

Oration on the guidance of a sound philosophical spirit in the investigations of medical science : Read before the Cincinnati Medical Society, Jan. 4, 1837.

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Essay B Throat

ORATION

ON THE

GUIDANCE OF A SOUND PHILOSOPHICAL SPIRIT

IN THE

M. W. Leisner

INVESTIGATIONS OF MEDICAL SCIENCE.

READ BEFORE THE

CINCINNATI MEDICAL SOCIETY,

JANUARY 4, 1837,

BY JOHN P. HARRISON, M. D.,

PROFESSOR OF MATERIA MEDICA,

IN THE

MEDICAL DEPARTMENT OF THE CINCINNATI COLLEGE.

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ORATION.

Gentlemen of the Medical Society:

The subject of the remarks, about to be submitted to your consideration, is one of difficulty and hazard. Difficult, from the profound inquiries to which a successful prosecution of it must lead us; and hazardous, because an inadequate explication of its merits will lay the speaker open to the critical animadversion of an intelligent profession. Still, it is a subject that is worthy of a full, and extensive, exposition—for it is replete with high and diversified bearings upon the best interests of medical science. My best efforts will be dedicated to a just and fair elucidation of the topic to be discussed—which is—THE GUIDANCE OF A SOUND PHILOSOPHICAL SPIRIT IN THE INVESTIGATIONS OF MEDICAL SCIENCE.

The science of medicine owes its present elevated position among the useful and honorable departments of human knowledge to the inductive philosophy. The same processes of observation, and generalization, which have conferred such illustrious distinction, and demonstrative certainty upon the sciences of astronomy and chemistry, have in a subordinate degree, imparted to the science of medicine all the well-grounded character which it possesses, as a practical branch of human knowledge. For too long a period a spurious and meretricious renown was attached in our science to the glittering plausibilities of an ingenious speculation. But physicians are no longer the enraptured enthusiasts of an idle and delusive scheme of explanation of the actions of the living body in health and disease upon any mechanical, mathematical, and chemical hypothesis. Neither the physis, or etherial fire, nor the dunamis, of Hippocrates, nor the fermentations and concoctions of the blood of Sydenham, nor the lentor, tenuity, and error loci of Boerhave, can now spread a bewildering charm over the mental faculties of the profession, to fascinate and blind their powers of observation and induction. Our science has emerged from the chaos and wild confusion which once shrouded its brilliancy, and quenched the fire of its genius. Led by the inductive philosophy, physicians no longer group about in search of truth in their own fancies, but look with an observant eye upon the phenomena of nature for the revelations of a just and useful

knowledge. The benevolent mind is filled with sadness as it casts a retrospective glance over the history of medicine. With an art so practically useful as that of medicine to engage their attentive regards,—and with a science so available to the promotion of a sound culture of the mind, and a development of the most interesting exhibitions of the Creator's wise and beneficent adjustments, how melancholy is the reflection that for ages medical men wasted their energies upon the most absurd and empty inanities, which have ever emanated from the brain of man. And whence arose this waste—this reckless, wanton expenditure of thought and effort on the part of those who had addicted themselves to the practice of medicine? Fundamental to the whole host of follies and errors which infested medical science for so long a succession of years, was this one great, pervading, ruinous misconception—that truth could be elicited by the subtle workings of the mind, independent of the teachings of experience,—that the man of genius could elaborate in the workshop of his own acute and vigorous faculties a just and satisfactory explanation of all the phenomena of nature. Deserting the only path of all correct views of the anatomy and physiology of man, and of the diseases to which his body is liable—the path of observation—they indulged in the most extravagant conceptions of the organization and actions of the living animal economy. To be sure the plan of attaining their fancied elevation of knowledge was a very compenduous one,—in which no task was imposed on their industry of research? Immured in the closet, each one could fabricate at pleasure, the gossamer webs of his own speculation, and spangle them over with the gaudiest tinsel of a false logic.

We glory in the present more certain state of medical science; we rejoice in the presence and agency of a sound philosophical spirit, which is every where in busy, ceaseless force and activity in the discovery of new truths, the detection of old errors, and the additional illumination of the admitted doctrines and facts of our science. Our minds, in confiding trust of the onward march of medical knowledge to still higher and higher approximations to certainty, dart forward to the disclosures of coming years. We feel a rejoicing satisfaction, dilating our bosoms, as we contemplate the triumphant progress of medicine in future years. Guided and inspirited by the genius of a sound, authentic, elevating philosophy, medicine will achieve still greater victories over disease, and diffuse in a still wider and wider circle the benefits of its curative influence.

And what are the characteristics of this sound, authentic, elevating philosophy? What the essential features of this guiding spirit, which is to conduct the footsteps of physicians up the steep and

rugged path of knowledge, and to put them in possession of a territory on which their mental powers may expatiate in all the luxuriance of a rich and varied intellectual banquet?

