk and occupation of life, by the exercise of which men procure bread. The pettifogger in law, the Millerite lecturer in theology, the demagogue in politics, the system-monger in education, and the wonder-worker upon the brains and bowels of infatuated audiences—what are all these but quacks moving in their respective spheres, and fattening upon the credulity of dupes. A certain portion of mankind are so constituted that they require to be ridden by others, and if you should succeed in unhorsing a particular impostor, it is only to prepare the saddle for a fresh and more unflinching equestrian. It is not good policy to say or to write too much in regard to the pretensions of impostors. A celebrated author observes that “many a popular error has flourished through the opposition of the learned.” By throwing the gauntlet at an insignificant man, you at once raise him to the dignity of being your competitor, and acknowledge him as a “foeman worthy of your steel.” And if you discover uneasiness, resentment or ill temper, the public conclude that you are influenced by your private interests. Besides, when you have entered the arena of controversy, you will probably find that the quack who has his all at stake, can afford more breath and time, than you can conveniently spare from your other occupations, and in an active warfare, he may acquire two partisans to your one. It is not long since the exhibiter of a stuffed mermaid succeeded in drawing down the popular indignation on an unfortunate naturalist, who had ventured to declare that it was made of a fish and a monkey. The public generally require time to get disabused of a favorite error ; and if too abruptly assailed, they will sometimes hold on to it, as the traveller did to his cloak when attacked by the north wind.

In your demeanor in regard to quacks, you should keep aloof from them, and trouble yourselves little about them. Admit the general fact that the

race always do and must exist in society ; that they are wanted by the credulity of a particular class of minds ; that the fall of one dishonest pretender, or one visionary sect, is sure to be replaced by the elevation of another ; therefore it little concerns you to know what particular imposition has the ascendancy at any given time. When you are interrogated in regard to a specific subject of this kind, you should make a reasonable, cogent and dispassionate answer, always avoiding the appearance of warmth and especially of self-interest ; and you may be sure that a majority of the public will be on the side of truth. As far as my observation extends, three quarters at least of the families in Boston and New England, are in the hands of regular practitioners. The remaining fraction, more or less, consists partly of minds so constituted that they require the marvellous as a portion of their necessary food, and partly of unfortunate beings, suffering the inevitable lot of humanity, who having failed to obtain relief from the ordinary resources of medicine, seek for temporary encouragement in the dishonest assurances of any who will promise to cure them. The first class is the dog in the fable, catching at shadows ; the last is the drowning man catching at straws.

Above all, if you would discountenance quackery, take care that you become not quacks yourselves. Charlatanism consists not so much in ignorance, as in dishonesty and deception. In your intercourse with patients, cultivate a spirit of fidelity, candor and truth. Endeavor to understand yourselves and your science, weigh justly your own powers, and profess simply what you can accomplish. If you announce to your patients that you will cure incurable diseases, or cut short those which have a necessary period of duration, you do not speak the truth, you merely blind your patient, while you throw the die for a fortuitous result, a game at which the veriest mountebank may at any time beat you. The profession as a body are often unpopular with a large and sagacious part of the community, because they so frequently disappoint the expectations they have allowed themselves to raise. You may safely undertake and promise to cure diseases which you know to be curable, to alleviate others which you know to be not so, and to perform what art and science can do towards conducting doubtful and dangerous cases to a happy issue. But this is all you can accomplish or promise. The skilful mariner may steer his ship through a dangerous navigation, but he cannot control the wind, nor arrest the storm. Nor would he gain reputation by professing to do so.

It is hardly necessary that I should counsel you not to neglect your patients, when you can do anything for their welfare and security. Neglect of outward attentions is not, I think, a very frequent sin of physicians, inasmuch as their interest very obviously lies in a different course. But many practitioners fall into the opposite error of over-attention to their patients, of making them long, tedious or superfluous visits, of hampering them with strict and complicated instructions, and especially of over-drugging them with remedies. There are some patients, it is true, who like to be bled, blistered and physicked ; but the number is small, and in most cases both the instinct of the child, and the discretion

of the grown man, cause them to revolt against nauseous and painful inflections. When, therefore, you are called to take charge of a case, ask yourselves how great is the danger, and what is the probable tendency of the disease if left to itself. If life is in question, and you have reason to believe that the patient may be rescued by prompt and energetic remedies, you should not hesitate to employ them. But in common, trivial and safe cases, such as afford a large part of a physician's occupation, you should not allow a habit, or a hobby, to lead you into the blind routine, of always thinking that you must make your patients worse before they can be better. I believe that much of the medical imposition of the present day is sustained in places where practice has previously been over-heroic, and because mankind are gratified to find that they and their families can get well without the lancet, the vomit and the blister, indiscriminately applied; and because the adroit charlatan transfers the salutary influences of time and nature, to the credit of his own less disagreeable inflections.

It is the duty of physicians to elevate their profession, by maintaining in their individual character a high moral rectitude, a just and honorable conduct, a devotedness to the welfare of their patients, and an unceasing effort to improve themselves and their science. If this course is pursued by medical men, they can hardly fail of becoming useful and respected members of society. There is no country in the world in which the avenues to respectability and distinction, to competency and even to wealth, are more open to physicians, than in the United States. It has been observed that in England, no medical man is ever permitted to attain the aristocratic rank, which belongs to birth, and which is occasionally accorded to eminence in the military, political, legal and financial professions. But in our country there is no post of honor or emolument, and no situation of influence and distinction, which our history does not show to be within the reach of our profession. But it is not to political, or extra professional preferment, that the true physician should look. He should rather be contented to build up his own character within his own sphere, as a man of knowledge, fidelity and honor. The respect of the community, and the attachment of friends, will always attend on him who loves truth for its own sake, pursues knowledge that he may be able to benefit others, and deals justly with his fellow men, consenting that they, in turn, should deal justly with him.

MEDICAL DEPARTMENT OF THE NATIONAL INSTITUTE.

ANSWERS TO QUESTIONS IN THE DEPARTMENT'S CIRCULAR.

[Communicated for the Boston Medical and Surgical Journal.]

1. *The Medical Topography.*—THE part of the country in which I practise, is on the banks of the Connecticut river, and is hilly. The stream itself and the level meadow land constituting its immediate banks, vary from one eighth of a mile to one mile in breadth, and from this the