An introductory lecture delivered at the Massachusetts Medical College, November 6th, 1849 / by Henry J. Bigelow.

AN

INTRODUCTORY LECTURE

DELIVERED AT THE

MASSACHUSETTS MEDICAL COLLEGE,

NOVEMBER 6th, 1849.

By HENRY J. BIGELOW, M.D.,
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BOSTON, NOV. 9, 1849.

To the Professor of Surgery in Harvard University.

SIR :—At a meeting of the Medical Class of Harvard University, held yesterday morning, a Committee was appointed to request, for publication, a copy of your Introductory Address, delivered at the commencement of the present course of Lectures.

The undersigned have the honor to constitute that Committee; and in the hope that the solicitation will be agreeable to yourself and complied with at your earliest convenience,

Are, with the highest respect and esteem,

Your obedient servants,

HENRY CLARKE,
C. H. HILDRETH,
R. N. HODGES, JR., } COMMITTEE.

GENTLEMEN :—I have the honor to acknowledge the receipt of your note of the 9th inst., requesting, in behalf of the Medical Class, a copy of the Introductory Lecture delivered before them.

I beg to assure you of my high appreciation of this honor, and it gives me great pleasure to comply with the request.

With great respect,

Your very ob't friend and servant,

HENRY J. BIGELOW.

To HENRY CLARKE,
C. H. HILDRETH,
R. N. HODGES, JR., } *Committee of the Medical Class.*

NOV. 10th, 5 CHAUNCY PLACE.

INTRODUCTORY LECTURE.

Gentlemen of the Medical Class: —

We are assembled in obedience to a healthy custom. It is well that those who are interested in this institution, should meet together once in the year, to testify their good will to it, and to indicate by their presence that they feel an interest in its prosperity. We recognize here the guardians of the University; the flourishing condition of which is ample evidence of the fidelity and wisdom of their administration. Here are those who, at no remote period, were actively engaged in teaching the lessons of our art; indelibly associated with a pleasant period of our lives, and bound to many of us by claims to more than our regard. Some who look back as if it were yesterday to the time when like yourselves they stood at the threshold of our profession; when they imbibed at this fountain the early teachings of our science; come here to be reminded by each recurring year, of the lengthening interval which separates them from a period which never can return, and to awaken its memories. Winter has assembled you from various distances and with various motives; animated by curiosity or impelled by duty; determined to accomplish an end, or yielding to a customary routine; but all imbued with a good and friendly spirit, and ready to unite with the well-wishers of our institution, to promote its best interests.

Occupying a relation to you, gentlemen, new to myself, and of the honor of which I am deeply sensible, there may be a propriety in devoting an hour, usually allotted to considerations of a general character, to an exposition of some of the principal topics suggested by this relation; and it is my intention, with your permission, briefly to review our subject in its connections with science, and with the community.

The Institutes of Surgery are its settled principles; and if we consider the character of the phenomena which are presented to us in the study of this science, and reflect how unappreciable are the agencies which constitute disease, we have good reason to be satisfied that there is any thing in a successive generalization so remote as to be called a principle, or so unequivocal in its character as to be considered settled, in our science.

In this division of our subject, where generalization is broadest, let us avow that we still linger upon the lower steps of scientific progress. The phenomena of fever or of convulsive action, bring us but little nearer to their immaterial cause. More than this, we are but little nearer to their material machinery. A man dies of tetanus, and in a large proportion of cases you can find no lesion of his nervous organism. Fever has been grouped into inflammatory, irritative, and hectic, because febrile symptoms tend to recur in certain groups characterized by one or more constitutent symptoms, predominant in intensity and duration. Perfect knowledge should demonstrate the intimate mechanism of each symptom; yet we possess no such knowledge. The inward fire is kindled, and the thrill and the restless play of an unknown machinery warn us of a never-ceasing elaboration; but we stand without the edifice, and only gaze bewildered at the complicated manifestations of its exterior. We have only learned that certain occurrences are probable, but do not know why they are probable.

And leaving the symptoms, which are the result of lesions, for the material lesions themselves, we are, indeed, nearer to the fountain-head of morbid action. But here, too, the investigation of the simple fact, divested of its relations to proximate cause, is the boundary of our research. Phlegmon, and erysipelas, and ulceration, represented in color and in outline, in duration and transition; scrofula and cancer, each uniting somewhat heterogeneous groups of very various phases; these furnish subjects of what may be called the institutes or settled principles of surgery. That they are combinations of frequent occurrence cannot be denied; and we may concede that, from the constancy of their recurrence in a state of combination, they may be fairly inferred to have some common bond of union maintaining to them the attitude of cause; but we have not extracted or identified this common principle; and science falls short of its perfection, by the wide interval which separates suspicion from a certainty.

The broader generalizations have often reached a second class. Thus, having grouped the different symptoms of inflammation, we again unite the phlegmonous and erysipelatous varieties by whatever is common to them both; still it may ultimately prove that their discrepancies preponderate; that we have not yet touched their real point of sympathy or of difference; and that we misappreciate the actual value of characters which may prove accidental. It is a striking fact, that a writer of the Augustan age should have indicated the marks of inflammation as four—"redness and swelling, together with heat and pain;" and that, till within a very recent period, medicine has added little to elucidate this fundamental process of disease. But medicine must ever follow behind Chemistry, and Physiology, and Anatomy; it may propel, but it can only follow them into the threshold of discovery.

Palliate it as we will, few pathological principles are entitled to that name. There is a broad line between material phenomena and their immaterial cause. The pathologist scrutinizes the gross tissue, subjects it to mechanical force, and to chemical reaction, he disintegrates as much of it as will lie upon a needle's point; he bends the rays which emanate

from only a small portion of this particle, until the image of a single cell shadows a large portion of his retina ; and still the surrounding fluid is reflected pure and crystalline. Far more impalpable than this hyaline fluid, is some heavy air, and far more subtle still is light, and again, at an unmeasurable interval, the vital force. Short of this point, our generation may surely rest satisfied ; and content itself, for years of progress yet to come, with such investigation of material changes as exaggerated vision may afford, and such improved speculation upon them as may be made through the aid of collateral progress in the kindred sciences.

It has come to be questioned how far Clinical Instruction is essential to a course of medical teaching. Local interests or local exigencies have led to a discussion of the value of this method of imparting knowledge, and as seriously as if there were some doubt about it. Surely those who hesitate, do not consider the difference between words and things ; between the aspect of a man himself and such a detailed description of him as the police might give ; between visible and tangible disease, and a written history of it. No doubt an original fact and its description both gain access to the understanding ; but there is a difference in the quality of the knowledge thus obtained. To value a possession, the mind must first have felt the want of it. Curiosity must first stimulate both its perception and its ability to retain. The mind asks a question, and is then polarized for the reception of a direct answer ; and it is balked and wearied by an irrelevant reply. Now every protracted description, especially a lecture, is of the nature of a series of replies to which no question has been asked. A whole audience cannot ask or be answered at one time, and the alternative is to distribute information in bulk, that each may select something which will approximate his purpose.

On the other hand, exhibit a case of actual disease, and every observer will put and answer in his own mind, and with the rapidity of thought, an endless variety of queries upon points in which, perhaps, he alone is deficient, and for the reception of which his mind alone is stimulated.

Another point is more important. Sensible qualities must be described by reference to acknowledged standards ; and we can thus measure heat, and space, and weight ; but not shades of color, nor the attributes soft and hard, nor the varying outline of a curve. In the same way a personal examination will yield the qualities of an odor, a pulse, a tumor, an expression of the features, which pages of tedious description might fail to do. And the mind which painfully contemplates an abstraction, will seldom fail, at such a moment, to arrest some tangible association by which the abstract quality is permanently fixed.

Clinical study is bed study. Here the student closes and grapples with the malady of whose Protean forms he has as yet only read. Here he learns at once the language of disease and the language of suffering humanity ; and while his scientific sense is educated, his kindlier feelings are also developed. He learns to listen patiently, to sympathise ; he learns to reëstablish a facility in the manifestation of that stratum of kindly feeling which is generally upon the surface in early youth, but which some-

times, in the process of education, gets imbedded beneath a show of indifference and insensibility.

The dialect of disease is an especial object of clinical study. Is a fever settled? Is a cough seated on the lungs? Is there water on the brain? Such questions are as significant as if conveyed in the language of recondite science. On the other hand, there are propositions less intimately according with modern views. What is the cause of this? asks one. Is this a scrofula humor? Is it in my constitution? These, or even the vexed question of biliousness, may well perplex the votary of rigid science. Such querists suppose the physician to possess a truly intimate knowledge of the human frame. In the words of Sir Thomas Browne, two hundred years ago, "They foolishly conceive we visibly behold therein the anatomy of every particle, and can thereby indigitate their diseases; and running into any demands, expect from us a sudden resolution in things whereon the Devil of Delphos would demur; and we know hath taken respite of some days to answer easier questions."

The language of symptoms leads us directly to the threshold of our science. The evidence afforded to the physician by signs and symptoms, may contradict the positive assertion of the patient. But it is not on that account to be rejected. The rigid exactitude of Louis would not overrate the statement of a patient when it contravened a probability derived from previous experience. Disease has been observed for a great length of time to repeat itself in certain forms. Cancer of the breast precedes the affection in the axilla. But suppose a patient to insist that the reverse had taken place; it is quite evident that a fact so unusual must be well established before we can accept it. Nature, indeed, is under a tacit contract of probability always to do as she has already done. Her character for honesty of performance is established, and the burden of proof is on the individual to show, by collateral or some other especial evidence, that nature is this time at fault.

It is then quite evident that, in questioning a patient, whose testimony is not exempt from human fallibility, I must have some standard with which to guage the accuracy of his statements; to compel him, as it were, either to conform, in his rendered account, to some one of a series of regular moulds of disease, which I alternately present to him, or to show good reason for not doing so. It is therefore necessary that I should be familiar with the standards by which I am to guage his statements; and these standards are the result of my researches into the previously recognized order of nature. I have thus learned that nature has the habit of grouping certain symptoms together, which we then call by the names of individual diseases.

To illustrate this: if a man has certain symptoms of laryngitis, I examine him to ascertain if the lungs are the seat of a primary tubercular affection. If not, I abandon this hypothesis, and treat the affection as a local one. If treatment is again without success, I may form a new hypothesis, perhaps in favor of an aneurismal tumor pressing on the nerves of laryngeal motion; a disease of which Mr. Liston actually died. Let it then be well established, that in studying a case the mind is active; that it is not the time bestowed upon its examination: especially that it

is not the protracted consideration with which a pulse is held and counted, nor the attention with which a tongue is scrutinized, that throws light upon the disease ; but a previous and full knowledge of the usual combinations of symptoms which enables the observer to recognize any especial combination as one which has occurred before, and which has been before identified. On the other hand, it may be satisfactory to know, that certain symptoms are sometimes united, which have not been before observed together, and which the assembled faculty of the civilized world could not interpret.

There is a word in frequent use, in connection with medical practice, the true value and import of which it is essential to understand—the word *opinion*. It is used to indicate the sentence passed upon disease, and is popularly said to be *pronounced* by the physician. A man's medical opinion is quoted in the community, in proportion to his combined force of character and professional notoriety. Yet these elements of popular position are often quite distinct from pure scientific ability, and it is important to separate them from it and to understand them. Scientific acquirement, which is sometimes quite a different thing from professional notoriety, should be the only standard of professional opinion, and would be so were medicine an exact science, or could medical opinion be at once tested. An opinion is, in fact, the result of judgment, and judgment must be informed and enlightened. Opinion now differs from that of former days, because science is now built up of many accurate facts, which must be known, to form a ground of inference ; and it is valuable just in proportion to a man's natural ability for judging, and to his knowledge of the rules of disease by which the case is to be tested.

Let us consider the process of forming a diagnosis ; presupposing the observer to be sufficiently familiar with disease to identify with certainty, any common union or succession of symptoms. If such combination actually exist in the case under consideration, the question is settled, and the diagnosis is made up from positive evidence.

But it more frequently happens that certain signs are wanting ; that a part only of the usual symptoms are found, and that the case is proportionably obscure in its indications. A certain tumor often resembles many other tumors ; and we find no obvious characteristics to identify it. Instead of looking further for positive evidence which cannot be had, the observer then avails himself of what negative evidence the case may afford, and makes what has been called an eliminative diagnosis, a diagnosis by exclusion. He considers what diseases are capable of presenting the actual symptoms before him, and examining each in its turn, rejects or eliminates the less probable. A difficult case is thus brought, in general, within two, or, at most, three alternatives ; time often supplies additional evidence, which serves to complete the indications, or if not, it is impossible to get nearer the truth. The comparison of symptoms which resemble each other, and especially of similar combinations, is called by the French the "*diagnostic raisonné*," in which the question of similarities and of differences in the symptoms of disease, is stated with reference to the application of the eliminative diagnosis in any especial case.

It is quite obvious that the observer must possess a knowledge of all the possibilities in a case before he can choose among them ; that if he fail to

identify a tumor by its positive signs, and is then in consequence obliged to select among the entire range of lesions of this class, he must possess a comprehensive knowledge of all tumors, in order that he may invoke each in its turn, and test by it the affection which is ultimately to be identified.