The first distinguishing trait of this judicious and regulating, this prompting and guiding spirit of inquiry in medicine, is a deep-wrought consciousness of our ignorance, till we are instructed by the voice of experience. All sound experience must be derived from a careful inspection of the phenomena of nature;—but there can be no legitimate claims urged for the findings of observation, unless there pervade the entire results of such observation a lucid consistency and congruity of all the facts. There should be no contradiction between the different parts of our discoveries of natural phenomena. But on this point much confusion and incertitude often obtain. Thus by a hasty process of generalization it has been pronounced that the Creator accomplishes his most complicated results by simplicity of means. And this remark is verified not only in the mighty, and intricate, and lengthened series of effects which flow from the operation of the simple law of gravitation, but also in the beautiful contrivance of the human hand. By the law of gravitation this world is kept in its orbit, and the secondary planet of our earth in its obedient course—by it too the waters of our earth, whenever accumulated in large masses, rise and fall, flow and ebb; by it the atmosphere has its tides, by which it is kept in free and diffusive circulation round the surface of our globe, and by the exertion of this law, which compels the attendance of those lamps of night which minister light to their primaries, as a supplement to the day's accommodation, all substances on the earth are preserved from centrifugal flight away from our presence. And by that wonder-working, simple instrument, the human hand, man accomplishes the schemes of his inventive mind, and adorns the surface of the earth with the proud monuments of his skill and taste. But God has not restricted himself to an entire simplicity in all the adjustments of nature. The frame of man is an abundant refutation to any such premature and excessive generalization. And the human eye affords as signal a display of complexity in its anatomical relations as any part of our composite mechanism. The result here is simple, and yet the apparatus is exceedingly complex for the attainment of so definite, limited an object as vision.

Another illustration of hasty generalization is seen in the corollary proclaimed by physiologists, that all animated existence must be nourished by either vegetable aliment directly, or by animal food, which has been itself antecedently thus nourished. But the experiment of Fordyce on the gold fish, disproves this sweeping generality. He

found that he could keep his gold fish any length of time, by merely allowing them fresh air, although they were not fed at all, and existed in distilled water.

The opposite error of exclusive, narrow, and minute inspection and analysis—the frittering away the powers of intellect upon attenuated points—is the characteristic of puny and unambitious minds. But minds possessed of a strong faculty of curiosity—joined with impatience and restlessness under the restraints of a toilsome investigation—ever require a well disciplined, and habitually exercised power of command to prevent a premature arrival at their conclusions.

By a direct contradiction in the results of observation, experience is always proved to be spurious. Thus when it is averred that a certain medicinal substance will, when administered in a similar manner, cure diseases, which our observation has proved to be entirely distinct in their pathological character, we feel assured that all such averments are either the fabrications of the vilest charlatanry, or the illusions of a spurious experience. All just experience in medicine must arise from the observations of minds capable of a correct appreciation of the amount of importance to be attached to the facts presented. And no mind, however originally gifted, can attain such a comprehensive collectedness of judgment, as qualifies for a quick and true action on the phenomena of disease, submitted to its examination, unless it has previously undergone the discipline of a full preparatory exercise of its faculties on the rudimental departments of medical science. And here the true modesty of a just philosophy is seen. First, that we are not to decide in reference to the nature of a disease, nor of its most appropriate treatment, until we have acquired a correct knowledge of the anatomy and physiology of the human body; and in the second place, we must never frame a theory of the disease, nor of its mode of cure, which will be in contradiction to our knowledge of the structure and laws of the living animal body. We perceive that in both these most important points, the ancient physicians violated that characteristic of all sound philosophy—a pure and deep respect to the steps by which nature carries on the actions of the system. The ideas, therefore, of Galen concerning the four elements and their corresponding temperaments—of the separate functions of the vegetative, sentient, and rational souls, and of the agency of the natural, vital, and animal spirits, and which, by his weight of authority, were the doctrines of physicians till the middle of the seventeenth century, were obviously in contravention of that philosophical humility, which should ever guide the human faculties in the investigations of medical science.

Observation, in medicine, may be divided into direct, and inquisitorial. Direct observation is that act of the mind by which we watch with sedulous inspection the evolusions of nature's activity. In this instance, we sit as obedient ministers and interpreters at the feet of nature, and from her receive those teachings of experience, by which she makes wise all who depend on her lessons for instruction. By experimental or inquisitorial observation, we make nature pass through a questionnaire process. And such is the unbending authority of the true inductive plan of research that it is not till a truth is made to pass through this ordeal of a severe questionnaire process, that it is entitled to be placed by the side of the admitted and demonstrated axiomata of any of the physical sciences. Now, in reference to the most important departments of medical science—those which have more directly to do with the practical applications of all the gathered fruits of our observation—this questionnaire, or inquisitorial, method of arriving at truth can not be practised. We may make experiments upon the lower animals in order to clear up an enigma which still shrouds our knowledge of some important function of the body—and by this stern interrogation of nature, we may oblige her to make a satisfactory response to our demand. By a severe scrutiny of the organic arrangements of the dead body, we may satisfy a rational inquisitiveness, which urges us to become intimately conversant with the complicated structure of man. But when we approach the bed-side of a diseased, suffering fellow-being, there can be but a very limited sphere offered for experimental inquiry. Considerations of humanity forbid, in clinical medicine, indulgence in mere trials of the modes by which nature can be made to give out her responses to our calls.

Here, patient, repeated, sagacious observation must take precedence of every other plan of arriving at truth. We must watch the origin, progress, and termination of disease, as it occurs in a multitude of cases, and with nice precision mark, and treasure up the observations made by us upon the curative influences exerted by our different measures in meliorating the aspect, and abbreviating the career of illness in our patients.

