25

THE INCENTIVES, MEANS AND REWARDS OF STUDY:

AN

INTRODUCTORY ADDRESS,

DELIVERED AT THE

OPENING OF THE THIRTY-THIRD ANNUAL COURSE OF LECTURES

IN THE

MEDICAL COLLEGE OF OHIO.

November 1, 1852.

BY L. M. LAWSON, M. D.

CINCINNATI:
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CINCINNATI, *November* 2, 1852.

At a meeting of the Students of the Medical College of Ohio, held November 2, 1852, Mr. M. T. Carey was appointed Chairman, and C. C. Davis Secretary.

On motion of Mr. Shuey, it was unanimously

Resolved, That a committee of five be appointed to confer with Prof. L. M. Lawson, and solicit a copy of his Introductory Lecture for publication

Whereupon the following gentlemen were appointed: J. L. WOODWARD, CH. DISNEY, A. C. SHUEY, J. C. SUNDERLAND, B. F. HART.

M. T. CAREY, *Chairman.*

C. C. DAVIS, *Secretary.*

MEDICAL COLLEGE OF OHIO,
November 3, 1852.

PROF. L. M. LAWSON,

SIR. The Students of the Medical College of Ohio return you their sincere thanks for your late valuable and eloquent Introductory Address; and in their behalf we solicit a copy of the same for publication.

CH. DISNEY,
J. C. SUNDERLAND,
B. F. HART,
A. C. SHUEY,
J. L. WOODWARD.
} *Committee.*

Prof. L. M. Lawson.

MEDICAL COLLEGE OF OHIO,
November 12, 1852.

GENTLEMEN: Your very kind note asking in behalf of the Students of the Medical College of Ohio, a copy of my Introductory Address, with a view of its publication, has been on my table for some days, and would have been answered earlier, had not the lamentable occurrence in our Faculty, with which you are familiar, prevented it.

I do not feel at liberty to decline the publication of the Address, when called for by the class, and especially as the application is accompanied by expressions of gratification. The manuscript, therefore, is placed at your disposal, with the hope that its publication may contribute something toward the correction of what I have considered to be a faulty philosophy.

Very Respectfully,

L. M. LAWSON.

Messrs. Ch. Disney, J. C. Sunderland, B. F. Hart, A. C. Shuey, J. L. Woodward, *Committee.*

ADDRESS.

Gentlemen of the Medical Class:

You have assembled this evening, for the purpose of participating in the opening of the thirty-third Annual course of Lectures, in the Medical College of Ohio. It becomes my agreeable duty to welcome you, on behalf of the Faculty, to this institution, and to introduce you to the general course of instruction. This duty I perform with all fervor and friendship; for although some of you may be personally strangers to us, yet the relations which are now to be established will bind us together in a common cause, and unite us by the same faith in the indissoluble ties of brotherly love and friendship. Welcome, then, thrice welcome, to this institution; and while the terms of our association place you in the position of pupils, and the Faculty in that of teachers, we desire at the same time to add to this those fraternal relations which must ultimately grow out of kindred pursuits.

Twelve months ago, when assembled on a similar occasion, we had to lament the unfinished condition of the building which we now occupy. Disappointed and chagrined that our promises could not be redeemed, we were obliged to throw ourselves upon the generosity and forbearance of the class; and although some were driven away by the want of adequate accommodations, a large proportion, impelled by sincere attachments for the school, remained in their places, and patiently submitted to many privations, rather than seek other institutions. For these acts of noble self-denial, we give

them all praise; and it is but just to say, that amidst the various annoyances to which we were all more or less subjected, every man did his duty. No class of more faithful and diligent pupils ever assembled, and none ever made more substantial progress. And as many of those who experienced the embarrassments of last winter, have again assembled with us, we embrace this occasion to congratulate them on the favorable changes which now surrounds us, and most fervently hope that they may be amply rewarded for their kindness and patience under the privations of the past session.

But now, thanks to the energy and well devised plans of our excellent board of Trustees, we have the high gratification of assembling in one of the most capacious and elegant buildings ever erected in the United States for medical purposes. The Lecture rooms, Library and Museum room, and the apartments for Practical Anatomy, have all been planned with special reference to the comfort and convenience of the class; and those who now, for the first time, occupy them, will doubtless fully attest their superior advantages.

But, gentlemen, walls are inanimate. Spacious rooms and glittering domes cannot instruct you. In addition to the accommodations afforded by a spacious and well appointed edifice, you require faithful, diligent, competent, *earnest* teachers. Few persons, I am constrained to say, possess all of the requisite qualities for good and successful teachers; and whether these rare gifts and acquirements are possessed by the Professors in this school, is not for me to decide. *You* have doubtless reached that conclusion, or you would not now be here; and I can only add, that if a conscientious sense of responsibilities, an ardent and enthusiastic devotion to duties, and an unfaltering determination to devote their entire energies to their respective departments, be any aid to success, you will not be disappointed.

In casting your eyes over the present corps of Teachers, you will miss two familiar faces. The venerable Professor of Surgery, whose prelections some of you have enjoyed,

having reached the culminating point of professional labors, by his own appointed time retired from the school. Feeling the weight of accumulating years, he notified his colleagues and the board of Trustees, three years ago, that his connection with the school would be severed at the close of the past session; and with his usual sagacity, advised the appointment of the present incumbent, as his successor. Few men have fulfilled a more successful destiny, and few will end a career more replete with all that adorns the profession; and whatever may be his position during the evening of his days, we can all join in invoking the choicest blessings around his pathway, and that calm and unclouded sunset, which belongs alone to the great and the good.