A rounded tumor of the cellular tissue, not peculiar in its appearance, was presented to Velpeau, who avowed his belief that it was a fœtal growth ; in other words, that it was material belonging to the body of another individual, which was accidentally buried beneath the skin of the patient under examination. So remarkable an opinion excited much attention, especially when the extirpation of the mass verified the diagnosis. But examine the evidence upon which it was based. This tumor was completely destitute of sensation, and was invested with a most singular skin. All ordinary growths are susceptible of cutaneous sensibility. This tumor was then not likely to be a growth of any ordinary description. So far the evidence is negative. But a lock of hair projected through a fistulous opening from its interior. It was doubtless this lock of hair, not uncommon in fœtal growths, that laid the ground-work of a positive hypothesis, which the facts of insensibility and of peculiar skin, negative in regard to all other tumors, now confirmed. Add to this the tumor was congenital, it exuded an oily matter, neither serum nor pus ; and to answer to the well-known fact that such tumors often contain bone, there was a central density which might well be osseous. Such facts led to the belief that this lesion was identical with a few others, of rare occurrence, which the wide study and tenacious memory of this surgeon supplied to him ; and upon this probability, the diagnosis was founded.

Thus the mind, laden with a group of symptoms, oscillates among the combinations with which our experience of the rules of nature has furnished it, attracted by resemblances, repelled by differences, again returning, in despair of finding better, to hypotheses which, at first, seemed to be untenable, until at last it settles where the probability is strongest. And it is the part of clinical instruction to indicate these journeys of the mind in words ; to detain thought, which ever tends to hurry on, and is loth to retrace its steps, while the obliquity of its original wanderings is made evident. And the student may be safely abandoned to himself, when he is at once master of the few well-beaten tracks of daily diagnosis, and familiar with the system upon which they are projected.

Before leaving the subject of clinical study, let us consider the value of the popular assertion that it educates the senses. How does it educate the senses ? Is the eye of an artist, who should chance to study medicine, likely to be educated by the blush of inflammation, or the red of hectic ? Will the capacity of an average olfactory be probably developed by an experience of gangrene or of porrigo ? Is the tactile sense refined by the wave of ascites, or the fluctuation of an abscess ? Consider this very point of tact, by which the fluctuation of deep-seated fluid is detected. To doubt its existence will be cardinal heresy in the eyes of many, who consider it a leading attribute of a skilful surgeon. According to my own humble experience, fluid cannot be identified by the touch alone. A cyst may be so hard that it differs in its sensible properties

from a solid body, in translucency alone, fluctuation being entirely wanting. On the other hand, a solid fibrous tumor, especially an encephaloid growth, may offer a fluctuation so unequivocal, that no man, from this sign alone, would be justified in doubting the existence of subjacent fluid.

This must be obvious. Fluctuation implies displacement. The parietes of a contained fluid may be so tense and unimpressible, that you can displace nothing; while, on the other hand, certain soft solid and elastic tissues may perfectly fulfil the required conditions. So it is with the blow of a blunt edge upon the scalp. The tissue of each side may rise in such a way, that while an inexperienced person would be quite sure of the existence of fracture of the bone, when it did not exist, a skilful surgeon could only pause and doubt. Whence comes, then, the accuracy of diagnosis, which in general is referred to tact, and which characterizes skill?

Leclerc, who wrote more than two hundred years ago, draws a line which in these latter days seems to have been lost sight of. He says,

"How may it be discovered that the two tables of the skull are broken?

"By inspection and by reasoning.

"Are not the eyes sufficient alone, and are they not more certain than reasoning?

"Yes. But forasmuch as things are not always seen, there is often a necessity of making use of rational deductions, to find out that which the eyes cannot discern."

When probability is substituted for certainty, an informed judgment is our only resource.

In the kindred and beautiful science of auscultation, a new râle is learned like a new landmark; not by any especial development of the sense, but by a repeated act of observation, and a corresponding effort of the memory. And wherever two or three of these landmarks can be observed, an immediate inference can be made with respect to the condition of the patient. An experienced ausculter decides rapidly and at once; not because his ear is more acute, but because his memory is better stored; and he can thus assort and appraise more readily his hypothetic combinations. A skilful surgeon detects fluid, not because his tactile papillæ are more sensitive, but because his ready knowledge furnishes him with natural groups of symptoms, which now exaggerate and now discountenance the value he would attach to the indications of the tactile sense. Surgical tact, like social tact, is not only the delicate impressibility which apprises the observer of some manifestation in the individual with whom he is in relation, but it is a correct inference of its true cause and character, leading to appropriate action, and based upon a knowledge at once of collateral circumstances, and of man's physical and moral constitution.

Operative Surgery is another department of our art. Here "Anatomy and Mechanics," in the words of Boerhäave, "both better and more universally understood in our Days, have laid the foundations, and spun the Thread of our Reasonings; both of them sure!" In operative surgery we occupy more directly what is popularly considered to be the province

of the surgeon. The surgeon, with the public, is associated with surgical operations; and his notoriety is in measure with the belief which the world may entertain of the number or magnitude of the operations he may perform. Singular as it may seem, a surgical operation, even in the medical world, is apt to be looked upon with an undue appreciation; and even eminent physicians concede an unquestioned position to a skilful operating surgeon. So true is this, that for acquiring the notoriety which is a nucleus for surgical practice, a surgeon had better sometimes be known as the hero of extraordinary operations which have proved unsuccessful, or even fatal, than as a follower of the usual routine of ordinary treatment.

This has always been true of the surgeon. In earlier times, when the art was in its infancy, the successes of the surgeon were more exclusively than now connected with manipulation. Besides, the art was confined to few, being, in a measure, hereditary, or transmitted from master to some favorite pupil. It partook of the exaggerated and exclusive spirit of alchemy, being admired rather than exactly estimated.

Much of this spirit of exaggeration still invests the science. Why is the amphitheatre crowded to the roof, by adepts as well as students, on the occasion of some great operation, while the silent working of some well-directed drug excites comparatively little comment? Mark the hushed breath, the fearful intensity of silence, when the blade pierces the tissues, and the blood of the unhappy sufferer wells up to the surface. Animal sense is always fascinated by the presence of animal suffering. It is the trace in man of the emotion which the sight of blood, of laceration, or of death, produces in the lower animals. But, beyond this, there is an arbitrary interest and an arbitrary importance attached to the performance of most surgical operations, in my view disproportioned to their intrinsic merit. It is rare that supply does not respond to demand; and, in obedience to a general expectation, the surgeon is prone to foster and to encourage the undue appreciation which the public is ready to concede. The error, indeed, if it be one, lies with the community itself, which offers a sure market for surgical pretension; but the effect upon the professional world is not less to be regretted. From a habit of modifying his standard to an eager curiosity, a surgeon may easily lose his own standard, and fall into the mistake of exaggerating a case in the presence of those who are competent themselves to judge; an error growing out of an habitual illusion, and entirely dissonant with his tact and good judgment upon other subjects.

As we have now perhaps reached the kernel of our proper subject, let us inquire, somewhat in detail, what is the actual and intrinsic merit of a surgical operation. I do not hesitate to avow a belief that the great majority of mere surgical manipulations require less skill and less manual experience, than the nicer mechanical manipulations of daily industry, which excite little attention. This estimate does not include the three years of preparatory study, common both to the physician and the surgeon, but only the peculiar and usual training of the operating surgeon. Few, who have studied our art in Paris, can have failed to be struck with the number of aspirants singularly adroit in the various methods of performing surgical operations upon the dead subject, still practising mani-

pulations, week after week, and year after year, but never destined to make their skill available; and who soon sink beneath the surface in the tumult of competition, to be succeeded by others of equal skill. The operating surgeon should add something to mere dexterity of manipulation. "A surgeon," says Celsus, meaning an operating surgeon, "ought to be young, or at most but middle aged; to have a strong and steady hand, never subject to tremble, and to be no less dexterous with his left than with his right hand; to have a quick and clear sight; to be bold, and so far devoid of pity that he may have only in view the cure of him whom he has taken in hand, and not in compassion to his cries, either make more haste than the case requires, or cut less than is necessary; but do all as if he was not moved by the shrieks of his patient." "These irregular operations," says Liston, speaking of tumors of the neck, "require, on the part of the surgeon, correct anatomical knowledge, prudence, coolness, decision, and some share of dexterity; qualifications only to be gained by practice and experience." Here is something beyond manual adroitness. I have noticed in Europe, where opportunities for comparison are frequent, that the crisis of an operation,—when the wound gapes and the bleeding is free, and the end is not yet in view,—sometimes induced in the operator a constitutional excitement and haste, a want of steadiness which threatened to hazard success, were the operation protracted beyond its natural and anticipated period. Fortunately, at this time, difficulties are surmounted, and the end begins. This contrasts unfavorably with the physical immobility, the unimpressible steadiness, that may be relied on at a critical time; or with the self-possession which may be directed, at a moment's warning, to the quiet contemplation of some new exigency. I should place a constitutional, or acquired imperturbability, at the head of the qualities to be prized by the operating surgeon. Decision and self-reliance are next, and then a fertility in expedients. Bell describes an operator, destitute of these qualifications, as "agitated, miserable, trembling, hesitating in the midst of difficulties, turning round to his friends for that support which should come from within." "Although the chair of surgery has been, for seventeen years, entrusted to me," says the renowned Haller, "although I have frequently demonstrated the most difficult surgical operations upon the dead body, yet I could never bear to cut a living man, fearing that I might do him injury." With such evidence of its attendant excitement, it will be conceded that there is a fascination in a game where life is a not unfrequent stake, in the presence of a breathless multitude, or in the solitude of an appalled household. It is not wonderful that Wiseman wrote of "the nobility and dignity of chirurgery," and Hildanus of its "grace and splendor;" neither is it remarkable that surgery, in these days, should offer a resistless charm to the majority of students. And yet these attractions can be abated. It should be remembered that, with some operators, a natural insensibility, and even brutality, is a substitute for the simple steadiness of the humane surgeon. And besides this, there are shoulder-joints and hips amputated, and extraordinary operations satisfactorily done by those whose names are not destined to outlive the number of the Journal which reports them, and whom accident or temerity has urged into an unwonted position. Again,

the result of an operation is often no test of the skill invested in it. Nature is a great leveller, and among a hundred amputated limbs, it would be difficult to distinguish the original result of consummate skill, from that of only moderate ability. A traveller upon the lakes tells us of a thoroughbred Indian, who, when a tree had fallen across his leg, took out his knife, cut off his own leg, bound it up, and paddled himself home to his wigwam, on a distant island, where the cure of his wound was completed. Johannes Lethæus, having sent his wife to the fish-market, extracted from his own person a calculus weighing four ounces. Nature is the great surgeon, and art is at best but an assistant. It is also well to remember, that a dexterous operator might perform single-handed, and in a few weeks, a large proportion of the operations occurring in a large city, in the course of a whole year; so that, as a question of mere expediency, based upon the frequency of surgical opportunity, it is profitable for the student to throw his labor into the scale upon whose preponderance his daily occupation will, for a long time, depend. Such considerations will not discourage genius, which is talent with a marked taste to direct, and a strong driving power to work it; nor should they dissuade those whose deliberate judgment may have determined them to pursue this art. It is, however, unquestionably better for most students to aim at being competent pathologists and physicians, than to devote a disproportionate time to the various methods of performing an amputation of rare occurrence. Besides, in estimating the true position of an operator, we are to weigh the contingencies of an operation, and not its regular and successive steps. It is quite obvious that a novice might attain exquisite adroitness in any given manipulation; but unexpected deviation of anatomy or disease, abundant and sudden hemorrhage, violence, syncope, the panic of bystanders, the lack of aid, these adventitious circumstances call for distinct qualifications; and it follows that a patient is actually less safe in the hands of one who is not familiar with exigencies and expedients.

It has been proposed to separate the Science from the Art of surgical manipulation. This can never be; the involved interests are too great; and, although we meet in other walks of life presence of mind and ready concentration of the faculties to which are apparently entrusted equal interests with slighter guarantee, yet the helmsman or the engineer stakes his own life with that of the passenger, who confides not in his skill alone, but in his instinct of self-preservation. The surgeon risks nothing; and the patient confides in a character to which the lapse of time has testified.

Still, upon ground peculiar to the surgeon, we arrive at another consideration of importance—the evidence which, in each case, determines an operation. And here, again, is the field for the exercise of the higher faculty of sound discrimination. It is unnecessary to allude to cases in which the propriety of action admits of no doubt. Common sarcoma and common lipoma, in active state, and in a healthy patient, are usually extirpated, and with permanent relief. Cancer, on the other hand, as inevitably returns at a subsequent period, and generally to prove fatal. In such a case, the contingencies on either side may be thus briefly stated. In default of excision, acute pain wearing the patient down,

recurring and exhausting hemorrhage, the apprehension or actual existence of local disintegration with its accompanying calamities, which, together or singly, may render life a burden ;—on the other hand, a chance of a permanent local removal of these terrible local symptoms, with a chance of their local return,—a chance of not affecting the duration of life, with a chance of abbreviating it,—these are the difficult elements of the question which it often falls to the lot of the surgeon to determine. Human life is a question of deep responsibility. "You must die as you are, and an operation will give you a chance;" or more exactly, "You can live but a few months in your present state, and with an operation you have an equal chance of sudden death and of permanent recovery,"—this is a frequent and responsible alternative. To one man, life is inexpressibly dear. He would live a short month longer for himself, for his child, for his estate; while the defenceless woman, whose existence is embittered by disease which awakens a groundless but withering suspicion, would give a world to cast off a weary burden, and strives, by sophistry, to make the surgeon her executioner. Here the physician and the surgeon occupy a widely different ground. While the physician so adjusts his remedies, that if they do no good, they do no harm, the surgeon is unhappily compelled to see many a death accelerated, or directly caused, by his remedial agents.