It is in vain for us to pretend to a greater degree of certainty in the practice of medicine than a just and philosophical consideration of the point will permit us to feel ourselves warranted in entertaining. And here I cannot but notice the efforts made by M. Louis of France, to give to the results of clinical experience a kind, as well as degree, of certainty, which it seems to me impossible ever to reach. In this respect, that distinguished physician has done obvious violence to that spirit of sober philosophy which should ever guide us in medical investigations.

Numerical, or arithmetical computations in clinical medicine are insusceptible of practical application. The reason seems obvious upon slight reflection. Rigid statistical calculation, and quantitative statements, must always be founded on fixed and ascertainable proportions, and unvarying elements in bodies. The atomic theory in chemistry is a beautiful exemplification of such fixed proportions, and relative unvarying elements. But in the practice of medicine, there can not exist any such fixed unvarying elements, upon which a rational analysis of a numerical character can be established. The states of the system are perpetually varying, and the results in a given number of cases are at last the compound aggregate of a mixed and constantly fluctuating condition of actions. No two cases of the same disease are precisely alike in all their pathological history and results. Thus diversity of constitution stamps an essential modification on each case;—state of the mental powers will likewise exert a deflecting agency—the degree of exposure to the exciting cause;—the habits of life;—the predispositions under which the system labors, either from congenital, or acquired tendency to a particular constitutional disease, such as phthisis, or scrofula—or from anterior attacks of the affection with which he is now taken—all these, and many other modifying circumstances, go to constitute the problem of therapeutical effects arising from our means of cure, one of involved and perplexed calculation. And yet to prescribe successfully, the physician must, ere he administer a single dose of medicine, or detracts a single ounce of blood, take all these modifying circumstances into consideration, and arrive at a sound practical decision, through all this array and perplexity of elements, which make up the existing sum and substance—the speciality and entity of every case of disease.

The mathematical physicians pretended to a great minuteness and accuracy of calculation in their speculations on the physiological actions of the body. But the laws of life, and the ever varying modes in which these laws were manifesting themselves, put a constant refutation on all the a priori conceptions of the visionary system monger.

True philosophical modesty was outraged in all the stages of the mathematical speculations of a former era on the actions of the living body in health and disease. Louis violates this philosophical modesty only in one point. He is a warm, enlightened, diligent cultivator of our science, and were it not for the fact that he has assumed too much on the ground of numerical precision in reference to the proper treatment of disease, no abatement from his high reputation as a profound and original explorer of the mine of medical truth would be

made. The contradiction, however, existing between the inferential judgment pronounced by Louis, respecting the use of the lancet in pneumonitis, and that given us by Prof. Bouillaud, shows us that the numerical plan is a very uncertain guide in conducting the mind to a sound conclusion on the therapeutics of disease. "Bloodletting," says Louis, "has had very little influence on the progress of pneumonitis in cases under his observation." "Pain," adds he, "was not overcome in any case by bloodletting; it was but little influenced by it." These declarations are at war with the general experience of the profession; and Prof. Bouillaud avers that his experience is in direct opposition to this practical decision of Louis. Another result of the investigations of Louis, guided by his numerical analysis of cases of pneumonitis, is, "that vesication has no evident influence upon the progress" of that severe morbid state of the lungs. Here Bouillaud contends that Louis is in an error, and the experience of the profession in Europe and America is likewise in direct antithesis to this averment of Louis.

But I must pass on to other distinguishing characteristics of a sound philosophical spirit.

The next attribute of this spirit which is worthy our consideration, is that of grave dissent, or sober and reflecting scepticism, which the mind should ever exercise in the pursuit of medical truth. There is a calm, yet ever wakeful spirit of reserve possessed by the inquisitive mind, which preserves its faculties from those delusions and error, which are so apt to cloud the intellect in the road of discovery. This scrutinizing scepticism, which constantly doubts ere it surrenders itself to the implicitness of a confiding reliance on announcements of truth, made by others, and which hesitates in a posture of calm and severe scrutiny ere it settles down on its own final conclusions on any point of inquiry, is above all price in the study of medical science. Credulity, operated on by superstition, has subjected our science to the most disastrous vacillations. One error has given place to another; and although there has been incessant activity displayed in the various departments of medicine, it has been, in too many instances, but the activity of a laborious idleness, busying itself in the chase of shadows.

The theories of medicine are as numerous as a wandering fancy, heated by an eager enthusiasm, could, during a succession of ages, elaborate,—and yet, wild and numerous as these theories are, the supposititious facts of medicine surpass them both in the violence done to truth, and the multitudinous variety which they present of contradictory statement, and of colliding asseveration.

Advert to Louis' numerical scheme once more.—Here is a very re-

markable exhibition of this positive contrariety in the statement of facts regarding the results of a given plan of treating a very common, and very severe complaint. Louis disparages two of our most effective weapons for the conquest of the malady—Bouillaud reinstates them, by his positive announcement of the success which accompanied their employment in his hands, in our confidence. Now, contemplate the fallacy lurking in the entire ground of the numerical plan; let a scrutinizing scepticism be brought to bear on the whole matter, and then the mind will not too suddenly rush to a conclusion against the lancet—that sheet-anchor of safety in inflammation of the lungs. Ask yourselves the question, and have it well answered in your own minds before you give implicit credence to the practical deductions of Louis, whether every step of the path traversed by him was perfectly free from the slightest degree of looseness and indecision—whether the law of definite proportions—of determinate proportional powers---and of precise quantitative and numerical elements—was in full play, so as to give to the results of the whole inquiry the full force of numerical announcement.