The Professor of the Theory and Practice, who greeted you last session, is no longer in our midst. Enfeebled by long and arduous literary labors, he brought to his chair in this institution but a limited amount of physical strength, and this condition, still further increased by the nature of our climate and the arduous duties imposed upon him, soon so far prostrated his declining strength, that he was compelled to seek a more congenial climate, and a less toilsome position. We most ardently hope that his useful life may long be spared, and that his prolific pen may still contribute to enlarge the boundaries of our noble science.

You are aware, gentlemen, that the vacancies thus created have been supplied; and I need hardly delay to inform you who are the occupants, much less to bestow praise on those who have been selected. Eulogy is pointless where fame is broad as the land; and praise is not needed by those who occupy the highest positions. He who was the founder of this college, and whose name stands first on the list of our profession's living actors, deserves all that the place can confer. It derives more honor from him, than he from it. The vicissitudes of life, and the varying scenes of professional fortune, in days gone by, separated him from this early offspring of professional ambition; but, having, fulfilled a destiny, and

being invoked by more genial chords and clearer skies, he returns with undiminished love, and glowing with fervent hope, to aid in transmitting a noble institution to a grateful posterity.*

Your favorite department of Anatomy is committed to no new or untried hands. One of the early Professors in this school, the incumbent returns, a welcome and renowned teacher, full of honors earned by years of faithful and unremitting toil. You know, too, how the chair of Surgery is filled. You cannot doubt in that respect. If the triumphant success of the past be an earnest of the future, your hopes and desires will be more than realized.

And now, gentlemen, if I have not employed the language of exaggeration, you have many facilities at your command for the acquisition of medical knowledge. What more, let me ask, is required ? I have yet to name the most important. Inanimate objects cannot teach, nor can listless supine pupils learn. We want, then, ardent, devoted, persevering and untiring pupils; we want a class, who for the next four months will breathe only the atmosphere of science. Such, I am proud to believe, is now before us; and with the view of aiding you in the exercise of a just enthusiasm, and in the acquisition of a pure philosophy, I shall for the remainder of my time, address you on the following topics:

1. The Incentives to Study.
2. Means of Study; and
3. The Rewards of Study.

I. THE INCENTIVES TO STUDY.

Our profession exhibits a peculiar blending of science and morals. It embraces not only a science, (or a series of sciences), of the most interesting and sublime character, but it is also based on the purest benevolence. While the *science* unfolds the wonderful mechanism of human organism and life,—a science more intricate and profound than any of its associates—the *art* is employed for the relief of pain and the

*Dr. Drake, since deceased.

prolongation of life. The assumption, then, is not gratuitous, that one great and leading incentive to the study of medicine is its *elevated and pure benevolence*. No science, apart from that of divinity, can claim this attribute to an equal extent. All science, however, in one sense, embraces the principles of benevolence; whatever enlarges, purifies and cultivates the human intellect, is a benign and benevolent work, which rises above the gross elements of our nature and occupation. The science of medicine not only expands the intellect and elevates our moral nature, but it takes cognizance of the frail medium through which the mind operates; it descends from the bright throne and starry mazes of metaphysical light, and travels the rugged path of bodily pain, disease and death.

The relief of pain and prolongation of life, are prompted by the purest benevolence. No element of the human character is more commendable—none more God-like. "God is love," is the language of inspiration; and he who compassionately regards the sufferings of his fellow beings, is acting in harmony with the great attribute of eternal love.

It may be said the physician labors for a consideration; and so he does; but how inadequate, and disproportioned to the labor and responsibilities of the services rendered, I need not inform those who have tested it. The physician is never too wearied, nor the danger too great for him to obey the summons of suffering humanity. No night is too dark, nor wind too bleak for him to go forth. Neither the violence of epidemics, nor the sickening breath of contagion dismay him. At the pestilential quarantine he stands as the faithful sentinel, and dies that his fellows may live. Few, indeed, know the sacrifices, and ill requitals, which mark the physician's career; but there is an eye that never sleeps; and the eternal vigils will not pass unrewarded the messenger of mercy.

As an incentive to study, this element of our science stands pre-eminent. Mere pecuniary considerations may impart activity and induce long continued exertions and perilous advantages; but it requires a higher and nobler impulse to

sustain those intense, protracted, never ending studies which belong to our profession. Many persons are attracted to the study of medicine by an innate feeling of benevolence, and a pleasure experienced in relieving the sufferings of their fellow creatures. It is said that Dr. Physic received his first incentive to the study of medicine through the gratification he experienced in administering relief to the wounded soldiers at the battle of Germantown. It cannot be doubted, that if medicine were divested of its benevolent attribute, its votaries would speedily become mercenary and unfeeling, and the science itself degenerate into the basest traffic.

Another incentive to diligent study is the vastness of the subject. The astronomer, as he glances from star to star and from world to world, has no difficulty in imparting a proper conception of the vastness of his subject. But some are ready to believe that the practice of medicine which is often seemingly attained with ease and readiness by the most illiterate of our species, is not a very extensive study, nor does it require any great effort to reach it. But such reasoning is sadly fallacious. Instead of being so limited and insignificant—a sort of art that comes by nature—it is really endless and boundless. No one intellect has ever measured its length or breadth, heighth or depth. It embraces much of nearly all the natural sciences, is intimately related to the moral, and often connects itself with the legal. Like the weary traveler as he ascends the snow-crowned alps, the prospect widens as we advance:

> "So, pleased at first, the towering Alps we try,
> Mount o'er the vales, and seem to tread the sky;
> The eternal snows appear already passed,
> And the first clouds and mountains seem the last;
> But, those attained, we tremble to survey
> The growing labors of the legthened way;
> The increasing prospect tires our wandering eyes,
> Hills peep o'er hills, and Alps on Alps arise."

