


10-12-1863

Introductory Address Delivered Before the Students of Jefferson Medical College, Philadelphia.

Samuel Henry Dickson, MD, LLD

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J.M.C. Opening Address

INTRODUCTORY ADDRESS

DELIVERED BEFORE THE

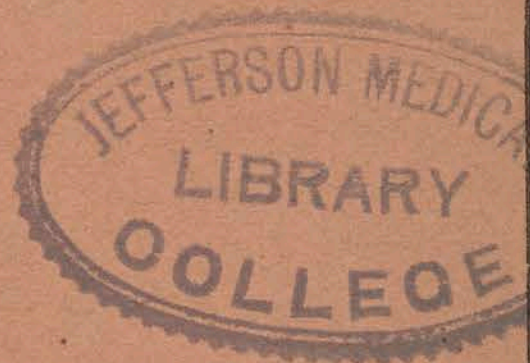
Students of Jefferson Medical College,

PHILADELPHIA.

BY

PROFESSOR SAMUEL H. DICKSON.

OCTOBER 12, 1863.



PUBLISHED BY THE CLASS.

PHILADELPHIA:

HENRY B. ASHMEAD, BOOK AND JOB PRINTER,
Nos. 1102 AND 1104 SANSON STREET.
1863.

DEPARTMENT OF AGRICULTURE

UNITED STATES GOVERNMENT

WASHINGTON, D. C.

1917

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CORRESPONDENCE.

JEFFERSON MEDICAL COLLEGE,
October 13th, 1863.

PROF. SAMUEL H. DICKSON,

Dear Sir,—At a meeting, held this day, by the students of Jefferson Medical College, the following resolution was adopted:

Resolved, That a committee of one from each State be appointed to wait upon Professor Dickson, and solicit a copy of his Introductory Address for publication.

J. GORDON MAXWELL, *Secretary*.

T. HOLLINGSWORTH ANDREWS, *President*.

WE, the undersigned, being the committee appointed under the above resolution, take pleasure in submitting it to your consideration, and trust it will meet with your acquiescence.

- | | |
|----------------------------|----------------------------|
| J. JACKSON, Pa. | B. F. HODSON, Wis. |
| F. B. LIPPINCOTT, N. J. | R. ZARRACINO, Cuba. |
| O. D. TODD, Ky. | P. M. BRENNAN, Canada. |
| WM. CHRISTIE, N. B. | H. LIPPINCOTT, N. S. |
| C. T. LOWNDES, W. Va. | C. G. SLAGLE, Miss. |
| M. H. WAPLES, Iowa. | J. BACON, Md. |
| E. PHILLIPS, Ill. | D. F. WILLARD, Conn. |
| L. J. DEAL, N. Y. | J. R. MAY, N. H. |
| J. W. GRAY, Ind. | C. C. ELA, Me. |
| ALBERT CRANE, M. D., Mass. | J. F. EDWARDS, M. D., Cal. |
| T. D. MORTON, Ohio. | WM. S. HENDERSON, Tenn. |
| W. C. DOILGE, Vt. | L. F. ELLISON, Del. |
| T. W. KOCH, Mich. | ROBT. HOADLAY, Eng. |
| P. C. REMONDINO, Min. | |

MESSRS. JACKSON, LIPPINCOTT and others, of the Committee.

Gentlemen,—In compliance with the purport of your communication, just received, I place at your disposal the Introductory Address delivered on Monday evening last. Be good enough to present to the members of the Class my respectful acknowledgments. I remain, gentlemen, cordially,

Your obed't servant and friend,

SAM'L HENRY DICKSON,

1127 Girard street, Philadelphia.

October 17th, 1863.

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INTRODUCTORY LECTURE.

It is my pleasant office, gentlemen, in behalf of my colleagues, to greet you with a cordial welcome, and to invite you to pursue with us, for a few months, the paths of scientific inquiry and discussion. There needs but a slight glance over the course of studies you have undertaken, to appreciate its vastness of extent, including, as it does, the entire range of Biology, Physiology, and emphatically, Anthropology. The natural history of man, his past, his present, his probable future; his origin, progress and development, considered in relation specially to hygiene, pathology and therapeutics—these subjects are to occupy your thoughts during your coming lives, prominently and primarily, and are happily of a character so engaging, that having once entered upon them, you will feel yourselves attracted by an interest ever growing, a curiosity which will never be exhausted or satiated with the endless variety of gratification attained.