Exercise this sceptical, doubting, inquiring spirit in every department of medical inquiry. When the cerebral anatomist tells you that there are certain organs in the brain, which subserve various intellectual, moral, and sensitive, or appetitive purposes, ask him to show these organs to you; to give you an ocular demonstration of their existence. If to this reasonable request he demurs, and instead of demonstrating these organs, which he avers exist on the surface of the brain, and which impress a configurative force on the skull, so great as to be seen externally, he attempts to satisfy your rational scepticism by uttering various superficial plausibilities about the possibility, nay probability, and *almost* absolute certainty, that these organs are really substantive existences—turn away from such a meagre, idle speculation, and reserve your belief for objects capable of a clearer demonstration, and which are of a more philosophical cast.

It is really a matter of surprise and of mortification that physicians, even in this age of clearer illumination of medical science, should, with so tenacious a grasp, still hold fast certain mechanical and chemical explanations of healthy, as well as morbid, actions of the vital powers.

What are the speculations concerning the Endosmose and Exosmose, and the ideas of the undetected and undetectable morbid matters with which the blood is so abundantly stocked by some writers, but retrogressions to the former dark period of medical knowledge?

It is imperatively required at our hands that we exercise a sober

reserve of mind towards all unsubstantiated views in medicine, however alluring and persuasive may be the blandishments of the hypothesis advanced. Let us ever preserve the mind from that very humiliating state—a voluntary subjection of its faculties to error. How puny and imbecile must that man's mental capabilities be who delivers up his mind in credulous assent to every plausible theory, and warmly urged statement, which cross his path, and solicit his acceptance, from day to day. Such a mind will be but the sport and play-thing of every idle conceit, which a bold ingenuity may throw off in the wantonness of a prurient fancy. To cultivate the complex, difficult science of medicine, the mind must possess some degree of the robustness which will not allow a too facile yieldingness to every novelty, though advocated by the most eminent of the profession. Those physicians who deserve to be regarded as the truly philosophic members of the profession should maintain that severe discriminating perspicacity of mind which will preserve them from becoming the deluded admirers of every novel theory, and mode of practice, which may have upon them the signature and superscription of a great name. A just and enlightened philosophical scepticism of mind is to be carefully separated from that spurious, and most irrational obstinacy of arrogant independence of thought, which leads a man to deny, without examination, truths which are well established.

This illogical species of mental independence, which denies its assent to truths, which have undergone a thorough, prolonged, and accurate investigation, delights in a positive fixation of the mind in the dim and disastrous region of egotism and folly. Instead of the humility of the real investigator of truth, the man possessed of this spurious independence of mind entertains such a high conceit of his own powers as to persuade him that, however other less gifted intellects may need further accumulations of knowledge to enable them to pronounce upon a great question, involving the best interests of man, yet that he, the sceptic, has, even anterior to a candid and patient inquiry into the subject, an immediate, nay intuitive, perception of the whole merits of the question. Nimble nonsense is always rapid in its flight to a conclusion; overleaping, with airy bounds, all obstacles to its quick progress in the road of knowledge.

Owing to excessive facility of belief, the crude notions of Brown became at one time the pathological ground upon which diseases were treated. This bold, original, speculative genius peremptorily announced, that under his plastic hand medicine, which had hitherto been mainly conjectural, was now to assume the grandeur and solidity of a certain, demonstrable, enduring science. And how

was this most desirable result to be obtained? By the creations of his own imaginative mind, independent of observation and experience. Thus did he exemplify the justness of the critical animadversion of Bacon, directed against the vitious mode of philosophising which obtained among certain ancient sophists, whom he designated as "men who searched for truth in their own little minds, not in the great world without them." In more recent times, the ultra views of Broussais have been too eagerly received, indiscriminately adopted, and acted upon, by many medical men. It augurs well for our science that the confidence of the profession in such all-embracing views of disease is rapidly subsiding. Even the students of medicine, who attend our medical schools, from the prevalent tone of thinking in society, and from the lessons of a correct mental discipline, are every day passing adjudication, in their own minds, in favor of those teachers who, with their doctrinal expositions of disease, interweave practical illustrations. We cultivate a directly practical art—we pursue, as physicians, a calling which brings us every day in direct contact with the lives of our fellow-men. Any scheme of doctrines which stands alien and apart, in solitary grandeur, like the pyramids in the desert, from these practical applications to which every truth in medical science ought to be made to bend, should be looked at with philosophical distrust by every mind, intent on the discovery of truth, and that desires not to lavish its powers upon barren speculation and sterile generalities. I am aware that students of medicine are not always capable of appreciating the discussion of general principles, although such general principles are absolutely essential to a just and philosophical understanding of disease. Let general principles be thoroughly discussed, till the light of a most lucid exposition be made to pour its lustre upon those doctrines, which lie at the very foundation of all enlightened conceptions of morbid action. But should there arise in any part of the wide field of medical doctrines, a destitution of those proofs upon which the teacher should rely for the verity of his doctrinal statements;—should he, for instance, lay down a certain pathology of disease as true, and then after such an abstract position fail to adduce proofs from the symptoms, treatment, and post mortem appearances of persons dying with such disease, that his theoretic principles were just—then let him forego the delights of such entertainment of fancy—and either quickly supply himself with better views, or candidly confess his ignorance. "It ought to be inculcated upon all men," says a French writer, "that next to the positive knowledge of things which may be known, the most important science is to know how to be ignorant. 'I don't know,' ought to be the frequent answer of

all teachers to their pupils, to accustom them to make the same answer without feeling ashamed."