Pain, but recently an object of insuperable terror, once prohibited many operations. The quivering and straining muscle and the deep groan of fortitude, or the thrilling shriek of agony, which resolution could not stifle, then invested surgery with a sad solemnity. In these days, the surgeon has a lighter task. The rising vapor stimulates and stupefies the intellect, whose fantastic clamor may excite a not uncharitable smile; but the operator, with a conviction that alarms are groundless, lulls his patient to a quiet slumber. In other times, a fear of pain coöperated with a fear of death, to resist an indiscriminate attack upon the stronghold of disease. In the annihilation of pain, let not an equal force be now brought to bear against vitality alone. The balance of surgical right has been shaken to its centre by the annihilation of an element whose preponderance may be truly said, in a majority of cases, to have turned the scale; and years must elapse before a standard of expediency can be adjusted. In the meantime, let the burden of proof lie with the patient; let the surgeon avoid operating when he can do so; and, at least, let him consider how far he would himself be ready to encounter, in his own proper person, the risks presented by each recurring case. Years, too, must elapse before the surgeon will cease, as he must ultimately cease, to be identified with pain; and, as years elapse, the anæsthetic will excite as little speculation upon mysterious agencies, as now the quill which shields the individual from a pestilence. But it matters little that a great principle should cease to excite remark because it is of vulgar application. I care not whether the well-worn story, fretted by hostile pertinacity, palls upon the ear. When the petty jealousies which opposed, and the obstinate consistency which still makes show of doubting, shall have been forgotten; when we, with our estates and our institutions, shall be scattered to the winds of

heaven; when nations shall have been disintegrated, and their material wrought and rewrought into the organism of successive ages, it will be remembered that the discovery which annulled the physical suffering of man, was made at Boston, in America.

I wish, in this connection, to allude to another subject which is acquiring an increasing importance in our community. I allude to the practice of deciding questions of a purely medical and scientific character, by appeal to a legal, and medically unqualified, tribunal. A man receives a blow upon his watch or upon his window, and submits to a jury the following three questions: first, the fact of the blow; second, the connection between the blow and the injury received; and lastly, the extent of the injury. It is plain that the second question, of the casual relation of the blow to the injury, is, in this case, absurd; the effect of a stone upon a pane of glass is too obvious to be discussed—it is a question of every day experience. But suppose that a severe blow has been received upon the head, and that a man thus assailed has fallen dead. The connection between the blow and the ensuing death, though quite obvious, nevertheless trenches upon peculiar ground. It is customary, in such a case, to invite the opinion of an expert, who would not however hesitate here to recognize a frequent cause, and an equally frequent effect. But let us go a step further, and suppose the blow to have been followed, instead of death, by some derangement of the physical or mental functions. A man shown to have previously possessed less than an average share of intellect, complains after such injury of an impairment of the memory. A sickly child, with many symptoms of diseased spine, finds that the disease is unequivocal, some time after receiving a slight concussion. These are cases which have actually gone through the courts, claiming remuneration. An accident happens; a man receives a considerable jar; and if he subsequently experience obscure pain, or short breath, or epileptic fits, or any symptoms of which the proximate machinery is utterly and profoundly inexplicable, he does not hesitate at once to accuse individuals, railroads or towns, and to prosecute for damages. It is plain that, to establish his case, he must show the connection between cause and effect; between the stone and the broken glass; between a blow upon the shoulder and a permanent pain perhaps in the leg. Before whom is the question brought to issue? Not before a jury who have spent a lifetime in acquiring an intimate knowledge of the physical mechanism of the human body and the causes and consequences of its derangement; men who have ascertained that nothing in medicine is certain, and that, for the lack of certainty, every question must be decided, if at all, upon its probabilities, and who are accustomed to the balance of these probabilities. This intricate question is not thus brought to issue; but is laid before twelve average minds, taken at random from the common walks of life, profoundly ignorant of medicine, or equally imbued with prejudice, and who are to be educated in a few days upon points which most intelligent students, after two or three years' exclusive study, would avow themselves unprepared to decide. This is not a question of the rights of inert property, nor of

the modifications of mechanical force, nor of abstract right and wrong, nor of a fact of occurrence, nor of any other subject which the general education of daily life renders men competent to settle; but it is a question of recondite and peculiar knowledge. And to submit such a question to most men, is to submit the figures of the planet Neptune to an optician because he owns a telescope, or to refer the question of pregnancy to a jury of matrons.

Unable itself to draw any inference from medical facts which it cannot comprehend, a jury is supposed in theory to make an average of the results at which experts have arrived, in informing itself of the opinions of physicans and surgeons. Here, however, is another fruitful source of error; on the one hand, human testimony is not rendered less uncertain in an uncertain science, by the insensible influence of conflicting medical interests, especially in small communities; and on the other, the public at large is totally incompetent in any case to estimate the relative scientific value of medical testimony. There is also a tendency among juries taken from the mass of the community, to side with the professedly oppressed. Wealth, incorporated or unincorporated, does not invite equal sympathy. Here is a bias. And in this refracted light, medical opinions of unequal value readily neutralize each other. Probability, too often the substitute of certainty in medicine, is exaggerated; or still worse, it is in some cases enough to show that a symptom might possibly have followed an accident; and the burden of proof is virtually thrown upon the defendant to show that it actually did not. The defendant is then guilty, until he proves his innocence.

Now almost any thing may occur in medicine. The most fantastic possibilities actually do occur. For instance, a good sized crowbar was shot through a man's brain, and he recovered. Another patient had an ulcer itching excessively upon his thigh; whenever he scratched it, he experienced extreme tightness of the chest and dyspnœa, and only then. The father of Lord Cavendish had a pain in the left arm connected with a stone in the bladder, and the only knowledge which he had of the necessity of micturition, was the recurrence of this pain. With such facts as possible, and these are perhaps solitary instances of their kind, what can be absolutely denied? Now, let two or three doctors testify before a jury, that, when a railroad car stops suddenly, it is barely possible that any passenger may be taken, for the first time, with an epileptic fit; and let as many medical witnesses testify, on the other side, that it is indeed possible, but that causal evidence upon this point is altogether wanting; let them avow with John Hunter, in an analogous case, that they "can give no decided answer," and the verdict, as in that case, will very likely go against the defendant, and this in default of any corresponding medical probability whatever.

It may be a matter of policy, to compel a railroad to pay for every accident to life or limb; and so to remunerate a road for travel, that it can also afford to insure the safety of its passengers. It is a very serious question, how far, upon grounds of mere expediency, a patient may prosecute his surgeon for mal-practice. On the one hand, gross injustice and ingratitude are occasionally exhibited towards the surgeon. He is made

to suffer for deformities which could not be prevented.* Besides, a patient, residing in a thinly settled country, who employs a local surgeon, virtually says, "I have, on the whole, decided to place myself under your care; you may not have the opportunities of a surgeon in a large metropolis, but there is neither time, nor can I meet the expense of sending to a distance. I am therefore prepared to incur the chances of recovery with such aid as you may offer, and on such pecuniary terms as are customary in this part of the country;" and he has no right subsequently to complain. On the other hand, the chance of being mulcted for gross inefficiency, is a chief preventive of ignorant pretension. It is the only means of hindering certain practitioners from assuming duties, to which they are not competent. These, however, are questions of practical expediency, differing widely from that of scientific right and wrong. Tested by the single standard of surgical truth and error, I believe injustice to be often done to individuals and to corporations; and if poisoning, infanticide, and analogous crimes, have created a science of medical jurisprudence, I know not why surgical injuries do not demand an equally, perhaps more extended science, of surgical jurisprudence.

Let us establish a position in relation to Empiricism. It is usual to reserve feeling, or at least, declamation, for those who are considered hostile to the interests of the true medical faith. And there is apology for an unfriendly feeling, and reason for the antagonistic attitude usually manifested towards quackery by our profession. Those who occupy a firm position in established medical centres, unquestionably encounter it more rarely, and feel its influence less, than those whose medical practice lies in thinly settled districts, or among less educated classes. The public opinion of large communities is very apt to be well ballasted by common sense; while in small communities, agitated by minor interests, medical, political and religious faith are almost equally subjects of difference and change of opinion; and the interests of medical men are, as often, very seriously affected. It is, therefore, the duty of every medical man, to discountenance quackery; the only question being how far and in what way this may be accomplished. Laws to repress it have existed at various times. Stowe, in his Chronicles, says, "A counterfeit doctor was set on horseback, his face to the horse's tail, the same in his hand as a bridle, a collar of jordans about his neck, a whetstone on his breast, and so led through the city of London with ringing of basons, and banished." The present French law is stringent against charlatans in medicine. And yet quackery has always existed; and, what is extraordinary, barren of invention, treading in a monotonous round, a thousand times exposed, and as often presenting itself anew with the same threadbare pretences, yet always receiving the same encouragement. Here are the natural bone-setters of 1579. "Here," says Ambrose Paré, "I determine to treat of those impostors who, taking upon them the person of a chirurgeon, do, by

* This resort to law has become so familiar, that it seems to suggest itself, at once, to every country patient who is dissatisfied with the deformity of a fracture or a dislocation. I am persuaded that patients often leave metropolitan institutions, where they have been treated with skill and care, who would, in the country, be able to make a strong legal case of distortion which was inevitable under the best treatment.

any means, either right or wrong, put themselves upon the works of the art; but they principally boast themselves amongst the ignorant, common sort, of setting bones which are out of joint and broken; affirming, as falsely as impudently, that they have a knowledge of those things from their ancestors, as by a certain hereditary right, which is a most ridiculous fiction; for, our mind, when we are born, is as a smooth table, upon which nothing is painted. . . . . God hath endued all brute beasts with an inbred knowledge of certain things, necessary to preserve their life, more than man. . . . . For it is no more likely that any man should have skill in surgery because his father was a chirurgeon, than that one that never endured sweat, dust, nor sun in the field, should know how to ride and govern a great horse, and know how to carry away the credit in tilting, only because he was got by a gentleman, and one famous in the art of war."

Here is the hydro-practice of Petro, who flourished a short time after Hippocrates, "who," says Celsus, "as soon as he was called to a person in a fever, when the fever began to be a little abated, gave cold water to drink; and if it once raised a sweat, he pronounced the patient to be out of danger; if it had not procured that discharge, he gave still more cold water, and then obliged him to vomit. If it did not give way to these methods, he boiled water with salt, and obliged him to drink it, that, by vomiting, he might cleanse his belly. And these particulars (I use the words of Celsus) made up his whole practice; which was not less acceptable to those whom the successors of Hippocrates had not recovered, than it is to those in this age, who have been long unsuccessfully treated by the followers of Herophilus or Erasistratus. Nor is this kind of medicine not to be esteemed rash; because, if it has been pursued from the beginning, it kills more than it cures." What comment upon modern quackery is more dispassionate and to the point, than this of 1700 years ago!

Read the medicine of any people or of any time, and you find allusions to the contemporaneous growth of quackery, perhaps elaborate efforts to repress it. The "Art of Chirurgery," published in 1663, contains nine folio pages of elaborate argument, to prove, of those wounds that are said to be cured by the "weapon salve," . . "that they are cured by the help and assistance of Nature alone," and written "in regard that there are many who have asserted the contrary." "Crollius terms all ignorant and simple, that doubt of the efficacy of this medicament." Nine pages of logical argument, is an opposition abundantly sufficient to reanimate any falling cause, and, doubtless, for a time invigorated this.