But, it may be inquired, will not this picture of vastness dishearten—nay, *dismay* the weary pupil? Will he not rather shrink from it as a Herculean task, more than man can

bear? To the weak and indolent it may be so; but I speak not of such. I speak of those iron-will, unfaltering spirits who know not the language of failure. There is a class of students who *will* and it is done; and their efforts are always proportioned to the difficulties before them. They consider that what man has done, may be done by man. They go forward with boldness and confidence, and win the prize while the sluggard sleeps. To such persons no incentive can be more inspiring than the greatness and grandeur of the object before them. It inspires them with a glowing zeal and lofty enthusiasm which no adversity can arrest, nor temptation divert from its proper course.

Another incentive to the faithful, untiring and successful study of medicine is a *love of glory*.

It may be alleged that a love of glory is a fault or a crime; but it is difficult to conceive that a passion so universal, and one which pervades all classes of society, from the sanctity of the cloister to the violence of the battle-field, can be necessarily evil. A proud spirit, a love of emulation, a glory in success, are the most potent stimulants to labor and perseverance. Without a love of glory, this world would be a vast wilderness. The broad savannas which now blossom with the rose and sparkle with ten thousand beauties, would be lifeless wastes; the echoing streams which teem with life from the gushing mountain rill to the broad ocean, would be silent and dead as the stagnant asphaltic lake; the busy press that throws out light upon the world, like myriads of radiant stars, would stand idly in its place; and the whole world would exhibit the signs of decay, and sink into a fearful and rayless night of gloom.

It was a maxim of Ovid, that "Glory inspires the soul with new vigor, and renders the understanding more productive, and the ideas more brilliant." The distinction between an inglorious *vanity*, and that dignified love of fame, which inspires the souls with lofty aspirations, is too obvious to be mistaken. Vanity engenders false and magnified views

of self, and exposes its possessor to just ridicule and contempt; it blinds the judgment, misleads the imagination, and obscures truth, just as the dark mists dim the brightest stars and throw a veil over the clearest skies. But a love of glory develops a deep and unchanging enthusiasm—not that wild and fitful glow of feeling, which, like the meteoric flash, is consumed by its own intensity; but that deep, quiet, intense and undying fervor, which burns on through a long life without consuming or fading. It is said of Giovanni, that he painted incessantly and never for money; that it was with him but another form of prayer. And so with the deep feeling which pervades the breast of every faithful student. It is a species of devotion—not gross and material—but a high and holy feeling, which leads us away from the sensual part of our profession, and elevates our whole being far above all mercenary objects.

The love of money will prompt the physician to cultivate his profession only as a trade; while the love of glory will incite him to the most unwearied exertions and profound study.

> "For this the youth in vigils lone,
> Hath toiled with brow and cheek grown pale;
> The sage hath perils scorned that well
> Might make the hero's courage quail;
> For this his venturous foot hath tracked
> The death-fraught mine, the glacier dread,
> His hand hath dared the serpents fang,
> And dallied with the lightning red."

II. The means of study.

This division of our subject will embrace both the means and modes of study; that is, the necessary facilities for the acquisition of medical knowledge, and the best method of using those means.

The different departments of medical and surgical science being partly demonstrative and partly theoretical, it is obvious that the means of study must be modified in accordance with the constitution of the sciences themselves. The teachings, therefore, necessarily embrace lectures, demonstra-

tions, and private or solitary study. It cannot be doubted that lectures and demonstrations are the most efficient methods of study; and hence medical schools, which have the means to conduct successfully such a course of instruction, have become indispensable in the study of our science. The accumulation of means of illustration, and the division of labor whereby each teacher has a single department assigned to him, render schools capable of imparting more instruction than can be obtained from any private source. It is generally conceded, that *lectures* are the most efficient and speedy mode of imparting knowledge. If a lecturer possess the necessary clearness of diction and method of arrangement, together with a sound knowledge of his subject, he cannot fail to impart information very rapidly. But some of the departments are almost wholly demonstrative, while all partake more or less of that character; and hence it becomes necessary that a course of lectures should embrace the necessary means for illustration. This remark applies with peculiar force to practical medicine and surgery; these department require those illustrations at the bed-side which are obtained in hospitals, and which constitute such a valuable part of a course of medical instruction.

I am ready to concede, however, that private study is required, between the courses of lectures, in order to familiarize the student with the details of the different departments, and which may not have made a permanent impression on an over-tasked mind. During the course of lectures, however, I am fully satisfied that but little is gained by an effort to read largely, and that the principal reliance should be placed on the lectures themselves, aided by notes, private "quizzing" classes, and the various modes of recapitulation. I desire to make this remark carefully and deliberately, and to invite the attention of the class particularly to that subject.

Another means of study too generally overlooked, but of immense importance, is habits of composition. There is no means of study more neglected than habits of writing, and

yet, I am fearless to say, none more efficient in rendering the physician or student logical, accurate and profound. It was a maxim of the great Lord Bacon, that "Reading maketh a *full* man, conference a *ready* man, and writing an *exact* man." No precept could be truer or more important. Every student should be daily in the habit of composition. It will not only serve to enlarge and systematize his views, but it will impart far greater accuracy to his ideas, and clearness and precision to his expression.