Here, however, and during the brief session now begun, we circumscribe *your* and *our* duties within comparatively narrow limits; and yet, with every wish to save you from being overtasked, we are compelled to lay out for you a laborious and exacting curriculum. Your whole time is to be absorbed; all your energies of mind and body will be called forth. You must give to us your entire attention; awake and alert you must listen and observe. Text-books will be offered you, that you may not find it necessary to burden yourselves with full note-taking, but you should never be without paper and pencil. Your teacher will not always be the same, will not always view the topics treated of in the same light. He may be inspired with some happy idea; may hit upon a peculiarly felicitous expression; he may fall into a train of reasoning which shall run parallel with a vein of your own thought; he may offer you, incidentally, some pregnant suggestion, which it shall be

of value to you to seize, to treasure up, to carry with you and reflect upon at your leisure.

At any rate, before you retire to rest each day, give yourselves a period of silent study, not of your books only: look within, and read what has been written on the tablets of your brain during that day. Go over the lines traced there and deepen them by the effort of recollection, as the faded inscriptions were revived on the ancient tombstones by the chisel of Old Mortality, and thus render them ineffaceable. Write them down then with pen and ink. By this double process such thoughts will have become yours, no matter whence derived; part and parcel of your intellectual nutriment, your mental growth.

Oral instruction has so much to recommend it that the system of prelection, or didactic teaching, has been followed from the earliest times. It is combined in many departments with demonstration, the eye being addressed as well as the ear. Thus, my distinguished colleague will display before you the wonders of Anatomy; will discourse eloquently on "the structure and uses of parts;" will show you how the heart is formed to beat, and the lungs to respire; unfold the intricate convolutions of the brain, and exhibit the shape and texture of organs, the arrangement of tissues and fibres, and the course of nerves and vessels: a lofty task, for which his indefatigable ardor, his practised delicacy of manipulation, and his copious felicity of descriptive language, most happily qualify him.

Thus, also, will your Surgical Professor exhibit to you, with unsurpassed ability, the means and appliances of his noble and beneficent art; its resources for relief and palliation of suffering, and cure of injuries and wounds. Exploring with and for you the results of the inevitable and often irremediable inflictions which fall upon our frail and wretched race, he will enlist your warmest sympathies, and arouse within you the anxious desire to palliate evils which you cannot remove, and the conscientious determination to prepare yourselves, to the utmost of your ability, for the performance of your future functions.

The Chair of Chemistry will bring you directly into the heart of the relation which medicine, as a science and art, bears to all the other arts and sciences; with whose progress it

steadily advances, and of all whose triumphs it avails itself. I cannot, if I would, exaggerate the importance of such knowledge to you. Follow, with patient diligence, the veteran philosopher who will lead you in this intricate path. Chemical investigations, suggestions, explanations, theories and hypotheses fill the chapters of our progressive Physiology and Pathology, govern our Pharmacy, and modify even our Therapeutics. We ought to and must know the elementary composition, as well as the minute microscopical structure of our fluids and tissues, and of every agent that impresses them. We must endeavor to find out their affinities; their relevancy; their mutual influence. Though life itself be not, as some vainly contend, the mere result or product of chemical combinations, actions and reactions, we must admit that these changes are coincident with, perhaps necessary to, its evolvment and continuance; and that many of the vital processes offer close analogy to chemical operations effected in the laboratory.

In the teachings of your experienced Professor of *Materia Medica*, you will be made familiar with the therapeutical armory of medicaments, and enabled to select your weapons for every coming conflict with due discrimination. Herbs, metals, earths, waters and airs, will be brought under close inspection. Pharmacy will be spread before you in its scientific details, and toxicology discussed in relation to medical jurisprudence, as well as in its important application of antidotes.

As sons and brothers now, and husbands and fathers prospectively, you will take a more than merely professional interest in the study of feminine suffering and disease. You will give to these important topics a grave attention, and gather with serious earnestness all that the wide reading, careful observation and communicative facility of the recently inducted and highly esteemed occupant of the Obstetrical Chair will convey to you for your future reliance.