True philosophical scepticism is never ashamed to confess the want of knowledge, where there is no proof offered. It can wait—it will wait—most patiently, for that proof, and not till it is obtained does it abandon the sure ground of doubt, of inquiry, of diligent search, to move forward to the higher ground of confiding trust. And this leads me to expatiate a little on another trait of that philosophical spirit which should guide all our medical investigations—it is the love of truth.

The purest and most ethereal satisfaction that can be imparted to the soul of man, is that which springs from the exercise of his faculties in the pursuit and in the possession of truth. Constituted as our rational and immortal nature is, happiness can never beam its enlivening influence upon the soul, unless truth breathe upon the powers of the mind, and the passions of the heart, its renovating, transforming power. Physicians should be happy men. They have all the elements of a durable, sacred happiness in their possession. It has been confidently asserted that the profession of medicine has in its ranks more individuals who reject the genuineness, authenticity, and authority of the Holy Scriptures, than any other avocation in society. We are very confident that such an allegation is extravagant and calumnious. There are as many exemplary christians in our profession as are to be found in any one single department of the the social subdivisions—the clerical, of course, excepted. The same causes which are operative in the generation of religious scepticism among the agricultural, the mercantile, or legal, walks of life, are influential in the production of a neglect, or contempt, of religion, among physicians. These causes are, a total want of humility, philosophical and religious, intellectual and moral; an entire abandonment of the heart to its own imaginings and devices—and a destitution of the love of truth, in the highest and most beautiful forms of its power. "Ye will not come to the light," is the prime source of infidelity in all men. Sure we are that neither the study of the human mechanism, with all its multiplied adaptations and beneficent adjustments—nor of the disordered movements to which this mechanism is subjected in the diseases, for the cure of which the physician is called to prescribe—nor the study of the laws of man's being, its origin, progress, maturity, and decay, would ever conduct the candid, philosophic mind to the dark conclusions of religious scepticism. The profession of medicine has afforded, and does still afford, as eminent instances of men in the realization of a calm, religious faith, and of a peaceful happiness, as flowing from that faith, as earth can

exhibit. Besides, our profession opens up to the mental powers a rich perspective of view, along the pathway of which are profusely distributed the most attractive truths, which can engage the mind of man in this sublunary scene. The science of medicine presents to the active and executive faculties a rich field for their most noble and assiduous toil. So that both in the contemplation of truth, and in the practical application of truth, the physician, who loves his profession, and who strives to be useful to his suffering fellow-beings, may ever expatiate in pleasurable emotion over that allotment of life which he has chosen. "O! but the toils, the anxieties, the harassing perplexities of our profession! The ingratitude of the public! their preference of ignorant presumption to modest skill! the miserable pecuniary recompense, doled out with niggard hand, to our painful efforts on their behalf!"

Fond, puling, indolent complainer, cease thy complaints, If thus your abject spirit dwells only on the ills of your profession, abandon it; for, be assured, with such a quirulous, dejected, splenetic soul, you are not worthy this good, this glorious calling. But stay, ere you take your departure from our ranks, and endeavor to stir up in thy darkened spirit, by every cheering, ennobling consideration, drawn from the inspiring loveliness of truth, from the subduing appeals of suffering humanity, from the love of thy own happiness, an earnest, unconquerable, irrepressible, aspiration after the high rewards, temporal and eternal, which flow by the very constitution of your being, and the fiat of the eternal God, from the love of truth, and the practice of virtue. Lift up thy down cast eyes, and in yon clear upper sky, what dost thou behold? There shine those great luminaries of our profession, whose light directs and animates our efforts in the cause of active benevolence.

In imperishable glory the names of Sydenham, Rush, and other eminent physicians, are engraved in golden letters upon the temple of medicine. Their labors live in enduring remembrance in the minds of the profession. Their lives were consecrated to a bright renown, and their earthly career was radiant with the beams of a divine philanthropy.

Hear the language of Sydenham, declaring that, "the art of medicine is the best of all worldly gifts, and so much more preferable to all others, as life surpasses all the enjoyments it brings with it." Again, says this great and good physician, "Upon deliberate and equitable reflection, I find it better to assist mankind than to be commended by them."

And the illustrious Rush, *clarum et venerabile nomen*, after deep struggles and travail of soul in arriving at a correct conception of the

Yellow Fever of 1793—having at length satisfied his mind that truth had been vouchsafed to his earnest prayers and labors, and that a correct method of treatment was discovered, thus exclaims—“never before did I experience such sublime joy as I now felt in contemplating the success of my remedies. It repaid me for all the toils and studies of my life.”

Bereft of every trace and remnant of generous feeling must that heart be, which does not sympathise in a glow of sacred emotion with the noble love of truth and practical virtue evinced by these memorable examples of disinterested benevolence.