In the next place I remark, that our investigations must be sincere, truthful, rational. In no department of science is a sincere regard for truth, and a conscientious adherence to faithful narrations, of higher importance than in medicine. Truthfulness should form a part of our very existence; it should become our star of faith to guide us through the labarynths of a difficult philosophy. Falsehood and prevarication is a detestable vice, even in the most common on the streets; it becomes an offense of a grave character when a philosopher permits himself to deal in fictitious statements to sustain even a favorite theory; but in the physician, who deals with the lives of men, falsehood is a crime of the highest grade, and an offense stained with the blood and tears of deluded victims.

But, gentlemen, the mere materials for the study of medicine are not sufficient. The student must possess the skill to combine and arrange them, and to distinguish between truth and falsehood. In other words, he must study medicine as a rational science, avoiding empiricism on the one hand, and visionary speculations on the other. He must be guided by well attested facts and legitimate observations; or the light of reasonable theories, which do not reach so far into the dim regions of fancy, as to find no analogies among the real or probable.

The poet possesses a license for the exercise of a fervid and and even wild fancy; the metaphysician may weave his intangible theories without any great harm; but the practitioner

of medicine, who cannot control disease with poetic visions, nor with the mystical doctrines of the closet, should not indulge in groundless conjectures, nor rely on the illusions of imaginative philosophers, madmen, knaves, or fools.

Medicine must be regarded in the double light of a *science* and an *art*. As a *science*, it is made of facts and principles, duly classified and arranged; as an *art*, those facts and principles are applied in the practice of medicine and surgery; and it is obvious that these relations are natural and indissoluble, and cannot be separated without violence to the whole structure. It is true the *science* may be cultivated for its own intrinsic beauties and interest; but the *art* becomes at once false and distorted if removed from the light of the science. We may, admit, nevertheless, that simple experience and observation have often developed important truths, which have ultimately become integral parts of a great science. Thus the Chaldean shepherds watched the movements of the heavenly bodies, and were able to reckon the years before astronomy was known as a science; the alchemists made important discoveries before chemistry had a philosophical basis; and the votive tablets of the Æsculapian Temples contained the record of important truths, long anterior to the development of medicine as a science. But the knowledge thus obtained was limited and imperfect, and liable to constant misapplication in practice.

There has always been a tendency in our profession to depreciate the value of experience on the one hand, and of theory on the other; and these conflicting sentiments gave rise, at an early period, to different medical sects, the two opposing being the empirics and the dogmatics. The empirics professed to be governed by simple facts, while the dogmatics sought to unite the theories of the idealistic philosophers with the maxims of Hippocrates. And a distinguished physician of our own country has written an elaborate treatise on the "Philosophy of Medical Science," in which he reduces nearly, if not quite all our learning to empirical formula. But I need

hardly remind you, that mere observation can prove nothing universally true, until it becomes itself universal, both in regard to time and space; and this being an obvious impossibility, we are instructed to look for a guide better adapted to the ever-changing circumstances which surround us. It may be alleged that *principles* are equally faulty and limited; but it is not so; for true principles admit of *universal* application, requiring only those exceptional provisions common to all natural science.

Nature furnishes us with two classes of truths—one is necessary and fixed, and the other conditional. Thus, two and two make four; and under no conditions can this result be different. But in the natural sciences, truths, instead of being thus fixed and unchanging, are always conditional, and therefore not necessarily true. For example, we learn from observation that opium induces sleep, and in twenty successive cases our experience may be sustained, but in the next it may prove utterly false. Observation teaches that heat expands bodies, while cold contracts them; but our observations become at once confused by the fact, that the earths *contract* under the influence of heat, while water *expands* in freezing.

How vague and uncertain, then, must *experience* be, when not duly regulated and explained by philosophical principles. The *present* may be true, but the *future* is all uncertainty; indeed, facts thus practically become hypothetical in the extreme. We are required, therefore, to add reason to observation—principles to facts—and science to art. A principle in science, becomes a rule in art. Knowledge consists of abstract ideas, as well as material objects; of innate or independent thoughts, no less than impressions received from without.

Systems of mental philosophy, or the methods of arriving at truths, have in all ages and countries, occupied a large share of attention. And from the days of Socrates, or of Plato and Aristotle, to those of Bacon and Descartes, every department of learning has been greatly influenced, if not essentially modified bythe schools of philosophy; and medicine,

in common with all other sciences, has felt the grasp of this universal philosophy, whether of ancient or modern date; and that this influence is still felt, to a far greater extent than most persons suppose, will not be denied by those who stop to investigate the subject. It is in this way that regular medicine becomes distorted or misapplied; while the same plastic agents operating on grosser materials, produce the many-phased systems of charlatanry with which the world has been, and now is cursed. It will perhaps repay us for the trouble to trace some of the relationships between medicine and philosophy.

Two principal schools of philosophy, variously modified according to the fancy or theories of their advocates, have existed from the earliest dawn of philosopical ideas, to the present moment. These are the sensualistic and the idealistic schools, to which may be added skepticism and mysticism, as growing out of these. We are informed by historians, that Oriental philosophy embraced all of these systems; that after a time they appeared in the Grecian schools, and were finally re-produced in France and England during the 17th and 18th centuries. Thus, these systems of philosophy have been transmitted from age to age, buried and again exhumed, until we find their ghosts stalking in our own midst, and exercising the same kind, if not an equal degree, of influence, as in the Indian and Grecian dialectics.