Medical quackery belongs to no age, to no country, and to no people; its elements lie in the human mind. It is as certain to take root and vegetate in any country or in any age where mind exists, as cancer is to affect the material tissues. Quackery is but an unsound modification of every science and of every art. It is a false pretence of ability, or knowledge. The science of medical therapeutics is especially open to it, both from its uncertainty, and from the difficulty of testing it. You can test a piece of iron, or a plan of ventilation; but give a remedy, and how shall you know, from a single case, whether nature or your physic cured the patient? You can only infer upon various probability. "Medicine,"

says Celsus, "is a conjectural art, and the nature of conjecture is such, that though it answers for the most part, yet sometimes it fails." "God and nature," says Ambrose Paré, "do sometimes such things which seem to physicians and chirurgeons impossible." "This observation and some others," says J. L. Petit, speaking of hernia, "prove that cures which appear miraculous, are due to nature more than art." If nature is conceded to have so large a share in therapeutics, you can decide the effect of a single remedy only by a deliberate inference upon a series of cases. But how difficult is this act of the judgment! To many men, one personal experiment is worth octavos of recorded evidence. "I grant every thing," says one of these, "but I know that this cured me, and I think it will again." "And, indeed," adds a bystander, "if it agrees with his constitution, why should it not?" Personal knowledge of single cases, lies near the foundation of all quackery. Again, the physician frankly avows the inadequacy of his art. The charlatan promises a cure, endorsed by the statement that he has had a precisely similar case. "When it was decided that the Lord Martignes must die, Monsieur de Savoy showed himself to be much discontented and wept; and asked them again, 'if for certain they all held him deplored and remediless;' they answered, 'yes.' Then a certain Spanish impostor shewed himself, who promised on his life, that he would cure him; and if he failed to cure him, they should cut him in one hundred pieces. 'I swear to thee, by God, that before eight days, I will make thee mount on horseback, with thy lance in thy hand; provided that no one touch thee but myself. Of this thou mayest be assured upon my promise. I have cured divers who had greater wounds than thine;' and the lord replied, 'God give you grace to do it.' Notwithstanding, two days after, the said lord of Martignes died; and my Spaniard, seeing him in the agony, eclipsed himself and got away without bidding farewell to anybody." This is the second category of quackery, common to all ages and countries; except that, in these days, the cancer doctors and the water doctors find it unnecessary to "eclipse themselves and get away," inasmuch as the notoriety of a case which has proved fatal, is pretty sure to bring another.

Other bias of deliberate judgment may be found in a love of change, of patronizing, of originating, and especially when a quiet and inoffensive person, suddenly, and perhaps to his surprise, finds himself arrayed in the defence of some form of quackery, which consistency then makes his own cause. And, finally, the mind is often irresistibly swayed by the personal attraction and power of some representative of unsound doctrine.

Such are the disturbing elements of judgment where this faculty exists. But, unfortunately, medicine is a balance of probabilities. Fully to appreciate the leaning of medical evidence, demands capacity, simultaneously to embrace a considerable number of details, often distributed through time, and also a fair share of intellectual capital to discriminate and to combine them. Now a mind well endowed by nature, and susceptible of stimulus upon subjects connected with the daily occupations of life for which it may have a natural aptitude, may have no taste for this especial subject, or knowledge of it, and so yields at once; or may be biased by any of the considerations before exposed.

On the other hand, many minds cannot comprehend a logical necessity, and propound their belief quite as impressively as if they could. Expose to a person of this class a preponderating mass of probability, or an inevitable certainty, depending from a chain of evidence, and at the expiration of an hour you shall receive the answer, "Still the quack cured this man." "But," you reply, "Nature, and not the remedy, cured him;" to demonstrate which, you open another argument, and are again brought up by the original premises of your inflexible friend, that "the man was cured."

Such has been and will be the permanent nutriment of quacks; not of any one sect, but of all sects; not of any one year, but in all the past, and in all the future. If these views be correct, quackery cannot be repressed by any exposition of the absurdity of a theory or set of theories. It is not its local or temporary manifestation that demands our notice. Its roots lie deeper—in the defects of the human mind. Credulity and imperfect knowledge are the fermenting soil which nourishes a hundred different excrescences, modified by the local influences of disease or of national peculiarity. You cannot abate quackery by any thing short of government restriction. Every man must have his medical, political and religious faith; and unsound and unenlightened minds, in a free country, will have, equally, theirs. You cannot repress quackery. Let us not vitalize it by opposition. It lives by notoriety. Like cancer it is inflamed and grows by injudicious efforts to repress it. Leave it alone. I will not honor contemporaneous quackery by naming it in this place; you cannot recall a patient strayed from your fold by exhibiting your displeasure. Maintain your philosophy. Perhaps you may ingraft into your science a hint from the total abstinent in therapeutics, which will be of service to the intemperate in practice or in drugs. Your patient may return, but it is even then quite likely you will live to be many times deserted in behalf of quackery by the same profound logician.

The progress of true medical science cannot be impeded by the vulgar opinion of the unsound or uninformed. It is in this century steadily and rapidly progressive. Entwined with the kindred sciences of physiology and chemistry, it grows as they grow, at intervals sending forth an independent shoot. It is curious to observe the difference in the methods of its culture, at different times and in different countries; and to note how a few standard types of medical research have been repeated. Celsus divides the medical world into two classes. "There are those," says the Roman writer, "who declare for theory in medicine, and who look upon the following things as necessary: a knowledge of the occult and constituent causes of distemper; next, of the evident ones; then, of the natural actions; and lastly, of the internal parts." Among occult causes were classed purely theoretical causes, of the four elements, humors, &c. On the other hand, those who styled themselves empirics, admitted the "evident causes" as necessary, but "affirmed the enquiry after the occult causes and natural actions to be fruitless, because nature is incomprehensible." They held that "it is much better to seek relief from things certain and tried;" that "medicine was deduced from experiments;" that, for example, "some used a full diet in the beginning of a disease, others were abstemious; and that those grew worse who had eaten plentifully."

"That these and the like instances daily occurring, diligent men observed attentively what method answered best, and afterwards began to prescribe the same to the sick." Here is the medical theorist, and here the experimentalist of all time. On the one hand, the humorist, the solidist, the Brunonian, and I know not what other disciple of false theory, ever volunteering and assuming the unproved *why;* and on the other side, the Hunter and the Louis, dealing with nature as it exists, cautious in assigning cause, inexorable in requiring evidence.

It is a little remarkable that national peculiarity should be so marked in its bearing towards medical science. "The Englishman, while still young," says Roux, after his visit to London, "is remarkable for a certain maturity of reason and of judgment, which, when we are about to teach him any science whatever, allows us to reckon as much upon the operations of his own thoughts, as upon the simple exercise of his memory. Without being less qualified for labors of the mind, for the cultivation of the sciences, and conceptions of genius, the French youth is more impetuous, more distracted; his reason is more slow in coming to maturity; and when he sets about the study of the sciences, it is necessary, for some time at least, that his memory only should be cultivated, and that few things be left to his meditations."

French medical science strikes a foreigner as a forced growth, a business overdone. There is less claim to originality in science, than constant struggle to assert it. In this dense competition, notoriety is the great aim. Numerous scientific societies offer a market to novelty. Here is a mutual forbearance which listens patiently, on condition of being heard. A society or a train of followers thus becomes a rostrum for announcing the last remedy or surgical operation. It was complained that a gunmaker availed himself of the Academy of Sciences to give his wares publicity.

This long custom and facility of disproportionate announcement, are a constant stimulus to the medical world, who labor with an assiduity little known in this country. But the mass of labor is not always directed by sagacious hypothesis. Medical discoveries are generally but novelties, slight modifications in routine and method, and seem to be an inadequate remuneration for the great expended labor. On the other hand, this constant review of details produces a medical precision elsewhere equally unknown. In knowledge of the usual combination of symptoms, in diagnosis, in pathology, the French are unrivalled.

The German mind is of a different stamp. Here is the same, perhaps greater capacity for labor, guided by the most ingenious and recondite theories. From Germany, we have Embryology, and the Philosophical anatomy, originating, as if to stamp a current value upon the imaginative faculty, with the great German poet.

John Farey, a practical engineer. and familiar with the history of mechanical inventions, in his testimony before a committee in the House of Commons, in 1829, expressed the opinion that "the prevailing talent of the English and Scotch people, is, to apply new ideas to use, and to bring such applications to perfection; but they do not imagine so much as foreigners." This is perhaps as true of science as of art. The general

tendency of modern English medicine is not to new or subtile theory, neither have the majority of English medical writers any taste for dry and exact detail. Theirs is not the philosophy which excavates perpendicularly downward at the root of some isolated fact, to scrutinize in the ultimate fibril its microscopic point of contact with the hidden rills of science; nor yet that which toils on the surface, to note with unwearying fidelity the germination of disease, and to chronicle in every leaf the varying type of morbid action. But there is a high intelligence and a large share of sound determination in the better part of English medical mind. It is slow of admitting novelty, a little tenacious of opinion, perhaps of prejudice, and ever leaning to the useful, to practice rather than theory, it is perhaps a little exclusive in its attention to therapeutics. But we are dealing with the practitioner as well as the pathologist, the man as well as the philosopher; and we recognize the cultivation of the higher intellectual faculties, and the balance of a strong common sense.

Louis and Hunter! the pathologist and the philosopher! The one stimulated by a passion for truth, the other impelled by genius. The labor of the one a corner stone in the foundation, which art cannot improve, and for which no other can be substituted, which may be built over as the edifice is reared, but which will resist the wear of time. That of the other, a vast and fragmentary system, sketched by the hand of a master, with here and there a thought, as of inspiration, which suggests the architecture of the whole plan.

Louis, singling out each function of the healthy man and tracking it through the labyrinth of disease, observing such experiments as nature herself might institute. Hunter dismounting the machinery of the whole animal world, ever suspecting new truth, forming new theory, and with a rapid sagacity organizing original experiment. "For, as in ordinary life," says Lord Bacon, "every person's disposition, and the concealed feelings of his mind and passions are most drawn out when they are disturbed, so the secrets of nature betray themselves more readily when tormented by art, than when left to their own course."

Louis gauging phenomena by standards of color and form and dimension; Hunter seeking behind these phenomena to link them by some principle common to animal existence. Louis identifying occurrence, the when and the whether; and affirming truth upon this side of the verge of uncontrovertible certainty. Hunter seeking cause; ever contemplating the why; transcending proof to speculate in possibilities; summoning a thousand facts from the recesses of a vast mind, to cluster them about some shadowy uncertainty, until it is revealed as palpable as if demonstrated.

In a storm of prejudice and error, Louis stood passionless and inflexible, deep in the conviction, that amidst the flashing and meteoric sophistries of Broussais, the modest lamp of truth would arrest attention by its intrinsic beauty. His was an intellect not readily conjecturing, but sound in its discrimination between well known and recognized resemblances, and indefatigable in action. The intellect of Hunter was a gigantic mechanism in full play; capacious of a myriad of circumstances, cognizant of the loftiest and of the humblest details of the organized world.

Rapidly transported to the confines of human knowledge, and there pausing, Hunter sat, as in that noble effigy which art has bequeathed to us, for hours consecutively contemplating the memory of facts beneath an ample forehead. It was then that faculties, at other times chained to the slow progress of experiment, or diverted to the exigencies of daily life, assumed their legitimate sphere, and strove with a noiseless and impetuous energy. Gazing into the misty future, suspecting affinity from resemblances as extravagant as beautiful, devising and executing almost simultaneously the *experimentum crucis*; ever laboring; soaring from experiment to abstraction, and nailing abstraction again down to the test of experiment; toiling at his art for the means of gratifying his enthusiasm for his science; such was John Hunter; and, if his books are hard to read, I question if the hardness be not the hardness of his facts, and their obscurity the depth of his reasoning.

From mind turn to matter, and regard the possibilities of human knowledge in our science. Who will assign a limit to man's future knowledge of chemical affinities? Reason indicates no barrier beyond which the analysis of inert matter may not be urged. The chemical eclecticism of the atoms of the animal tissue will ultimately be traced to the point where chemistry yields its sway and vitality begins. The cell, the point at which matter, stimulated by the vital force, first becomes sensible to the eye, is now being recorded in all its manifestations, as it yields to the mysterious influence which transforms it into the animal and vegetable world. Cancer and tubercle, lesions of the cell, common to the whole animal kingdom, and terribly devastating to the human race, are upon the eve of being as far identified, as a thorough appreciation of their ultimate form and a fair inference upon the forces which animate them will warrant. Muscular force, which has now been shown to animate the simple cell as well as the ultimate element of the true muscular fibril, is as yet unexplored. Its key fact, the entering wedge, the starting point from which investigation shall proceed, is not yet recognized; and unless it lie in that acknowledged fragment of what is called animal magnetism, which is said to modify or annul muscular power, it is a labyrinth without discovered entrance. Yet there is nothing in the relation which this force bears to animal existence which ostensibly prohibits its ultimate exposure. The nervous fibril of each muscle will one day be followed to its termination in the cerebral mass; and while the physiologist appropriates fibre after fibre for his sensitive and motor functions, the intellectual philosopher will analyze the mental faculties, claiming for their few dissected elements whatever tract may then remain unappropriated. The solid and the fluid, the denser and the rarer air, chemical force, light, the muscular and vital force, the intellect, the individual, successively escape one after another of our senses, until certainty becomes hypothesis, and conjecture in its turn fades into utter ignorance. Yet they all exist. The term material has relation only to the reach of human faculties. The interlacing evidence of all the senses attests the being of a resisting mass; hypothesis allures us to embody the less palpable testimony of a single sense, while that which is conceded to be immaterial lies where human imagination cannot follow.