The Institutes of Medicine are no where confided to more competent hands than those of our learned and able Dean, whose voice and pen have been so long, and with such universal acceptance, employed in disseminating knowledge in all the branches of our Profession, and have so well illustrated every topic on which he has descanted. He will expand before you,

with vivid clearness, the vast acquisitions of physiology, static and dynamic; lead you with easy and familiar guidance into the pleasant domains of hygiene, and investigate with you profoundly and impressively the laws and doctrines of health and disease.

For myself, I have only to say that I will earnestly endeavor to fulfill the duties of the Chair which I occupy, as Lecturer on the Practice of Physic, in such a manner as not to be altogether unworthy the association with my world-renowned colleagues. It will be my constant aim to address myself to your reason and intelligence in all the views that I shall offer you. While, with Sydenham, I shall lay the due stress upon experience which, as he expresses it, "is the surest guide; and unless practice be regulated thereby, it were better to discard the art," I will not yield, on the one hand, a blind submission to authority, nor, on the other, indulge in a vain or dogmatic skepticism. In my general plan of teaching, also, I propose to follow the same approved guide, and shall consider, as he did, that I shall have "done my part by mentioning the indications to be answered, and pointing out the time and manner of doing it: whoever, therefore," as he goes on to say, "expects to meet with abundance of prescriptions, will be disappointed; for the practice of physic chiefly consists in being able to discover the true indications, not medicines to answer them."

Your objects will be greatly promoted, and all defects of requisite detail supplied by the clinical opportunities so amply presented in this institution, and in those diffused throughout the city, so long famous for the facilities and inducements of this kind, offered to the medical student.

The unhappy history of our times calls for a very special attention to military hygiene, surgery and therapeutics; and particular care will be taken to lay before you the most extensive information on the several topics embraced here. Our highest professional interest, as well as the warmest feelings of humanity, prompt us to every effort for the relief of the infinite mass of suffering spread far and wide over our afflicted country.

The function of the physician is as plain as it is important, and may be defined under a few simple categories. He is called upon

To avert preventible death—assuming that death is sometimes preventible;

To prevent avoidable suffering and injury from disease;

To diminish or palliate irremediable suffering and injury;
and

To reduce to its minimum the agony of inevitable death.

Your purpose here is to learn the means of effecting these objects; mine, to teach you, so far as I know them, the appliances and methods by which they are best attained.

Are there to be found any such means and appliances? Is there an art of healing? Does there exist a science of medicine? Do we deceive ourselves, or give utterance to an empty boast, when we presume to claim the power—under Providence,—to relieve suffering—to save life?

The ever changing aspect of medicine, considered as a science, has been made a frequent taunt, and its varying condition, as an art, a basis of positive denunciation; and it behooves us to inquire into the real ground of such depreciatory remark. Even among ourselves, in the midst of our own body, there is manifested a spirit of infidelity, or, at least, a hypercritical disposition to impugn the safety, the usefulness, the efficiency and the propriety of all therapeutical administration; to discourage all direct interference with the sick; to protest against all formulæ of prescription for them; and to recommend a reliance upon “nature in disease,” as, on the whole, the wisest course of conduct in regard to them. This system of expectant medicine is more or less fully and openly advocated by different authorities, of whom separately it is not easy to understand how far each one of them may be inclined to drive us to inaction. While Forbes and Bigelow merely urge, in well rounded sentences, a paramount reliance on nature, Holmes, more frankly, and with somewhat less vagueness, proposes an abandonment and general abolition of “drugs;” yet, even he excepts “opium and a few specifics,” a phrase which leaves us still uncertain as to his actual position. Against this most impotent and negative doctrine, if it may be called by so definite a name, the blank despair of progress which it implies is, I think, a broad and conclusive argument. On this ground alone, I reject it peremptorily and finally. Experience may