The sensualistic philosophy was first taught in Greece by the Ionian schools, was more fully developed by Aristotle, and finally faded away with Epicurianism, to be reproduced in London, by Lord Bacon. This philosophy, in all ages and countries, has been and still is, essentially material and empirical.

We are constantly reminded that everything solid and substantial in modern science, is due to the regenerating power of the Baconian method; that it rescued the world from the fatal errors of speculative philosophy, and spread abroad a light clear as the unclouded sun, and unfading as the eternal

stars of heaven. It may be fairly questioned, however, whether modern science owes all of its glory to the inductive method. It is true that the sciences rapidly extended about the time the Baconian method was introduced, but that these two facts sustained the relation of cause and effect, is not quite so apparent. It may readily be admitted that the newly revived philosophy exercised a valuable influence in suspending the scholastic dogmas which had risen up during the dark ages. But there were other concomitant influences, equally potent in regenerating the world. The perfection of printing, and the rapid diffusion of books, infused new life into the dormant sciences, and served as creative agents for those yet undiscovered. The time had arrived for new developments. The intellect could no longer be restrained. Like the pent up force of the rushing torrent, it burst the strong bands of superstition and ignorance, and stood forth in its native strength and beauty. Besides which, it must be confessed that Bacon's Organnon (which had probably been suggested by that of Aristotle), was but a renewal of an ancient system of philosophy, with the formula modified and somewhat improved, but still embracing the fundamental errors of its ancient prototypes.

But independently of all extrinsic considerations, there are certain radical defects in the formula of the empirical schools, which claim our most earnest attention. As medical philosophers, we have a deep interest in determining the exact value of this system, because we are taught that it is our only sure and certain guide to truth.

The empirical system as revived by Bacon, soon found many prominent advocates, the most distinguished of these were Hobbs, Gessendi, and Locke. In reference to this system, M. Cousin denominates Hobbs its moralist and politician, Gessendi its scholar, and Locke its metaphysician. It is to Locke, therefore, that we are to look mainly for the development of the inductive dialectics. Let us mark the results. Hobbs, as its politician, was soon found advocating

absolute monarchy; Gessendi gained many adherents in France, and from them sprang the free-thinkers of the Temple, from which Voltaire drew his first inspirations. Locke applied the same sensualistic formula to metaphysics, and limited all knowledge to sensation and reflection. Reflection embraces comparison, abstraction, association, reasoning; these faculties separate, classify and arrange impressions derived from *sensation*, but can add nothing to them. Hence, as a matter of necessity this school runs into gross sensualism, for all knowledge, according to its tenets, must be derived from sensation or observation. It is like the simple office of the prism, which separates the different colors of a ray of light, but can add no new one to them.

This is indeed a dark picture of the boasted glory of the inductive philosophy—perhaps too dark—for it is to a certain extent true, though not true as an exclusive system of dialectics. As a system it becomes sensualistic and empirical, thereby disrobing reason of her brightest attributes, and reducing the human intellect almost to a state of mechanical monotony. I have already pointed out the false tendency of experience; and every step that we take in the natural sciences confirms what has been said. Every thought that beames upon the mind, and every effort at ratiocination, teaches us that we are necessarily impelled a step in advance of mere sensation. Many ideas, indeed, could neither be suggested by experience, nor developed in their ultimate relations.

The direct and unavoidable tendency of this method, when exclusively followed, is to *sensualism*; and this in legitimate medicine engenders and perpetuates empiricism, and when separated from the restraining influence of actual science, speedily degenerates into gross and unmitigated quackery. It may be claimed that *induction* will correct the misapprehensions which are liable to arise from experience; but it does not appear that mere generalization can exercise any marked influence in this respect; indeed, false facts must lead to false

induction. Thus experience teaches the Thompsonian, that stimulants are applicable to the treatment of all diseases; and *induction* leads to the generalization that heat is life and cold is disease or death; which is a sort of syllogistic proposition that may be stated thus: Cayenne pepper cures disease; cayenne pepper is stimulating and removes cold; therefore, cold is disease. The experience of Hahnemann taught him that a medicine capable of curing a disease must be able to produce it; and hence his *induction, similia similibus curantur.*

Admitting the errors of this method, the question will be asked, where is the remedy? I answer, in a wider and more genial philosophy—in a mode of dialectics which not only ascends from particulars to generals, but which can likewise descend from generals to particulars—and which not only *infers* by induction, but which can also *demonstrate* by deduction.

It has already been remarked, that, running parallel with the empirical or sensualistic philosophy, was also the idealistic. This school, like the former, originated in the early ages of Oriental philosophy, extended to Greece and was developed by the Platonic and Pythagorean schools, and was finally revived in Europe in the 18th century by Descartes. Plato was the first to employ the term ideal; and his system, therefore, was an avowed idealism. The leading doctrine of Descartes (who has been styled the great secretary of nature) is that ideas are not limited in their origin to the senses, but that they may be *innate.*

At the beginning of the 18th century, these two antagonistical schools were in active operation; but the sensualistic school as developed by Locke, triumphed over the idealistic as promulgated by Malibranche. The age, however, was favorable to the propagation of sensualism; and the result was the establishment of empiricism.

It is proper to remark, in this connection, that Lord Bacon himself was less sensualistic than Locke; and it is to the

latter that we must ascribe the full development and success of empiricism. Bacon evidently foresaw the evil tendencies of this system, and hence he expressly declares that he has united the empiric and rational methods, the divorce of which is *fatal to science and humanity*.