There is a point at which religious faith makes it a duty to avow this ignorance; in conceding to infinite power the ability to act without material, and without place and time. To fix this point is simply to assign a limit to the reach of human understanding; and in the impossibility of doing this, it is neither a confession of a gross faith, nor a derogation to the attributes of matter and of mind, to run the boundaries of immaterialism close to consciousness itself; to class with the material, not only the attributes of matter, but that machinery of sense and of the intellect which is subservient to the will; and in this way to extend the possibility of human comprehension, so that it may one day unravel much that is now invisible and intangible; exposing the subtile relations of matter and of electricity, of muscle and of force, of special sense and of intellect. Analogy would then suggest in these untrodden regions continuous stages in a system of transition from palpable to less material; the development of a lofty structure, at whose foundation man now climbs.

It has been well said that, "if we are to have a correct philosophy of the human mind, it must come from physicians." As the surgeon deals with pathological processes in immediate contact with his senses, so the physiologist is nearest the mechanism of thought. Rays of light approach the earth, bearing the image of a distant star. They are woven and interwoven by human art, they penetrate the eye of the astronomer, to be elaborated in the mind, and sweep on with the diverging rays of human knowledge to illuminate the intellectual world. The physiologist claims the narrow isthmus which unites the luminous and mental ray, and lays his finger upon the machinery which effects the first step in the system of transition.

Analyze reason itself. The working of this complex faculty divested of its adventitious circumstance and sifted to its simplest form, the syllogism, is but a recognition of equality or inequality, of identity in degree. Represent equality or inequality by units. Suppose the mind to deal with units of resemblance or of difference, and we have already invaded the science of number; an intellectual operation, which can be performed by a material mechanism with far more accuracy than by the intellect itself; and in which a unit of brass is more certain to register its due influence upon the dial, than is an abstract unit upon the tablet of memory.

A brief but grateful task remains. The office which I humbly hold, has been occupied by those whose well earned name has conferred upon it dignity and even lustre.

He, to whose hereditary claim upon our respect, and to whose culminating and completed reputation we now yield a ready deference, but yesterday was toiling with an iron energy and unremitting will, bending to our science the best faculties of a long and vigorous life. Go to yonder amphitheatre, where the sufferer seeks in silent agony the last resources of our art; and in its wide facilities, its noiseless discipline, the absence of all ostentation, and in the calm severity which recalls the classic day of surgery, in a perfection indelibly stamped upon the organization of this arena of our science, study the impress of his ruling intellect.

Yours, Gentlemen, is also the grateful recollection of one, the echoes of

whose voice have hardly ceased within these halls. The spontaneous language of regret that he should have withdrawn in the meridian of his abilities from a position which no one was better qualified than he to fill, is yet upon the lips of all who have at heart the interest of this institution. For many years identified with its history, the warm advocate of whatever was advantageous to the college, deeply interested in your well being and receiving in return a ready and loyal devotion, the loss he has entailed upon you in resigning the professorship of surgery cannot well be over-estimated. To you, Gentlemen, I leave the expression of your appreciation of his teachings, and your interest in his welfare.

With unfeigned distrust in my ability, with a deep sense of responsibleness, with an earnest hope of making this office in some measure useful to others, I enter upon its duties.

AN

ADDRESS

DELIVERED BEFORE THE

SUFFOLK DISTRICT MEDICAL SOCIETY,

At its First Anniversary Meeting,

BOSTON, APRIL 27, 1850.

By JOHN JEFFRIES, M. D.

PRESIDENT OF THE SOCIETY.

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ADDRESS.

Gentlemen of the Suffolk District Medical Society:

I CANNOT but regret, that from the number of strictly medical subjects, which are so readily and pressingly presented to my mind as legitimate topics for a discourse, I am not at liberty to select some *one*, as a subject for this evening. But I am aware that the occasion requires an address of a different character.

Although we have met for years, under the broad panoply of the parent society, of which we are a branch, and conjointly with our professional brethren from all parts of the Commonwealth, have engaged in the intellectual and social pleasures of the anniversary; and although nearly the same individuals here present have annually, and sometimes more frequently, met in that City association which is designed to establish and perpetuate a Medical Police, we are now met in a new relation; we are convened to recognize the formation of a new organization. On this our first appearance before the public, as a distinct Society, and honored, as we are, by so large and flattering a representation of the intelligence and influence of the community, I think I shall

meet the wishes of this audience more exactly, if I take for a subject that which should alike interest our profession, and the community in which we exercise our professional calling.

May I solicit your attention to some desultory remarks on the relative position of the medical profession with the public?

To understand the present, we must recur to the past. We have no quadrant, by which to ascertain at a moment's view, what is the precise point which the profession occupies, as it passes along the sea of time. We must examine the chart by which it has sailed, and note the incidents which have occurred, to learn where we are, and how to shape our future course. When some of us, who are here present, entered upon the stage of active professional life, the practice of medicine was very different from what it now is. I do not mean the mode of practice — although that is greatly changed by progressive improvement—but the relation in which the physician stands, towards his patient and the public; the estimation in which he is held by the one, and the influence which he exerts upon the other. At that period, although the reverential awe with which the physician was regarded in ancient times by the great mass of mankind, had been removed from the minds of men, especially of the well-informed class, there still remained a willing submission to the guidance and unlimited control of the physician. It was thought, even by the educat-

ed, that the subjects which engaged the attention and study of the physician, were, from their nature, such as to be comprehended by him alone, who gave to them his undivided attention: that to the physician only, Nature revealed her hidden secrets, and Art imparted some mysterious power. Hence, there was an unlimited confidence in seeking and in following medical advice. The high standing with the community, for moral character and intellectual acquirements, which those gentlemen held, who preceded the time of which I speak, and who were then the leading men in medicine—nearly all of whom passed, within a short period of time, in advanced age, from the stage of life; and the equally elevated moral position and still higher professional attainments of those who immediately succeeded them, and who still remain among us, the honored fathers of physic, served very much to continue that reverential regard paid by the public to the profession. Nor was this deferential respect conferred only upon those who might more justly claim it as their due; but it was extended to all who legitimately exercised the healing art. It was bestowed upon the office, as well as upon the men. Although not equally, all shared this confidence, and exercised a measure of this power. The prescription of the physician was not then scrutinized as now, nor his judgment often disallowed. A confiding trust, almost a blind credulity, possessed the public mind, in the skill and intelligence of physicians. The spirit of inquiry

then slumbered in the public mind, and the sources of distrust had not yet been opened.

But things could not long remain in this condition: the genius of the people was against it; the constitution of the country was against it; the existing facility for acquiring knowledge was against it; the growing affluence of an intelligent and industrious community was against it; and above all, elements were at work in the physical world which were calculated to undermine medical influence.

My professional brethren, where is now that blind, confiding trust? Has it not faded, as it ought, before the light of truth? Where is that reverential awe, where that deferential respect? Are they not "in the deep bosom of the ocean buried?" Where is now even a just estimation of intelligence, integrity, and truth? Is it not withholden? That it has been unjustly withdrawn, will, I think, appear, as we proceed to consider the causes which have produced this result. Let us notice some of these, before we denote more distinctly the present condition of the profession. What has wrought this change in the public mind?

Since the introduction of that great agent by which space has been almost annihilated, and time made to perform a triple task—an agent changing the whole face of the world, and altering the aspect of all the relations of civilized life—since, I say, the introduction of steam, for the thousand purposes in

which it has supplied the place of human labor, and especially, since its application to navigation and to rapid locomotion, the human mind, roused into unwonted action, has been driven as by a tempest from its usual course; and, as this wonder-working power exhibited its applicability to new and important objects, a feverish expectation was produced which reason could not bound.

Not content with the application of this agent to the mechanic arts, to navigation of the seas and to railroads, men seem to have expected that it would take the place of other powers, equally established with this by the laws of Nature. Even the law of gravitation was to be set aside by this new power. Not satisfied with the triumphant navigation of the seas, the air was to be traversed by aerial ships. Not content with the wonderful rapidity of thirty, forty, or even sixty miles an hour, upon the surface of the earth, men wished to "ride upon the whirlwind, and to direct the storm."

To strain still more this unnatural tension of the intellect, and to pervert still more this untoward judgment, the physical world was ready with another development, hardly less wonderful and exciting. Men and things had been transported with unheard-of speed; now, words and thoughts, being incorporeal, were to be carried with an increased velocity. Material things might move by the comparatively tardy motion of steam, but the breathings of the mind, being spiritual, must have the speed of

the lightning's flash. Electro-magnetism, which had engaged the attention only of some philosophers, at the time when Oersted first described the nature, and the operation of the combination of its component parts, drew the observation of the scientific world, when it was practically applied in furnishing a time-keeper, more useful and correct than even the sun-dial. Its power was then estimated, and it was applied as a mechanical force. But it did not fix the attention of that great mass of semi-scientific men — who ask not, so much, "What is it?" as, "What can it do?" until the construction of the Electric Telegraph. The first flash over the wires, was as if an electric shock had passed through mankind. Men's minds, already strained, were over-excited by observing this new wonder; and now, not satisfied with the marvellous result of speaking, to be heard for hundreds of miles, and even from country to country, in a few seconds of time, the common people wished and expected that matter, as well as mind, should be conveyed over the electric wires: that something like electric steam was to carry material things in safety as quick as the passage of light.

Other scientific discoveries have served to increase and to continue this reign of the imagination over the judgment. The introduction of the Phototype, by Daguerre, attracted the attention, and excited the wonder of the world; and the later improvements in the application of this principle, by Talbot, rais-

ed still higher the fanciful expectations of men. It was well calculated to inflame the imagination of proud, aspiring man, to use the solar rays for his pencil, and to delineate external things, with unerring truth, by controlling the touch of light.

A flood of improvements, more or less engaging, have been poured upon the public eye or ear, by the modification, or adaptation of some one of these great principles to new objects. Almost every steamer, on its arrival at our ports, brings some new discovery in science or the arts; and carries, at its departure, some new invention in machinery. In arms, gun-cotton is offered for gunpowder; the deadly Paixhan gun takes the place of the ancient cannon; the revolver is used for the single tube; the rifle is safely discharged without flint or percussion cap, by the aid of detonating powder, hitherto supposed so dangerous.

But it is not my purpose to enumerate the thousand fruits of genius, which have been produced; the mention of which, would occupy our allotted hour. Science has led Art to the connubial altar, and their progeny is legion. I have said enough to show that there were causes sufficient, not only to rouse, but also to excite and to distract the public mind. It has been diverted by all this, from a calm contemplation of truth. A feverish thirst has seized the public, and the intoxicating draughts which have been taken to quench it, have but inflamed the body. A desire for novelty has been extensively

diffused throughout the community. A wish for change—for something wonderful or startling—has occupied the public mind. Old foundations have been broken up, and new fabrics have been constructed, many of which have proved without a basis. Such has been the general influence upon the mass of men—not upon all of every class.

It has been our consolation in times past, as it is still our happiness, to know that the number is not small, of those steady, intelligent, and thinking men, who cannot be easily deceived by a new chimera. But still, it remains a fact, that credulity, and not scepticism, is the feature of the age. Men believe too much, rather than too little, on subjects upon which they have no perfect comprehension. We may easily see that this state of mind and feeling is calculated to act powerfully on the subject of medicine.

Medicine, although it contains no hidden mysteries, to be revealed only to a few, embraces an extensive field of knowledge—a field much too large to be cultivated by those occupied in other pursuits. Hence, it is impossible for those who have not engaged in it as an especial study, to have a just understanding of its theory or its practice. Something may be gathered by observers of the principles which govern medicine, and something may be learned by them of their practical application; but such men are not qualified by habit or education to know much, or to discern clearly, on this subject. The desire for novelty leads some to re-

gard the precepts and practice of medicine without favor, because they are old; and the love of the marvellous induces many to cherish visionary substitutes as excellent, because they are incomprehensible. With not a few, a theory—if the idle speculations of the day, or rather the vain abstractions of the enthusiast, can be dignified with such a term—cannot be too ridiculous, too much opposed to common sense, to be believed. Claim for some new doctrine but a slight deviation from the laws of nature, and it will not be sufficiently exciting to be received; but assert for it some supernatural agency, and its proselytes are numerous! Should you declare, that by some new process the eye could be made to see more minutely or extensively than is natural, it would hardly be enough to arrest the vulgar attention; but place the sense of sight in the occiput, and you may have a host of adherents. Say that the touch can be made to discriminate, not only the colors of a manufactured texture, and even to discern the colors of light in the prism, this would not satisfy the wonder-loving world; but declare that it feels that which is not touched at all, that it finds tubercles in the liver, and tumors in the abdomen, in patients that were far out of the reach of touch, and the marvel is enough to stamp the silly lie with the seal of truth! How can such credulous minds appreciate the unadorned and simple principles on which a rational medical practice is formed? Would that it could be said with truth,

that this ignorance was confined to the uneducated and the vulgar! It is not so. All classes, except the sober-minded, reading class, furnish their quota of superstitious followers. The lower middle class of society abounds with them; and the upper class in fortune and fashion, furnishes not a few, who are ready to countenance and foster these delusions. One, moving in this circle, has been heard to declare, in a public place, that a particular bonesetter was born with the knowledge which he assumed to possess; and when reminded, that, by its nature, knowledge was that which must be acquired, to assert the more strenuously, that with him it was innate. And on this perversion, the highest surgical authority in our community was put down, and the most arrant quack exalted.