be fallacious, and testimony uncertain. Our senses and our reason often lead us astray; but it is not only absurd—it is impossible to refuse their direction. We must not, cannot stand still; and we must proceed upon the data afforded us by our senses, our experience; by testimony, the experience of others; and by our reason, employed in collecting, weighing and valuing these, and thence deducing rules for our advancing movements. Deciding, then, without the hesitation of an instant, on the necessity and duty of interference, we are encountered by the difficult questions—how? how far? in what direction? shall we endeavor to assist, or shall we oppose the “nature” of which we read and hear so much? Shall we recur, that is, to the rule of similar or contrary, or consent to be bound by either? What is nature in the sense here used? How shall we speak of—how define it? Periphrase is so inconvenient that we often employ a word without intending a special or palpable entity; as Mansel says in his “Philosophy of Consciousness”—“Ontology does not regard its object as a thing in itself, but a thing as we are compelled to receive it.” Thus, we discuss disease, nature and many other topics. We are hence liable to confound phenomena and their causes, as in the instance of heat or caloric—which at one moment we speak of as an imponderable, ingeniously maintained by Metcalfe to be the cause of all activity in the universe; next, as a state or condition, an effect of motion, for example; and again as a force producing motion. Disease is a state or condition; yet of some diseases we detect a present characteristic substance, as in the parasitic and contagious; in many, perhaps most, we recognize only a hidden force, a dynamic quality, appreciable by its action, its impressions, its effects upon the living organism. If we agree with Newton, that “there is no virtue except in substance,” we must admit a substratum for this as for all other forces. So Hippocrates seems to have thought. “His theory of medicine,” says his learned worshipper and translator, Adams, “is based on the belief of a *spiritual essence*, diffused through the whole works of creation, which was regarded as the agent that constantly strives to preserve all things in their natural state, and to restore them when they are preternaturally deranged. This is the *principle* which he

called nature, and which he held to be a *vis medicatrix*—the physician of diseases.” Sydenham, the English or modern Hippocrates, as he is often styled, takes care to tell us what he intends by the word, which, he says, “I frequently make use of—lest my opinion be taken in a wrong sense. By nature I always mean a *certain assemblage of causes*, which though destitute of reason and contrivance, are directed in the wisest manner while they perform their operations and produce their effects.” He confesses, however, to have often personified, “ontologically,” as Mansel has it, these abstract notions—“and ascribed various effects to her as if I would thereby represent some one self-existent being, every where diffused throughout the machine of the universe, which being endowed with reason, governs and directs all bodies.” Something of this sort is represented in the intelligent Archæus of Paracelsus and Van Helmont, the Anima of Stahl, and the *vis medicatrix naturæ*, so familiarly alluded to every day, by the learned and the unlearned among doctors.

A more fallacious and injurious notion is that which regards the disease itself, “*morbus ipse*,” with the foul conditions by which it is manifested, as remedial and restorative; thus personifying nature, like an African fetish, in a most uncouth and devilish form. The origin of this curious and fostered error is to be found in the occasional relief which follows hæmorrhages, fluxes, and the breaking forth of eruption in the exantheas. Incidental results here are transfigured into benevolent and salutary arrangements, on the same false assumption as the conversion of the subsidence of a malady—whose course and duration are as essential points in its history as any other of its characteristic symptoms—into its cure and arrest by the *vis medicatrix*. We should not forget that all effects come to an end when their causes cease or are taken away. All force expends itself in action. The causes of acute disease are in their character transient, and subside: it is their noxious intensity and violence that we dread; the suffering they inflict; the danger of fatal impression. The tendency is all evil. In albuminuria and glycosuria, the kidney solicits or permits the waste of material essential to life; in diabetes, it drains away the fluids; diarrhœa, sometimes briefly serviceable, soon be-

becomes destructive by exhaustion, as does hæmorrhage, which may also be fatally misplaced. From perverted morbid action in any organ, it is idle to expect salutary elimination; if less than totally perverted, the remaining imperfectly normal performance of function is all that is restorative; so far as it is diseased, it is only injurious, destructive, deadly.

Perhaps the word nature is oftenest used among us at present evasively, with no meaning at all; significant merely of a negation of opinion, or of a simple scepticism, either scornful or despondent. Sometimes, doubtless, and by the more philosophic, it is loosely employed as a synonym of instinct in the healthy, and in disease for the seemingly analogous proclivities or inclinations characteristic of the malady, or spontaneously exhibited among its symptoms and manifestations.