Who can doubt the truth of this declaration? The separation of the rational or idealistic from the empirical, says Bacon, is fatal to science and humanity; and yet, we are forced to admit, that our own science has been and still is a marked verification of this prophetic language.

It must not be inferred that I commend groundless hypotheses, or visionary theories; but we have the most conclusive evidence that in all of the natural sciences, some degree of theory, and even hypothesis, becomes necessary and indispensable. Reasoning is the reflected light by which many important discoveries have been made, which otherwise must have forever remained concealed in the unexplored recesses of nature. The science of astronomy has been almost entirely developed by theory and hypothesis preceding demonstration; and in chemistry, physiology, pathology, and even the practice of medicine, deductive philosophy has proved far more productive than the inductive.

It is not assumed, however, that either should be employed to the exclusion of the other; on the contrary, each has its appropriate office to perform, and each its specific relation to science. Thus, in one example a fact is perceived, and certain laws are *inferred* from that fact; this is *induction*. In another instance, a certain thing is suspected, a theory is formed, and it is proved or disapproved by subsequent observation and experiment; this is *deduction*. One *infers* certain laws from a given basis; the other demonstrates the truth of a theory by experiment. Deduction, therefore, is not only the most fertile method, but it is likewise the most certain and reliable in its results.

Now the practical point to which we arrive, and which immediately concerns our own profession is this: The empiri-

cal or inductive method relies alone on facts, admitting only of induction or inference from those facts. This is intrinsically well enough; but the great question is, what are facts? It is well known that alleged facts become the most common and fertile source of error. One declares it to be a fact that *infinitesimal* doses of medicine are all powerful; a second that *minerals* are destructive to vitality; a third that clairvoyance is a reliable means of diagnosis. Here we perceive that, in a practical sense, the inductive method utterly fails, because it cannot be sure of its basis; nay, more, it not only fails to reach the truth, but it establishes, by false induction, the grossest errors.

The only proper corrective for these evils lies in a sound and careful deduction, or idealism. It is true we may, according to this method, start with a theory, but the process does not rest there; it instructs us to analyze and experiment, to observe and demonstrate. Deduction, therefore, ends where induction begins; but with this difference—that it ends in demonstrated certainty, whereas induction, if its premises be false, necessarily ends in error.

No better illustration of the operation of these systems can be given, than the doctrines of Hahnemann. By the inductive method of reasoning, Hahnemann's system can be established to the entire satisfaction of many persons, even those who reason on such subjects. Hundreds are ready to testify that their maladies have been cured under homœopathic treatment. This is the *fact;* the *induction* is, that like cures like, in infinitesimal doses. Hence the theory or system becomes confirmed by experience. Now test the same system by deduction. You are told, *theoretically*, that like cures like, and that infinitesimal doses are more potent than larger ones. You doubt the truth of the theory—it is contrary to your ideas of physiological and therapeutical laws, and you therefore desire to test its truth. For this purpose you attempt the cure of gastritis by the administration of tartar emetic, and it fails; you next try the decillionth part of a grain of

charcoal on your own system, and find it inert. Here you rest, for the proof is complete. You *demonstrate* by deduction the falsity of the system which is so readily established by induction.

You will perceive now the relations which subsist between medicine and philosophy—how charlatanry and empiricism are sustained by sensualism, and exposed by rational dialectics; but above all, we are instructed that a philosophy based on experience alone, is too often false in its inception, and delusive in its conclusions.

But we have yet to consider another system of philosophy, which sustains an important relation to practical medicine, in one of its numerous branches. I refer to that system of metaphysics known as *Mysticism.* In employing this term, no allusion is made to the numerous schemes of modern chicanery, such as mesmerism, clairvoyance, neurology, spirit-rappings, *et id omne genus;* nor do I refer to the ancient mysteries of Orpheus, the Theurgic operations of the Egyptian Platonists, nor the chemical process of the German fire-eaters. But allusion is made to that system of philosophy which has ever been found cotemporaneous with idealism and sensualism, and which can be traced back to Alexandrian and Oriental Mysticism.

The essential characteristics of Mysticism, are, that it dispenses with all regular science, asserts the impotence of reason, abandons study, and runs into the fathomless regions of contemplation and fancy. Mysticism seems to grow out of the extremes of Idealism, just as skepticism naturally flows from empiricism.

But it may be inquired, what has Mysticism to do with medicine? The answer is, that it has much to do with our profession. Its principal application, it is true, was and is to theology; but it has likewise laid medicine under contribution, first through the agency of Alchemy, and secondly by a direct application of its theories. Paracelsus was a mystical Alchemist, and so was Von Helmont, the elder, and his son,

Mercurius. Robert Fludd, an English physician, and John Pardage a physician and preacher of England, both applied mysticism to medicine.

In the example of the Alchemists, the success of Mysticism, as applied to medicine, was only temporary. In that form mysticism become naturalistic, and, being investigated by tangible laws, soon gave way before the march of science.

As time passed on, however, another form of medical mysticism arose, more subtle and spiritualized than the former, and, therefore, the more difficult to remedy. I refer to the system of Hahnemann.

M. Cousin denominates Germany the classic grounds of Mysticism; and there, in that classic ground, arose this new medical mysticism. Unlike the former mystical doctrines of the Alchemists, it has no real or tangible basis; its logic, experiments, and results are all mystical. With a false experimental basis, it is pure mysticism calling on gross empiricism for its support—it is a sort of consarcination of all systems, claiming a dynamic nature, which reaches an unimaginable mystic end.