The love of truth is possessed of an enlarged and varied power. It is not a mere love of the ideal in pictorial beauty—nor a love of abstract truth in the severe sciences—nor a mere enthusiastic devotion of the soul to any one branch of intellectual inquiry. It dwells not in the head alone, touching not the heart, and awakening not its living energies into the kindling transports of virtue. No. It breathes a new life into the whole moral and intellectual man. It awakens and stimulates the attention—the perception—the memory—the imagination—the judgment—into a healthful and unwearied activity to seek for truth—amidst every difficulty and impediment. But it goes further, in the beneficent power which it exerts over the soul. It swells the heart with ineffable longings after virtue—it fills the soul with ardent thirstings for excellence—it agitates the breast with sympathetic emotion, when in silent secresy of mind, we brood over high deeds and heroic darings adventured for the good of man,—and its still small voice is constantly heard in the bosom, even amid the turmoil and strife of life, whispering the full fraught heart to acts of virtue, of honorable renown, of generous self devotement to the accomplishment of some great end in existence.

O what holy raptures gush from the pure wells of the heart, when urged by the love of truth, we find that we have not lived in vain—and when led by the hand of time to our final hour, we can survey the past, and calmly await the future; the couch of death being converted into a scene of triumph!

To prosecute the science of medicine aright, we should, therefore, possess the love of truth—we should not remain in a state of ignorant quietude, indifferent to the onward march of our science to higher degrees of usefulness and certainty, but be ever alive, and inquisitive to the new facts every day developing, in the respective departments of the healing art.

The love of truth leads the faculties to aggressive inroads upon the prejudices, and fallacies, of the past. It infuses into the mind a restless, keen, and inquisitive spirit of doubt, of analysis, of revolu-

tionary, movement. Essentially inimical to a passive, or negative conservative tendency so common to the human mind, the love of truth is continually conquering by its aggressive power that adhesive property, which fixes men in their old positions.

By its vivifying energy, the love of truth quickens the intellect into decisive acts of judgment; it is not apt, therefore, to make a man, for the sake of being on both sides of a question, a half-way believer in truth;—but it creates a consistent, thorough, confident reliance upon the determinations of his own mind, after a deliberate and careful inductive investigation of a matter.

The love of truth urges the mind to seek for definiteness and accuracy of conceptions; it, therefore, does not encourage a man to occupy a misty, ill-defined, shadowy region of neutrality between the demonstrable and undemonstrable, between that which has been, and is still, open to inspection, and that which lies concealed beneath the veil of inscrutability.

“*Medio tutissimus ibis*,” may answer as an excellent rule of conduct for us in matters pertaining to our social behaviour; and this maxim of prudence and safety we should observe in all those controversies in which the prejudices and passions of men are constantly operating to bewilder the judgment. But in matters of strict science—in all those investigations, in which the inductive method can be made legitimately to work for the discovery of truth—it is a most fallacious and injurious application of the rule of moral conduct that, “You will advance most safely in the middle”—to bring scientific truths and doctrines under this mere prudential maxim. Surely no one would contend for a moment that the middle path is best in reference to the ancient and modern systems of astronomy—or of chemistry—or of anatomy—or that we are to take a middle course of belief between paganism and christianity.

Truth is one—error is multiform:—to dilute truth with admixtures of error, merely to make it more acceptable to our preconceptions, is adverse to the whole spirit of the only sound, truthful method of inquiry—that of admitting nothing into our system of philosophy but what has been demonstrated.

The love of truth will effectively persuade the mind to surrender its most fondly cherished idols of opinion, whenever proof is offered that the previous convictions entertained on any point were not established on a just basis. The expulsive agency of the mind, in thrusting out error, is always the primary act upon which depends the exercise of the percipient powers in their discovery of new truths.

As zealous cultivators of medicine, let us temper our love of knowl-

edge with love of humanity, that our minds be not seized and possessed of a selfish intellectual taste. And we should never forget that all our acquisitions are to be made contributory to the good of man, and that the mere accumulation of medical knowledge, aside from its practical applications, does not entitle the possessor to the appellation of a lover of truth. Nor should we merely have the love of truth instigating us to the pursuit of knowledge, nor the love of truth actuating us to apply this knowledge to the cause of afflicted humanity, but we should have the love of truth leading us to communicate the results of our individual experience at the bed-side, that the science of medicine may receive fresh contributions of facts, and expositions, from our labors. The older members of this society will permit me, I trust, to say a word to them on this behalf. Why is it that so few physicians avail themselves of the opportunity afforded by our medical periodicals, of communicating the fruit of their clinical observations to the medical world? Many facts and valuable suggestions are kept forever within the very limited circle of many an observant physician's immediate personal intercourse, which if made the thesis of brief written communications might go far to instruct us on many litigated points of pathology and practice. Let them be constrained by the love of their profession to forego their indolence and their aversion to the toilsome process of putting down their thoughts, and arranging the facts of their observation, on paper, and no longer disregard the claims of medical science on this point.