There is also a legal spirit, which blinds the judgment of some, even of the learned, and of those who are enlightened in other matters, which prevents them from rightly appreciating physicians, or the truths which they present. These receive or reject asserted facts, by the number and respectability of the witnesses who say they saw them, without regard to the utter incompetency of such, to judge correctly on the subject, even of what they think they saw. The oculist has been assailed with the declaration of the astonishing deed that he had done, in removing an eye from the orbit, washing and replacing it. And when the miracle was denied, he has been silenced by the conclusive testimony of three wit-

nesses, who said they saw it done! The able and learned lawyer has been known to express his belief in that which the physician knew to be impossible, because four upright, intelligent and faithful gentlemen, declared that they had witnessed it.

The evidence of one who fully comprehends a subject, should outweigh that of a hundred who cannot know, and whose senses, even, may be deceived. Cases might be cited where this blind spirit has reached within the courts of civil law; but unfortunately, they are too frequent to need to be presented.

Before we notice the influence of this state of public sentiment upon the profession, let us trace the progress of medicine, during these changes of the world, and note its present position. And it is an agreeable task to turn from the contemplation of that, which must grieve the philosopher and sadden the philanthropist, as much as it injures and discourages the honest physician, to follow the march of medicine through the fields of knowledge.

Let us revert to the period which preceded this excited state of the public mind, and trace the progress of medicine through the stormy seas of the last thirty or forty years. What has the great body of physicians been doing, while the world has been tossed with such convulsions? How have we of this city, of this community, been engaged during the spasmodic movements of society? Let us answer these inquiries.

At that distant time, the position of medicine among us was such as to adapt it peculiarly for progressive improvement. Before the old physicians of that day had left us, a medical school had been established in this city, connected with the highly-renowned University at Cambridge. After the death or resignation of those who were its first Professors, it fell into the hands of those who still instruct, or who, having but lately retired, still watch over its interests with a faithful solicitude. The influence of this school has been greatly felt in giving shape and character to the whole profession in this community; and this influence has been of the most salutary kind. It has been a fortunate circumstance that it remained so long under the direction of those early associated with its interests; and a still higher subject of gratulation, that those were the hands of honest and enlightened men. There were not, with these gentlemen collectively, any particular doctrines to advocate, or with any one of them, any particular views to advance. There was not, then, and there never has been since, any extraordinary theory to be established, nor any extraordinary practice to be recommended. The Professors learned, that they might instruct; they studied industriously, that they might teach correctly. I proclaim it, with a proud emphasis, that the Boston Medical School has been, for these last thirty years, remarkably free from theories that were untenable, or teachings that

were uncertain or unsound. I do not utter this under the pressure of the official toga, which I have never worn; but I record it as the tribute of a grateful pupil. I thank my instructors that I was not early indoctrinated in error, or enlisted to do battle for the theories of a party.

The condition of medicine, in the old world, was favorable to the truthful instructions of this school at that early period. The Brunonian system, which a Scotch reviewer said, "had killed its thousands," had yielded to the milder doctrines of Cullen. Two opposing modes of practice—the heroic treatment, in England, and the expectant, in France—engaged the attention of the medical world. This school was not so near as to be drawn into the vortex of the one, or wrecked upon the rocks of the other; nor yet so far removed as not to observe the workings of both. Perhaps from sympathy, and more frequent intercourse with the parent country, there was, then, a predominance given to the therapeutics of England, as there is now to the pathology of France. But still, pledged to no system, observant of all that took place, both at home and abroad, this school has exercised an extensive, as well as a healthy influence, on the profession in this community, and in this commonwealth. Its opinions and practice have been generally adopted. Medicine has thus become so identified with this school, that the history of the one is also true as applied to the other. I need not, therefore, follow its honorable

and distinguished course, but speak of the medical body, of which it has been, and still is, a prominent and important part. Let us, then, trace the steps of the profession, as they are made by the whole body, by associations of parts, or by individuals.

The physicians of this place, as a body, have been most happily, free from prejudice, free to observe, free to think, and free to act. There is no conspicuous error, no prominent false theory, no general injurious practice, that can be pointed at, as distinguishing medicine, in this community. This is an important fact, and one which should receive the attention, as it deserves the approbation, of the public. Had physicians here vacillated from theory to theory, or changed from practice to practice, laying aside one jaded hobby to ride another, they might justly have forfeited the regard of the public. But they have been remarkably steady and consistent in their course. That which was new in science or art, and obtained a footing here, has borne the test of time; while that which has been laid aside, elsewhere, as false, has never been adopted here. We have not, therefore, had the mortification of denying that, which we once asserted, nor of being compelled to adopt that, which we once condemned.

In illustration of this. The simple, and therefore captivating theory of Brown, which makes all diseases to consist in debility, and, consequently, to require stimulants alone for their removal, was never in favor here. This system had nearly gone out of

vogue, after having beguiled a large number of physicians in the old, and not a few in our own country, before most of us entered upon our professional studies. A few of us witnessed its expiring gasp. Broussaism, which made the digestive organs the origin of all disease, never prevailed here, as a general system—nor other phases of the Physiological doctrines, which were hypothetical. Nor has Solidism, even when modified by modern improvements, been the exclusive system of the day; although, in this last, a broader foundation was laid, in truth, and the superstructure, in some parts, would bear the test of observation.

As a body, the physicians of this city cannot be justly distinguished, at any period, as Humoral Pathologists, as Brunonians, as Broussaists, or as Solidists. These, as systems, have come, and, for the most part, gone; but they have each "left its trace behind." No system, which could at any time receive the sanction of a considerable portion of the medical world, could be utterly devoid of truth. There must have been something worth retaining in each of these; and there have been hands among us to pluck the flowers, and reject the weeds. Of the humoral pathology, something has been retained even to the present day; and that it contains yet more that is true, animal chemistry and the microscope have recently shown, in exhibiting those actual changes in the blood in disease, which were before taken on presumption; and it may, if I mis-

take not, be also seen by the careful observer, in some of the practical effects of the hydropathy of this day. The long successful, and distinguished career of one,* whose setting sun those of my age may have witnessed; in whose tall form was held the nearest likeness to the doctrines of John Brown; would seem to show that, although all diseases are not those of debility, at least some of them can be made so by heroic treatment, and then removed by stimuli.

The equally long confidence of a discerning public, in the successful course of another,† as a surgeon and physician, to whom Broussais himself points, as the first to designate that great feature of his doctrines—the pathologic influence of the organs of assimilation—may be regarded as a proof that there is no small degree of truth in the doctrines which he taught. Perhaps there is yet more to be culled from these, before they are dismissed; and from their practical application, as adopted by such men as Hamilton and Abernethy, before they are discarded.

From all these, but mostly from the pathology of the solidists, physicians here have taken the materials for the theory and practice of medicine; not to construct a new, or peculiar creed, but to retain whatever of good has been apparent in all. In the

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* Samuel Danforth, M.D.

† John Jeffries, M.D., the father of the writer of this Address.

adoption of doctrines, or practice, they have been neither rash nor diffident. They have not rushed to receive one new promulgation because it was plausible, nor refused assent to another because it was strange, if it would bear the test of experience. It may be truly said, that they have been eminently conservative.

Such was the condition of the profession here, when, some eighteen years since, France heralded the discovery of a new path, which should lead much higher up the hill of medical knowledge. Louis, that master of pathology, whose escutcheon is, "Truth is in Nature; not in my fallible understanding,"—that close observer of phenomena, that careful recorder of facts, that uncompromising adherent to truth—he it was, who brought the science of numbers to bear upon the art of medicine, and who, more than any other, has elevated that art into the regions of that science. If the method of Louis was only the numerical system, which some suppose, its introduction would have been of incalculable service to medicine. When it is shown that nature, whose laws are as inflexible as truth, has, in a vast number of cases, fixed a sign upon a disease, that sign is diagnostic; it is the multitude of times that she expresses it, which proves to us that it is her law. Numbers cannot prove false. But this is very far from all that that master spirit has done for us. He who thinks otherwise, has never entered with him into that vast field of knowledge which

he reaps. Louis has not only shown that we must prove facts to be such, by numbers, but he has also shown us how we are to investigate those facts. It is quite as much the manner in which he investigates, as the matter which he brings forth. He does not only place the harp before us, and tell us, "There is music there," but he teaches us how to tune and strike its thousand strings.

Now it is this method of investigation which has so greatly improved medicine among us. We do not err when we date the beginning of an important change in medicine to the teachings of Louis how to observe disease. Before this, what was called experience was the highest guide; but what is this but a false application of the numerical system, fallacious as the memory on which it relied, and limited as the record to which it trusted? But now, facts were to be observed, and hypotheses discarded. It was no longer, "What do we think?" but "What do we know?" The change wrought in the minds of men was remarkable. Theories were to be tried by the numerical test, and practice was to be brought to the same bar. Each and every medicine, hitherto supposed to be beneficial, was to be tested anew. Authority, with its lofty brow and stately carriage, ceased to command obedience. In fine, all that was called knowledge, in medicine, was to pass through the purifying process of numeration.

In connection with this subject of an improving change, I beg to call your attention to another inci-

dent, originating from one of our own number. In the year 1835, a dissertation was read, by a late President of the Massachusetts Medical Society,* before that body, on the subject of Self-Limited Diseases. I am sure that I am within the bounds of conceded fact, when I say it had a most powerful influence on the Fellows of the Society; nor do I think I should exceed those bounds, if I should say, that on no occasion of a public medical address in this city, was a greater good ever effected. Original in thought, simple and lucid in construction, enclosing an extensive field, it exhibited distinctly the important truth, that over some diseases medicines had no control; and that they had no power, with a large class, to arrest or cut off morbid action. It led to a careful examination of the efficacy of remedies hitherto relied upon, and to a distrust of whatever was hypothetical. It took from under them the foundations on which some physicians rested; and induced all to scrutinize more fully the ground on which they stood. It was happily conceived, ably executed, and produced at a most propitious time. It introduced the name of Louis, perhaps for the first time, to some, and directed the earnest regard of all towards the subjects and the manner of the investigations of that great man.

From that time, the march of medicine has been

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* Jacob Bigelow, M.D., Professor of the Theory and Practice of Physic in Harvard College.

onward and upwards. By some, indeed, it has been thought, that the system of Louis and his school has, by the destruction of efficient practice, tolled the knell of physic; that so much has been found in the administration of medicines that was injurious or superfluous, that it must fall in estimation as an art; so many of its hypotheses had been proved fallacious, that the whole science should be condemned. But this is far from truth or justice. It has been the refiner's process. The more of dross which has been removed, the purer has been the metal which was left. Medicine, as it got rid of the clogs of error, has mounted higher and higher in the regions of truth. Knowledge has been increased, and from the nature of the case, must go on increasing. The sources of knowledge are careful observation and recorded facts. These can neither err nor change; so that, as time advances, the amount and the variety of facts must be augmented, and the sum of knowledge greatly increased.

The influences which have thus borne upon the medical character, have effected a change, which, from its nature, was calculated to affect materially the opinions of the community, in relation to it.

Physicians, as truth required, have not hesitated to declare a theory to be unsound when they have found it so, however long it had been cherished; they have not hesitated to confess some diseases beyond their control, and others to allow of alleviation, only, as soon as they knew them to be such,

however opposed to what was thought experience; they have admitted the inefficacy of many remedies, and the injurious influence of others, as soon as they had proved them such, however contrary to pre-existing opinions. They have openly declared an error when they have detected it, and honestly abandoned what they have found pernicious. This frankness and honesty has exposed them to distrust, when it should have commended them to regard. A measure of confidence has, consequently, been withdrawn, by some in the community, on the ground that they have distrusted themselves. And even the whole science of medicine has been condemned, by partial minds, because some of its teachings have been shown to be untenable; and the art of healing has been partly abandoned, because some of its appliances have been acknowledged to be ineffectual. Thus physicians are unjustly fallen in public estimation.

Let us now briefly advert to some of the improvements in medicine, which have taken place during the last quarter of a century, in this community; and it will evidently appear that, so far from deserving this low position, the profession, as a body, has never stood on so lofty an eminence for knowledge and integrity as now—never was more deserving of confidence and respect.

But a few years since, the dissection of the human body was attended, not only with the difficulties which are necessarily associated with the operation,

but with no small degree of personal danger, and of much risk of standing and reputation in society, on detection. In the year 1830, it was legalized by the Legislature of the Commonwealth, on the application of the Massachusetts Medical Society. For the accomplishment of this, the Society has recorded its thanks to a distinguished member of the bar, since dead.* Those who knew of the steps taken in that matter, and who were most efficient in accomplishing that important object, can tell of the debt of gratitude which the profession, and, may it not be said, which the community, owes to one, who has for some years presided over the interests of a neighboring District Society.†

By this civil enactment, the way was opened for physicians to lay firmly and broadly that corner-stone in the temple of medical knowledge which anatomy has wrought. Anatomy! the basis of medicine, which reveals the formation of tissues, the construction of organs, and the relation of parts; which shows to the scientific surgeon what are the structures involved in injury or in disease, and to the operative surgeon what his scalpel may not touch, and where it may safely go in removing disease. Anatomy! which, alone, opens the door of physiology, teaching the functions of organs, the nature and use of parts, the power and influence

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* John Brazier Davis, Esq.