Such a system cannot be approached by the common rules of logic, for it mounts far above them. Who can reason with a little globule, or probe the mystic laws of high dilutions? No mortal man can do it; hence homœopathy is precisely adapted to the natural superstition and love of mystery which pervade the human family, and therefore it cannot be eradicated. It finds a congenial soil in superstition and mystery, and spreads it roots far and wide into the fertile element.

A striking illustration of the mystical relations of homœopathy occurred not long since, in our own midst, which I will be pardoned for mentioning in the present connection. It will be remembered that Emanuel Swedenborg was a fully developed mystic; he embraced, indeed, all of the varieties of that intangible doctrine, and developed it into his peculiar theology. With his religious views, in the abstract, we have

nothing to do; but when they are brought into relation with medical science, and attempt to control it, it becomes our privilege to proclaim its character.

Three years ago, a distinguished minister of the Swedenborgian faith, published a long letter in an Eastern newspaper, for the purpose of spreading abroad the pretended success of homœopathy in the treatment of cholera, as it appeared in this city. And to show the popularity and success of homœopathy, he announced the extraordinary fact, that eighty-seven out of one hundred and five families comprising his church, adopted that system! This letter was forwarded to me, with the request to give an opinion as to its general accuracy.

Here we have revealed a most important and significant fact. Nearly six-sevenths of a religious class of people, possessing the ordinary degree of intelligence, and no more, become converts to a peculiar and strange medical doctrine. Now it is quite impossible that such a large proportion could become converts to this system, by any ordinary causes or evidence; and it seems clear beyond a doubt, that this remarkable coincidence of opinion was due to *something* embraced in their religious faith. That *something* was, beyond doubt, *mysticism*; the theological mysticism of Swedenborg, mingling with the medical mysticism of Hahnemann.

Now, gentlemen, we reach the conclusion, that in medicine we do not want exclusive sensualism, for it leads to gross empiricism; we do not want exclusive idealism, for it tends to unnecessary refinement and hypothetical extravagances; but above all, we do not want mysticism, for it is sublimated nonsense, which leads to a refined and intangible charlatanry.

But instead of an exclusive philosophy, we must look to a just combination of sensualism and idealism—for all philosophy is ultimately reducible to these two forms. We must abandon neither facts nor theory—induction nor deduction—analysis nor synthesis; but with a proper combination of

every element of reason, search diligently for truth, regardless of the facinations of mysticism, or the plausible deceptions of empiricism.

Our profession, gentlemen, is eminently practical, and it must ever remain so; but still there is an allowable field of philosophical inquiry and research, essential to the very existence of our science. And in order to attain safely and properly to a rational practice, you must first learn principles. The most obvious tendency of our profession, at this time, is to adopt the formula of the sensualistic school, and to limit its investigations to the observation of the grosser phenomena. Instead of this, I would rather commend transcendentalism—not wild and delusive hypothesis, vainly called reason—but that clear fervent and critical analysis, which goes as near to the essence of matter as human reason dare approach. I have no great fondness for strange hypotheses, nor startling paradoxes; but I would rather wander occasionally amid the inviting mazes of a new field, and pluck a choice flower, than forever tread the common path, beaten smooth by the ten thousand travelers who have gone before. The common and more tangible parts of our science and art are well nigh perfected; our attention should now be directed to the minutiæ—to transcendental anatomy, chemistry, physiology, pathology. We should be less occupied with the gross—more with the elementary and profound.

Take as an illustration what is called the humoral pathology, as contrasted with solidism. That which is known as solidism, looks only to the gross structures—it reasons but little beyond the mere surface—the simple facts, the palpable observations. It is the sensualism of medicine. But the so-called humoral pathology goes further—it regards the human system as consisting of nine-tenths of fluids; and it argues that these fluids are exceedingly complex; that their compounds, elements and atoms are undergoing constant changes; and that these various and constant changes are not only intimately associated with, but the very *cause* of vital and patho-

logical actions. An atom of nutrient material starts from primary digestion; it becomes elaborated and vitalized in the lacteals, mesenteric glands and lungs; at one time it is normal albumen, at another fibrin; again it is found as a morbid product, either in the form of deranged albumen or fibrin, saccharine matter, lactic acid, or urea. These changes however minute, must be known, recognized and remedied. But this is transcendental philosophy—it is idealistic medicine—but it is not mysticism. The reason is never lost in conjecture or mysticism; there may be here and there a link wanting, which theory or analogy supplies, but it is always conformable to the rules of science, and never transcends the limits of probability.

Let us look, then, with keen scrutiny to the ultimate actions and laws of the system—let the microscope and the crucible become our logicians, and with the eye of reason trace every atom from its origin to its termination. This is the great field now before us, and it is broad enough to admit all the laborers who may desire to enter.

III. The rewards of study.

In conclusion, let us turn to a brief contemplation of the *Rewards* of Study. Socrates has declared that the root of learning was certainly bitter, but the fruit truly delicious. Let us inquire, in what does this deliciousness consist?

The leading emotions which pervade the mind of the successful cultivation of medical science, are not those which mark the fruition of the warrior's laurels, nor the sordid satisfaction which fills the soul of the miser as he gloats over his perverted wealth. I shall not even *name* the pecuniary rewards of our profession, for in this respect we are excelled by most other pursuits; nor shall I dwell on the influential and honorable position usually accorded to the enlightened physician, for these also pertain equally to other vocations. But we look to higher and nobler rewards which emanate from a consciousness of doing good, and the fulfillment of a great and benevolent mission.