Let me direct your consideration to another prominent trait of a sound philosophical spirit in medicine—it is a correct and deliberate comparison and appreciation of the relative importance of the different branches of medical Science. The terminating point of all our medical studies is the cure of disease. Now there exists on this particular subject, an error of very mischievous tendency. We see too many physicians, who in their eager and unthinking impatience to reach the goal of all their preparatory inquiries, rush with reckless tread over the whole ground occupied by anatomy, physiology, chemistry, materia medica, and the institutes or theory of medicine.—After thus pushing their thoughtless and random steps over those very portions of the entire field of medical investigations, which constitute the art of healing a substantive science, no wonder that they forever remain the striking monuments of a presumptuous empiricism. The practice of medicine must never be disjoined, in unholy and destructive separation, from the science of medicine. It is only under the guiding light, and controlling power of a thorough indoctrination of the mind in the *præcognita*—the preparatory branches, and *præmial* views, of the science, that the art of prescribing drugs, can

be preserved from the fate of all mere mechanical occupations. There exists a gravitating tendency in a mere art to descend still lower and lower in the scale of liberality of culture. Art seeks for concealment, for short paths, for mystery of action. Science is diffusive, communicative, generous. It delights in broad comprehensive plans, and seeks to realize them on a noble scale. When, therefore, students of medicine are too eager to pass over their preliminary studies; whenever they slur over anatomy, physiology, chemistry, therapeutics, and the principles of medicine, and are desirous of gathering up prescriptions and formulæ, without a proper understanding of the indications demanding the employments of these, they should pause and beware, lest they become the veriest pretenders to the character of real scientific, enlightened practitioners of the *ars medendi*. A sound, authentic spirit of philosophy will teach us that surgery, as the mere art of incision, and excision, can never be successfully practiced unless the surgeon have his mind well imbued with correct information on the principles of medicine. Surgery in the hands of the barbers, during a darker age, and among a rude and ignorant people, was but a mere operative, mechanical calling. But modern surgery, stands on higher ground, side by side with medicine, in a strict sense of that term.—And the intellectual attainments, literary and professional, which go to make up the quantum of a modern surgeon's qualifications are as varied and profound as those of the physician. The physician should understand the principles of Surgery, and the surgeon should be well informed on all medical subjects. In our country, there can be, there never should be, any disjunction of those two great divisions of medical labor.

Every well instructed physician will readily concede the point already insisted on,—that no practitioner, of medicine can ever have any just claims to the character of an enlightened prescriber of remedial substances, unless his mind has undergone a thorough course of study on anatomy, healthy and morbid, special and general, physiology, chemistry, pathology, therapeutics, and the theory of medicine. Let us then institute a brief examination into the relative value of these separate departments of medical science.

The importance of correct anatomical knowledge in any curriculum of medical studies, however superficial, no one disputes. The exactness and minuteness of information possessed by the student of medicine on the organism of man, are a sure basis upon which he can build a most enduring superstructure of professional attainments: without anatomy, medicine is but a series of erratic movements;—the mind having no fixed data of calculation as respects the nature and seats of disease. Disease is disordered function, either connected, or

unconnected, with organic lesion. How can disordered function be understood, unless healthy function be understood; and how can healthy function be understood unless the structure of the organs by which the function is performed, be known? To the operative physician—the surgeon—anatomy is what Bacon called knowledge in general, power; power to prevent, power to save, and power to enable him to perform all his acts of surgical interposition successfully. Who would entrust his own life, or the life of a dear friend, a child, or other kindred, into the hands of a surgeon ignorant of the parts on which he was about to operate?

By universal concession in society the practice of dissection is not only allowed, but indirectly encouraged, wherever the endearing sympathies of life are not lacerated in the obtainment of subjects.—On this particular point, perhaps there is less danger at present, especially in the more cultivated walks of our profession, than on the opposite one, of an undue, or excessive valuation put upon post mortem examinations as elucidatory of the real nature of the morbid state, which produced the death of the patient. We are in danger of committing the anachronism in our theory of disease, by which we attempt to explain the actions of the disease, merely by the physical changes wrought by it, without knowing what were the specialities of the case during life.

Laws of physics do not preside over the living organism. We cannot make, therefore, our analysis and classification of the various changes met with in dead bodies as instruments to be employed in the synthetical arrangement and elucidation of vital phenomena. Pathological anatomy is a department of medical science that cannot be too accurately and profoundly studied; it should therefore be distinctly taught in every school of medicine, which aspires to keep up with the onward progress of medical knowledge. To it we are indebted for a rich accession of facts upon scientific pathology—it is an effective mode of teaching a most valuable class of truths in our science. But let us not endeavor to make impracticable, torturing applications of this excellent branch of medical investigation; let us strive to preserve a sound discriminating judgment in reference to the limits of its employment, and not injure its utility, and inflict mischief upon the science of medicine, by such a strained purpose as that of elucidating the whole nature of a disease, by its ravages;—of fabricating out of the debris of the dead, a well sustained theoretic edifice of the actions of the living. All diseases are divisible into functional and organic, or structural. In the production of both these great classes of morbid action there are two systems implicated—the nervous and vascular. There may be an entire isolation of disease in

the nervous apparatus, but inflammation cannot arise until irritation first exist. Inflammation originates most of the organic lesions seen in the dead body; but the mere fact that we have hyperæmia, or vascular injection, and various other forms of physical change in the organs, will by no means conduct the mind to a just conclusion, on the real character of the pre-existent malady.

Take pulmonary consumption for illustration. In this disease the lungs are affected with tuberculous deposite, which creates so much irritation, inflammation, and suppuration, as to destroy the life of the patient. Now, guided by the light of pathological anatomy alone, our attention would be concentrated upon the state of the lungs, and the very peculiar and invariable precursory stage of the disease, the cachectic condition of the constitution would be disregarded. All our researches into the rise, progress, and fatal termination of genuine pulmonary consumption, go to establish this great practical truth, that the curability of it by art is impracticable, and that therefore the only feasible mode of preventing the fatal catastrophe is to correct the tubercular cachexia before the supervention and establishment of the tubercular deposition in the lungs.