† Dr. Abel L. Peirson, President Essex District Society.

of each and every structure. Anatomy! the groundwork of true pathology, which tests the doctrine of diseases, exhibits the location of abnormal structure, and proves the nature of morbid affections. Anatomy! which not only lays the foundation, but enters into every part of the superstructure of medical science. And the opportunity offered was gladly improved by physicians:—they have availed themselves of this, the most important means of knowledge in their profession.

Anatomy has been diligently, deeply and minutely studied, in this city. The result of this has been to give confidence to the surgeon, and stability to the medical practitioner. In the prosecution of this study no suggestion has been allowed to pass unheeded, and no real improvement has received a tardy sanction. And, in its furtherance, no new appliances have been omitted. The important aid of the microscope has been called into full play, to elucidate structure and re-formation. The cell formation has been, to some extent, tested in animal and in vegetable matter. Every tissue has been examined, every texture sought to be unravelled. Every solid, and each fluid, has revealed to the microscope what was hidden to the natural eye. Things, unknown before, have become diagnostic signs of specific disease. Thus anatomy has become minute, to a degree hitherto unknown, and perfect beyond former experience.

Nor is it only the demonstration of the parts

of the body which has been made. The institutes of anatomy have been studied and taught; the principles established by nature, in the formation of man, have been sought out and proclaimed; the body has been studied, not only constructively and physiologically, but also psychologically. Diseased tissues, disordered functions, and mental aberration, have been examined together. The connection between mind and matter has been pursued, until fact ceased at the verge of hypothesis.

But it is in pathological anatomy that the highest attainments have been made. It is here that anatomy has produced the most practical results, and has proved most beneficial to suffering humanity. In this subdivision of this all-important branch, we have reason to be proud. If we have not all been original investigators of the varieties of diseased textures, we have had the benefit of the observations and instructions of one* who, although junior in years, to many of us, has been, on this subject, our senior in knowledge. No city in the old world is more favored than this metropolis, in possessing a thorough, intelligent, and able teacher of pathological anatomy. And the light, which modesty might have hidden, has been brought out and made to shine abroad. Information on this subject has been generally disseminated; so that, at no former time, has so much been known

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* John B. S. Jackson, M.D.

among us, on the subject of diseased texture, as at present.

In comparative anatomy, also, that much neglected branch, in former times—in which some of us have given the results of our unskilfulness, as our acknowledgment of its merit—much is now acçomplished. By the establishment of a professorship in this branch, at our time-honored university, this study is now made permanent, and the opportunity for further investigations and teachings is freely offered. Comparative anatomy, which establishes general laws in animals, which proves special laws in man, now reflects its light upon the human body with a distinctness and clearness before unknown among us. Let the great sagacity and marked intelligence, which were so lately exhibited in our highest court of law, in that sad trial which has so much harrowed our sensibilities, attest to the community the importance of these researches, and the elevated position which they have attained.*

The manner in which the investigations and conclusions of Laennec, with regard to the diseases of the chest, were here received, affords another honorable testimony of the integrity and intelligence of the medical body. There was so much of slowness as to exhibit caution, and so much of promptness in adopting his new mode of examining thoracic

* See the evidence of Dr. Jeffries Wyman, Professor of Comparative Anatomy in Harvard University, given at the trial of Prof. John W. Webster.

complaints, as to show the clear-sightedness to appreciate, the justice to approve, and the propriety to adopt, both the discrimination of these diseases which he made, and the method for their detection which he taught.

Ever since the first introduction of the views of Laennec, the knowledge of the diseases of the chest has been constantly and steadily increasing. There are among us some, whose teachings and whose writings, on this subject, justly entitle them to be experts in auscultation; and there is a degree of accuracy throughout the profession, in detecting and in treating these complaints, which may well compare with that of practitioners in any other place.

In surgery, the improvements have been, perhaps, greater and more directly practical than in any other branch of the profession. Time would fail me even to recount the various points on which improvement has left the impress of her hand. Of whatever nature, and however numerous, these have been, if they have come commended to the judgment, and especially if they have borne the test of experiment, they have been readily adopted.

In all the subdivisions of this important branch, great advances have been made. In operative surgery, there is a skill and confidence, derived from a more accurate knowledge of anatomy, which has effected the result in capital operations, and increased the benefit in minor cases.

Plastic surgery is no longer a mere mechanical

attempt to remove deformity, but is now studied in its relation to physiology, and to a correct pathology.

Ophthalmic surgery has justly taken a high stand, for its successful results. The facilities afforded for the study of the diseases of the eye at the Infirmary, where larger numbers of cases are presented for treatment, has tended greatly to this result; and the separation of this, as a distinct branch of practice, has perhaps done no less to improve a knowledge of these complaints, and promote a skill in operations. Ophthalmic literature has also received its contribution of valuable material, from some of the oculists of this community.

Dental surgery, which has sprung into existence as a separate branch of practice, within a comparatively short period, has assumed a great importance in relieving suffering, and in promoting the comfort of almost every individual. This is no longer merely a mechanical art, beautifully executed in its manipulations, but it has become a science, founded and practised upon an accurate knowledge of the healthy functions, and the diseased action of the animal economy.

Tenotomy has presented another field, where surgery has reaped new laurels. It is not only in removing deformities, so generally and so safely, that this art has proved most highly beneficial, but also in elucidating the fact that structures of fatal consequences, to be exposed to atmospheric influence, may be safely reached by sub-cutaneous division.

Operative surgery has stood high in this city, for many years—perhaps nowhere more so—and medical surgery has of late been making rapid advances in improvement. The distinction of tumors, and the accuracy with which their character is detected, under a careful observation, aided by the microscope; the constitutional character of malignant diseases; the nice discrimination of affections of the different textures of the same part; the simplicity of dressings; the efficacy of cooling applications; the powerful influence of dietetic treatment; these are among the benefits of a rational medical surgery.

Scientific surgery was never more elevated than it is now. Its institutes are taught in our schools, and the whole science is studied and followed with a zeal, a fidelity, and an intelligence, which promise for it a yet more elevated position. From what we now possess in this branch, we may justly expect to stand, if not unrivalled, at least equal to any, in teaching the principles and the practice of surgery. We have among us scientific surgeons, who are well qualified for the performance of any and every operation which reason can require at the surgeon's hand. There have been lately performed, in this city, operations which have tried the confidence and skill, the self-possession and the knowledge of the operator. And they have been done in a manner to warrant distinguished success.

In medical practice, as distinct from surgery, there

has been a very great and constant improvement among us, for many years. The sources of knowledge have been multiplying for the medical practitioner, and he has gladly and faithfully availed himself of all the advantages which have offered. The result is seen in the careful attention to the investigation of diseases; in the more accurate diagnosis; in the prudent administration of medicines; in the more certain prognosis; and in the more successful termination of cases. The medical practitioner of this day is distinguished not only by his skill in thoracic complaints, but also by a more accurate knowledge of other classes of disease; among which, as most important, may be mentioned the diseases of the skin, and the diseases of the mind.

Individuals have given special attention to cutaneous disease, and thus, not only have themselves acquired greater accuracy in their discrimination, and adopted a more correct mode for their treatment, but, as is always the case, where a few investigate closely, many follow the pursuit, by drawing the attention of the profession to these diseases, and by furnishing facilities for their observation and treatment, they have been instrumental in diffusing a more general and more thorough knowledge of these affections.

Perhaps there are no points in the daily practice of an accomplished physician, in which he acquires the confidence of his patients, and their friends, so

readily, as by a prompt and precise discrimination, and by successful treatment of cutaneous and ophthalmic complaints; because no diseases so much arrest the attention of people, or are so open to their observation. Physicians have been aware of this, and have given to them a more careful investigation.

Time will not allow me to give more than this general notice of the progress of practical medicine, and to mark some of its very many and highly useful improvements.

The physician has been aided in all this by the assistance afforded by Chemistry — the sister science of Medicine. This science, which has done as much, or more, than any other for the furtherance of the arts, for manufactures, and for agriculture, has also given an efficient assistance to the practice of medicine. Among its important discoveries, that of the active principle of plants, and the extraction of portions possessing known properties, in a concentrated form, so much more convenient for administration, and capable of so much more exact estimate of their effect and influence, is one of great benefit to the relief and comfort of the patient, and to the precision and confidence of the physician. The bulky forms of nearly all the most useful articles have given way to the more elegant productions of modern chemistry. Thus we are indebted for that exceedingly useful class of medicines — the alkaloid preparations of the Ranunculaceæ.

To the chemist, also, the physician owes a debt of gratitude for another extensive class of remedies:—in the combination of iodine with so many valuable drugs, furnishing in the iodides, concentrated and efficient agents for daily practice. But it has, perhaps, done yet more in the analysis of the secretions and the elements of nutrition of the human body. Animal chemistry has done much, and is doing yet more, to reveal to us the elements of a morbid condition, and to teach us how to remove such abnormal states, by the proper application of counter agents. This study is receiving its just attention among us, and will, unquestionably, ere long, find its position, and no doubt a high one, in the scale of useful knowledge. Let us remember, with grateful pleasure, that one of our own number,* upon whom has been bestowed the highest honor which can be conferred from abroad, did, in a series of experiments upon the gastric juice, so long ago as in the year 1834, go far to show the chemical affinities of vital action; and, in his declarations then, and since, assert the principles of animal chemistry, which has been illustrated by Liebig and his followers. Let us also pay to the science of chemistry the tribute of our united respect, for the use of those astonishing agents, the introduction of which has been the crowning glory of the age. For, in whatever way it may be thought that the anæsthetic

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* Charles T. Jackson, M.D.

agents were introduced, there can be no doubt that, from the laboratory of the scientific chemist, issued the suggestion, which, when ripened into practice, has proved a blessing second to none ever yet discovered, for the relief of suffering humanity.

There is a yet broader and deeper principle, to which medicine owes its elevation among us, more than to any or all of those to which reference has been made, and to which it must look for its greatest activity and strength.

I mean the principle of association:—which collects the scattered fragments of knowledge, and builds the temple of science; which gives force and energy to every undertaking in which man can engage; which ensures success in every thing possible of accomplishment.

In human labor, it has produced stupendous constructions. The pyramids of Egypt, the temples of Carnac and Luxor, with the rest of extensive Thebes, are the product of this principle, with the ancients; and it is hardly less in modern times, in circling the earth with iron bands. To the arts and sciences it has given a most efficient aid. No art has advanced without its fostering care, and none has languished under its direction. No science has grown, without its maturing influence; and none has dwindled, under its auspicious aid. In literature, it has been the one bright sun, which has given light and heat to all the varieties of intellectual effort. I need say little to recall to this

enlightened audience what associations have done in the department of letters.

From the first enlarged idea of literary societies, by Lord Bacon, and even from the rude and defective attempts at associations, in the time of Charlemagne, this principle has been at work, to enlarge, to cultivate, and to render useful the powers of the human mind. Societies, which will probably last while time endures, have been brought into existence. The best act of the careless Charles was the institution of the Royal Society of London. And the sagacious Richelieu knew well the power of association when he patronized and encouraged the first members of the French Academy. England, Scotland, France, Italy, and Germany, have, for more than a century and a half, had societies for the promotion of knowledge, which have survived the fall of political dynasties, sending forth lights to illuminate the world. We owe something, also, to lesser associations for what they have done for literature. Most of the great men of our mother country and our own, have been men of social and literary clubs, to which we are indebted for some of the rarest gems of poetry, and for some of those sparkling effusions of wit and humor which delight us in our merry mood.

I may not linger here to speak of such men as Goldsmith—who, though he did not shine at the club, was influenced by such a literary union—of Campbell, for whose intercourse with the literary

men of Edinburgh we are indebted for the "Pleasures of Hope"—of Beaumont and Fletcher, whose united hearts have favored us with the sweet thoughts of their united minds; nor of the host of constellations in the firmament of literature, placed there by the power of association. Nor have I time to notice the social and scientific meetings of physicians, which have done so much for the promotion of medical science. From such, in London, have emanated some of the most valuable discoveries in our art; and it may be, that to such an one we are indebted for some of the deep thoughts of the reflecting Hunter.

We have availed ourselves of the power of this principle for the furtherance of medicine, and of the collateral branches of science, in this city. Let us notice some of the institutions to which it has given rise among us.

"The Natural History Society," now so prosperous, and so justly esteemed by the enlightened part of the community, besides its distinguished head, numbers among its most efficient members some who are conspicuous in the medical profession. Associated effort has accomplished much, in founding and building up, within a few years, this important society; which, from its intimate relation to human anatomy and physiology, has produced no small amount of information for the benefit of medicine.

Other associations, more strictly medical in their

character, have, for a long time, exercised a powerful influence in advancing the cause of medicine, and in promoting public welfare.

"The Massachusetts Medical Society," binding in one the physicians of the Commonwealth; giving the same standard of education to the centre and to the extremities of its body; diffusing an uniformity of practice, and of views, throughout the State; everywhere, and always, most highly respected, and thus exercising an extensive influence upon the public; has been the one great means of sustaining, supporting, and establishing a high medical character, and of securing to the public, that which was designed by its charter, the protection, assistance and service of an intelligent and faithful medical body.