The acquirement of knowledge, in any branch of science, is a great and characteristic privilege conferred on man by an all-wise Creator. Science is,

> "The substitute
> Of God's own wisdom in this toilsome world,
> The providence of man."

The study of mere inorganic matter draws the ardent philosopher into minute and laborious investigations, which excite a fervent and elevated pleasure. Every division of nature—each star and planet—mountain and vale—nay the very *atoms* in the finest work of inorganic matter, are replete with varied and profound interest to the truthful and fervent philosopher, and their study cannot fail to elevate his moral constitution and expand his intellectual powers. But above all this, there arises another and more exalted creation. The elements of inorganic matter become combined and re-combined anew, until they take on that exalted condition which we call *life*. Thus the earth—insensible and dead—re-combines its lifeless elements, and the hills and vales teem with vegetable life. It is but a step, and yet how great the change! And yet another step, and the philosopher, as by enchantment, enters a new and brighter world. The same elements which play such a comparatively humble part in the vegetable kingdom, enter into and compose the animal creation, which is crowned with the glory of the human intellect. Thus man occupies the highest position, and becomes an object of superlative interest. And it is with this crowning product of creation that we as physicians become enlisted. Our study is *man*, in health and disease.

It is no exaggeration, then, to place this study of man—in his physical and mental relations—in health and disease—highest in the list of the sciences, and as a study which, in intellectual rewards, surpasses all others. But the enjoyment of this pure and exalted pleasure, belongs only to the true and enlightened physician. The mere *trader* in his profession, finds nothing but *toil;* and like the slave who digs for pre-

cious stones, looks only to his daily pittance as the reward. His soul is fettered by base sensualities, and he stands idle among the most brilliant scientific achievements, unmoved as a lifeless statue amid the lightning of the skies. The true philosopher reaps a golden harvest from scientific labors, while the sensualist shrinks from the investigation and repines at the toil. The philosopher finds in every fibre, and every action of life, a source of unbounded delight, which rises far above the hopes and wishes of the sordid and selfish, and elevates the soul to that vast sphere of intellectual enjoyment, where all is brightness and purity.

Another and higher reward of study, is the acquired ability to remove pain and prolong life. Disease and death are the portion of all; but it is not ordained that the fatal end shall come violently or prematurely. And it is given to science, as its highest reward, power to protect the frail system of man from the numerous dangers which surround it, and to prolong life when threatened by premature decay. This great control of science over human life, is but the power of omnipotence partially revealed in the laws of science; and the benevolent heart never throbs with purer impulses, nor glows with more fervent delight, than where the hand of death has been stayed, or torturing pain subdued. The consciousness of having thus afforded relief, is a reward far above that which money can purchase, or empty praise bestow. The smile of a relieved and grateful sufferer, like a stream of light on a dark sky, flows back upon the benevolent heart, and dispels the shadows of gloom which too often hang about our pathway. Such rewards are infinitely above the gross materials of earth: they are—

> "Shrines,
> Such as times keen tooth may never touch;
> Cenatophs,
> Which have no dread of the fierce flames,
> That wreck the solid world."

The rewards of study are rendered conspicuous in the perfection of the science, and the positive power thereby ac-

quired by the physician. Other sciences have their rewards, but of a different character. The geologist, as he marks the work of ancient fire and flood, and traces the numerous tribes of long lost animals in their fossil remains, feels that his labors have been amply repaid. The astronomer, as he turns aside the veil of the skies, and communes with distant worlds, feels that he approaches the great author of nature, and that his reward is all that his task deserves. But what is all this? It is the love of science for its own sake; it is the reward of intellectual labor reflected upon its own pure self. But the physician's reward rises even higher. It is all that science can bestow, and the still more exalted and unselfish reward of turning aside the griefs of his fellow beings. The mere naturalist looks on a silent and powerless spectator when the laws of matter transcend their usual limits; his philosophy is impotent to stay the fury of the winds, or to subdue the raging fires of the earth. But the physician is rewarded with a dominion over disease, though not complete, yet commensurate with the nature and destiny of man. The achievements of our science, thus far, stand unrivalled. Thus the discovery of vaccination has well nigh removed one of the most fatal and loathsome diseases. The use of citric acid has removed the greatest scourge of the brave mariner. Quinine is an acknowledged antidote to one of the largest and most important classes of disease. While opium, iodine, mercury, and a long list of similar agents, produce the most marked and important results, and give to the physician a positive power over disease, which can admit of no doubt or uncertainty. And the great benefits conferred by anæsthetic agents (the discovery of which belongs to our own country), are rewards enough for a world of laborers. By this great agent the surgeon's knife is shorn of its greatest terrors, and the primeval curse is well nigh removed from the fairest portion of creation. It is that great letheon,

> "Whereof who so drinks
> Straitway his former sense of being forgets—
> Forgets both joy and grief, pleasure and pain."

Such are the incentives, the means, and the rewards of study. It is said that Wellington never wrote a dispatch into which the word *duty* did not enter, and Napoleon none in which *glory* did not appear. Let us become endued with this two-fold inspiration; let us regulate our actions by an unfaltering sense of duty, and that pure enthusiasm and love of glory, which alone can call into action the powers of the human mind. But let us strive to mingle with these attributes the highest dignity and the purest virtue. Let us strive,

> "Against the torrent and the stubborn hill,
> To urge free virtue's steps, and to her side
> Summon the strong divinity of soul,
> Which conquers chance and fate."