Scientific practitioners of medicine in Great Britain, Continental Europe, and the United States, are too much disposed to connect organic disease with functional derangement. Broussais confounds irritation with inflammation, thus arbitrarily viewing abnormal action of the nervous system, whether localized or diffused, with super excitation of the vascular apparatus. He therefore relies, for a verification of his conceptions of disease, upon the structural modifications left by abnormal, or disturbed action.* But there is a large and important group of morbid phenomena which cannot be referred to any co-existent alteration of vascular movement, in which the nerves either of motion, or sensation, may be affected. Thus in tetanus there is a violent irritation of the motor nerves, and one of the highest surgical authorities declares, "that the evidence before the public to establish that tetanus has its origin in inflammation of nervous structure has failed, and that few if any practical surgeons entertain such a notion."

Of late years much has been written on hip joint and spinal diseases as organic affections, and yet sir Benjamin Brodie declares, that

*"Après la mort (says M. Broussais) on trouve toujours des traces de gastro-entérite." This declaration is in keeping with another extravagant eulogy indulged in by some, about "la médecine éclairée, par les ouvertures des cadavres." Both of which sentences amount to this—that pathological anatomy is the alpha and omega of all our knowledge of disease, and that the science of morbid actions must be viewed in this one light only.

he "hesitates not to say that a large proportion of young ladies who have been supposed to labor under disease of the hip joint, and the great majority of those who have been treated as suffering from caries of the spine, have in reality been affected by local hysterical symptoms and nothing more."

It behoves us, therefore, as sedulous and sober minded cultivators of medical science to preserve such an erectness and calm attitude of judgment as not to place an extravagant valuation on any one department of medicine. Let anatomy, special and general, healthy and morbid, be most assiduously prosecuted, but let us ever keep such acquisitions in harmonious balance, and reciprocal co-operation with the other branches of medical science, so that our path may be illuminated by the confluent radiance which beams from the different parts of the medical horizon, and not dimly shone upon by one source of irradiation.

I can in general terms only speak of the importance of the other branches of medical investigation. Each, and all of them should be accurately studied—their elements well mastered by the student of medicine—for like a well adjusted arch, they mutually support and are supported.

Gentlemen, we live in an era of the world's adventurous history, pregnant with stirring impulses. On all sides, the rising tide of human intellect and passion beats strong against the old embankments of error. Prejudices are receding like wreaths of fleecy cloud, which hang around the mountain and

———"Jocund day
Stands tiptoe on the misty mountain top."

Nation is calling to nation to move forward in the glorious march of improvement; the voice of the congregated thousands on the Thames is echoed back by the voice of the busy crowd of the Seine—and rising, like the deep sonorous anthem of the ocean's wide weltering waves, the voice of America—of free, united, happy America is heard pouring its bursting peals upon the broad arch of heaven, calling upon the nations to awake, and come out from their thralldom into the participation of like privileges with those enjoyed by ourselves.

There is abroad on the face of society, a keen, searching, inquisitive spirit. Our profession has already advanced under the elevating impulses of this spirit. Let us speed its onward advancement—let us urge on its career of improvement so that trophy after trophy may be won on the field of contest with disease.

Occupying the position upon which we now stand, we behold the past doing homage to the present. The facts and sound reflections

made by our predecessors in medicine, are consolidated in the durable body of the science. Even the errors of speculation, which crowd the pages of the history of medicine minister to our instruction, by admonishing us not to depart from the only legitimate high road of all truth, the inductive method of observation and generalization.

See the venerable form of Hippocrates coming forward to lay his contributions at our feet, his conjectural notions of an etherial fire, and four species of humours, he has thrown off as injurious misconceptions. Sydenham presents his Anglo-Saxon manly brow, upon which is written by heaven's own hand, original and profound genius, and he offers with pious willingness, his valuable gifts; but his fermentations, and concoctions, and despumations the stream of time has washed away. Hunter, the father of English surgery, brings with vigorous step and lofty bearing his noble offering, and in rough language bids us take his gifts—with rejoicing they are accepted, whilst his *materia vitæ effluæ*, stimulus of necessity and stimulus of death, are no longer to be found, and detract not from his memorable achievements. And Rush, with benevolence in his beaming eye, and eloquent earnestness in his every act, lays down his rich and varied intellectual treasures on the altar of medical science.

And the Bells, the Coopers, the Andrals, in England and France; Blumenbach and Tiedemann in Germany; Physic, Dunglison, and Dewees, with a Dudley, Caldwell and Drake, in America; these, and a countless host of other distinguished laborers in the field of medical science, have enriched, and are still enriching, the profession, day after day, by their facts and expositions.

Long may these gifted members of our profession live to pour fresh contributions of light upon the science of medicine, till all its obscurities shall be removed, and the warming, cheering, rays of truth be made to circulate still more and more throughout its departments.

And, Gentlemen of the Medical Society, may each and all of us co-operate in this great work—may we effectively aid in accelerating the progress of our science towards higher and higher degrees of light, of certainty, of usefulness! Then will the words of the son of Sirach receive their illustration and fulfilment in our lives. The skill of the physician shall lift up his head; and in the sight of the great men he shall be in admiration. The Lord hath created medicines out of the earth, and he that is wise will not abhor them.

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