"The Massachusetts General Hospital" has been the most instrumental means in advancing practical medicine among us. This institution occupies a position, as conspicuous in the promotion of medical science as does its noble edifice among the architectural ornaments of the city. The importance, to the medical student, of an opportunity to witness daily and extensive practice, is readily acknowledged, and the value of clinical instruction can hardly be over-estimated. This hospital has offered such facilities in an eminently successful manner. It has had, since its foundation, a steady and an increasing influence upon medical character; benfiting, not only pupils, but those engaged in practice, who must always be regarded as students in medicine.

"The Tremont Medical School," of later origin, but of sufficient duration to present, from among its former pupils, those who are now prominent as practitioners, has been another nursery for medical education. The system of teaching adopted here is a vast improvement upon the former mode of study. The daily recitations of this school, and the clinical instructions of the hospital, may be justly regarded as the most effectual aids which medical education has enjoyed in this city.

"The Boston Society for Medical Improvement," including much of the activity and intelligence of the profession here; holding frequent and highly interesting meetings for the purpose of medical improvement; possessing one of the finest collections of specimens of morbid anatomy in the country, under the supervision of the able professor of morbid anatomy of Harvard University; has had a powerful influence in eliciting information and disseminating knowledge. The cabinet of this society offers one of the strongest objects of attraction to medical strangers. The objects and pursuits of the society were precisely those which were most required in our community; and, so far as it has extended, it has produced a most beneficial effect. That it has the highest respect and most cordial good wishes of the whole body of physicians, is manifest from the alacrity with which all the profession, even those not recognized as members, have furnished subjects for discussion, and specimens for the cabinet.

Another society, of more recent formation — that for "Medical Observation" — is nearly allied to this, in its objects, and very similar in its organization. This efficient association is in the hands of some of the junior members of the profession, who bring to it an ardor, activity and intelligence, which ensure its success. It is destined to exert no inconsiderable influence on the prosperity of the profession, and the advancement of medical science in our midst.

So, also, we may hope, will be the influence of the "Boylston Medical School," under the direction of nearly the same individuals; yet in its infancy, but which supplies a deficiency which has, of late years, existed in medical education, by the delivery of a course of lectures on the diseases of the eye, and instructions in that much neglected, but most important branch of study, the affections of the ear.

Once more has this principle of association been brought into action by the formation of the "Suffolk District Medical Society," whose commencement we are assembled to celebrate.

The parent society, although accomplishing so good a purpose in uniting the medical profession in the Commonwealth in one body, was not designed for, and could not accomplish, the purpose of an instructor, in the various branches of medical knowledge. Its members were too widely spread to avail themselves of frequent meetings, for medical improvement or social intercourse. Feeling its weakness in this respect, it now requires, by its new

code of by-laws, what it formerly permitted or advised: the formation of subordinate societies, in every part of the State, which should reach, in their action, every thing which has relation to medical character. It is in the efficiency of these her children that the parent society is to gather her strength, and by these, the arms of her body, that she is to accomplish her most extensive and useful work.

The other societies, of which mention has been made, although right in kind, are all limited in extent, not embracing the whole body of physicians, in this locality; besides, as they do not owe allegiance to the general society, they are not so well calculated, in their isolated operation, to influence so powerfully the general medical interest.

The reasons for establishing District Societies, throughout the Commonwealth, are somewhat important. With a greatly increased population, there has been at least a proportional increase in the number of physicians. This affords greater facilities for professional and friendly intercourse, as a larger number can now be convened in the country towns, within a limited distance, than heretofore. It is most desirable that such societies should be generally formed and efficiently maintained.

Another consideration is found in the fact, that the general society cannot, in some of its influences, reach the extremities so fully as the centre of the body. This evil is very much removed, by making

various centres, for separate minor associations. Where District Societies have been most active, the beneficial influence of the parent society has been the greatest. If they were more extensively established, its benefits would be more universally felt.

There are other objects to be obtained for the profession, besides that of a general union, which the parent society cannot bestow. In order to raise the standard of medical education; to elevate the medical character; to stimulate exertion; to disseminate information and to promote a concert of action; it is requisite that a society should exist, which shall hold frequent meetings for professional improvement and for social intercourse. An association for these purposes, efficient in its operations, is even more desirable in this city than in any other part of the State.

The number of physicians is now very large, in this metropolis, and it is important that they should have a good medical police. Nothing can be so conducive to the efficiency of the laws which govern this body, as the frequent intercourse of the subjects of those laws.

Again, there is among the junior members of the profession, an amount of intelligence and activity which should, by no means, be permitted to lie dormant. The facilities for a better primary education, and those various happy influences on the professional character which have been noticed, have been eminently conducive to this. There has

been nothing more remarkable, in the few monthly meetings of this society, than the talent and information evinced by the younger members. It is not only just and proper that an opportunity should be afforded them to present their claims for distinguished abilities, but also that the way should be open for them to contribute their proportion to the general fund of knowledge, and to receive the fruits of experience which it is the duty of the older to distribute.

The frequent interchange of friendly feelings is as essential to the comfort of the physician, as is the interchange of professional opinion for his improvement. In this way, this society is calculated to do much good. It cannot be but that some asperities will rise between those who are aspirants for the same objects; and where much is heard, and little seen, of rivals in the pursuit of affluence or fame, these asperities may ripen into animosities. But where frequent and free intercourse is enjoyed, especially under circumstances which bring out the kindly affections, the rough points are rubbed off, and a smooth and more polished surface appears beneath. Many a faction has been disarmed by intercourse with an opposing party; many an unkind feeling has been removed by a personal acquaintance. The union of the social recreations with the intellectual pleasures which we enjoy at our meetings, is well calculated to remove every trace of petty jealousies, should such exist among us. If discordant minds

meet in the same worthy pursuit, the result, like that from various winds over the æolian strings, will be harmonious.

Another beneficial influence of this society consists in its offering one unbroken front against the invasion of error. The open expression of an united opinion, against any of the fanciful theories and false practices of the day, must disarm them of much of their injurious influence. And the hearty and united approval, by a large number, of a commendable object, does much for its promotion. It is the aim of the members of this society to move conjointly against error, and to act unitedly for truth.

Again, it is desirable that there should be something before the public eye, which portrays the doings of so important a part of the community as the medical profession; some point at which they should occasionally meet for mutual observation. May it not well be in the operations and the public meetings of this society, whose transactions are published, and whose doors are annually open, as on this occasion, to the observation of an enlightened and a scrutinizing public. The more closely the attention of the community is turned toward the medical profession, the better for the interests of that body. It cannot be that a discerning people can see physicians diligently engaged in the pursuit of knowledge, and earnestly occupied in searching after truth, without bestowing upon them their re-

spectful regard. The late meeting of the National Association in this city, as it attracted the attention of intelligent observers, elicited their entire commendation. So, in kind, will be the effect of the observation of the public, of the intelligent movements of this society.

A large association will comprise those differing in natural capacity and in the character of their talents. All are not ready to speak fluently, even on subjects for which their knowledge is distinguished. The minds of some are prompt to act; of others, slow. Some may express themselves more easily; others think more deeply. It is the free intercourse of all these powers which contributes to the general good. While genius sheds a brilliant light, and contributes largely to disseminate knowledge, it may, in return, derive assistance from less gifted minds. A practical suggestion from the most humble may awaken a train of thought in the philosophical, which may benefit mankind.

So, also, may the suggestions of genius be worked into most important practical results, by less pretending minds. Franklin conjectured and proved the identity of lightning and electricity; but others, far less profound, have given to the discovery its practical utility.

Modesty, too, may suppress or diffidence conceal that which, under the patronage of Associated Fellows, may be produced for the great benefit of all.

In these, and in various other ways, the meetings

of this society are calculated to exert a beneficial influence. Let us then cherish its interests, so well designed to advance the cause of medicine.

From this auspicious commencement, may we not confidently hope that when its meetings shall be more frequent, and its facilities to carry out its important designs, more full, it may prove a valuable aid to those who are its members, and an important benefit to all who are interested in its results.

The course of physicians hitherto has been highly meritorious. As a body, they have steadily followed truth in the pursuit of knowledge. Here and there, indeed, one has been found, allured by fancy, into the adoption of some of the ephemeral delusions of the day, or drawn, by the hope of gain, from the beaten path of science into devious ways. With such we hold no fellowship but in name. Chance has placed them with our number; but truth expels them from our fraternity.

With these small exceptions, physicians have been true to themselves and the science which they follow.

Is it not creditable to them, especially to the younger portion, that they should so perseveringly adhere to right principles and practice, when the views and feelings of those on whom they depend for a subsistence, have urged them to adopt the fashionable chimeras of the day? Should it not have convinced the public that those systems were

false, when they saw them rejected by the whole body of honest and intelligent men, however lucrative might have been their adoption? The public saw the readiness with which the body of physicians adopted the use of the anæsthetic agents into general practice. The effects of these are surely as wonderful as the pretended influence of the most vaunted system. There would have been the same alacrity to receive and to adopt other novelties, which have captivated so many in the community, had they borne the test of experience. But knowing them to be false, physicians could not, and would not, give them their sanction. They will not give them a character by their adoption, nor are they willing to prolong their limited existence by an undignified opposition. These follies "come like shadows;" so let them "depart." In their transit, we have an opportunity of learning, from one, how firmly we may lean on Nature's staff, in our daily walk; and from another, that one of the most common elements of nature may be sometimes applied as a remedial agent. From all of the delusions, as they from time to time appear, we may perhaps gather something to improve our art. If of no other practical advantage, they may show us the importance of associated effort to render the delusive theories of misguided minds as fleeting as they are false.

Had time permitted, I should have wished to have led you to the green graves of three of our

distinguished associates, each called suddenly, since the brief existence of this society, from active duties to the silent tomb. I should have loved to trace the course of one,* so like those heavenly bodies which, by their eccentricity and velocity, alarm the ignorant, but which delight the intelligent beholder, as he sees them flying on their course, but guided by the unerring hand of benevolence. Or, of another,† who, by the steady light which he shed on the scientific world, resembled more a star fixed in the firmament of knowledge. Or, of a third,‡ like a planet in its course, moving calmly, steadily and unobtrusively, in his orbit round the sun of truth. But we may not stop for this. The pen of friendship has delineated the character of two of these; and the many worthy public and private actions of the other are repeated from lip to lip by the community from which he has been violently removed. We must leave it for him, who will shortly address the parent society, to recount the virtues of the lamented dead.

On the lengthened consideration of the duties attached to our responsible calling we may not enter. They form that code of medical ethics which it becomes each one of us to study and to practice. Let us endeavor to perform these duties with all the faithfulness that we are able. Let

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* George Parkman, M.D. † Martin Gay, M.D.
‡ John D. Fisher, M.D.

us be true to *ourselves;* by improving such abilities as Providence has given each of us, and in sustaining a personal character above reproach. Let us be faithful to *each other;* by justly estimating and by fully according to others, their just meed of commendation; by a harmonious and friendly intercourse; and by an united effort to promote the best interests of the profession. Let us be true to *the public;* in shielding them from evils to which they are collectively exposed; and in zealously uniting with them in every moral reform and every intellectual advancement. Let us be faithful to those who are *our patients;* carrying into the chamber of sickness the highest amount of knowledge that we can acquire, with a most solicitous desire to apply it for practical relief. Forgetting ourselves, in our desire to do good, let us build our reputation on our success, and not on the opinion of our skill, which we have aimed to establish. While the kindest feelings of our nature flow out in unfailing sympathy towards the sick, let us be their honest counsellors and tender comforters in every trying hour. Let us be faithful to the Supreme Being, whose servants we are, and to whom we must render an account, for the spirit in which we have performed our professional duties: remembering that the christian cannot be rid of his religious responsibilities in any of the duties of life; that they follow the legislator to the halls of the assembly; the scholar to his study; the merchant to his counting-house; the

mechanic to his form; and the laborer to the field; and that they press upon the christian physician with peculiar force at the bed-side of the sick. Let us not fail to cherish, and to express a deep dependence, upon divine aid, in the execution of our daily task. Let us do our utmost to remove that stigma which has been unjustly affixed to the profession, that it leads to scepticism and infidelity, by pointing to the long catalogue of such names, as Harvey and Sydenham, Hartley and Gregory, Falconer and Arbuthnot, Hoffman, Good and Enoch Hale; and, especially, by exhibiting in our own case that it is untrue.

There is a danger that those engaged in investigating material things, should forget the Hand which brought them into existence; that, while science is pushing its inquiries into the cause and manner of re-production, and looking through matter for its vital principle, it will forget Him who breathes into it "the breath of life." Let us flee this danger, by a cherished regard for a divine revelation. Let us labor in our profession with zeal and earnestness, as if success depended only on ourselves; and let us seek the counsel of the Great Physician, as if the blessing was alone from Him, without whose aid,

> "Bethesda's bath could never heal,
> Nor Siloam's pool restore."

Erratum.—On page 21, Note, for "Professor of the Theory and Practice of Physic," read Professor of Materia Medica and Clinical Medicine.