I know not whether the modern expectants who, with Forbes and Bigelow, treat so eulogistically of "nature in disease," as their phrase is, would accept any of the definitions given above. But they have favored us with nothing better; indeed, they seem reluctant to make the attempt. The monstrous idea that the changes, disorders, disturbances, struggles, and in general the movements of disease, tend somehow to the restoration of health, is the foundation of the dogma which has, in our day, swollen to such vast proportions of triumphant charlatanism—*similia similibus curantur*. Common sense entered an early protest against the sweeping assumption and the exclusive inference, and we find Hippocrates teaching and practicing upon the contrasted doctrine, *contraria medentur contrariis*. We reject the trammels of both. The caprices—for such they seem to be—the infinite variations of instinctive propensity and action, render it unreasonable in us to submit to such blind guidance either in health or disease; either in the artificial life of civilization or in the wild and savage condition which we call emphatically "the state of nature." "In regard to alcohol," says the most recent writer of authority on Hygiene, Hammond, "the united testimony of arctic voyagers is decidedly against it. And yet, there appears to be an instinct in the inhabitants of high latitudes to indulge in the use of it." Which shall weigh most with us here? "the united testimony" on the one hand, or on the other "the instinct," the prompting

of nature ! Nay, this instinct is strongest in those tribes least tolerant of it, most apt to suffer from it—as in the Red Man, who most eagerly thirsts for it and perishes most certainly and most rapidly from its effects. All races of men, who have the skill to procure it or prepare it for themselves, indulge in and die by alcohol. A similar propensity leads them to the use and abuse of all narcotics, and especially of tobacco—a deadly poison, not only like alcohol and prussic acid in concentrated extract or ultimate principle, but in the ordinary form in which nature presents it to us. A few grains of it, a weak infusion introduced into the stomach, will sicken, torture, prostrate and kill as surely as any agent known. Yet even to this almost universal rule there are exceptions, curiously anomalous. Wilkes found on Drummond's Island a tribe of savages who *eat* it, not only with impunity but greedy delight; and Colonel Shakspeare, of the British Indian army, informs us that his attendants in the Nylgherries swallowed it not only as a luxury, but as prophylactic and curative of their fevers. Something feebly analogous may be noticed familiarly among ourselves. In the endeavor to acquire the habit of using it, many persons have to go through a painful apprenticeship, during which they endure martyrdom, in vertigo, headache, nausea, vomiting, cramps, and severe colics, while a fortunate few are able to enter upon it without any such ordeal. You may meet children of tender age, in the streets of our cities, with segars or the fag ends of segars in their little distorted mouths. A similar difference exists as to liability to sea sickness, from which annoying infliction some never suffer at all, and some always, the majority losing the susceptibility after a longer or shorter probation. We call these marked differences "idiosyncrasies;" we encounter their influence everywhere; in the selection and adaptation of food and drinks; in susceptibility to the action of causes of disease, of poisons, and of medicines; they enter as important elements into this topic of the powers and tendencies of nature; and the very allusion to them illustrates the vagueness and insecurity of such guidance. Nor may we ever forget that the entire life we live is artificial, factitious—it is perhaps too much to say unnatural. Each of us has been affirmed to be or to become "a bundle of habits." Habit, ac-

ording to the proverb, is a second nature. "Habit"—said the highest military authority, Wellington, whose knowledge of mankind was as rare as it was intensely practical—"Habit," said the Iron Duke, "is ten times nature." We must allow for it at every step of our prophylactic and therapeutic treatment of our clients. We cannot, in any case, for a moment, disregard it with impunity. But I have not room to enlarge on this interesting topic.

We talk lightly and familiarly of "the laws of nature," and the necessity of our submission to them. In the purely physical sciences we can refer with confidence to the existence and pressure of such laws; inexorable, precise and unchanging. When we enter the domain of biology, however, we must understand the term *law* in a very different sense. There is nothing here precise or unchanging. The three angles of a triangle must be equal to two right angles; a body at rest will remain so forever unless disturbed by force; 4 and 5 must make 9; two parallel lines cannot possibly meet. But in the living organism no certainty can be affirmed; no prediction is sure; there are always alternatives. Food does not always nourish, nor drinks quench thirst. Contingencies transient and permanent affect and modify everything. Custom—usage slowly acquired will give insensibility to drugs and poisons; temporary conditions will do the same; a man who would sleep under a grain of opium to-day or die from a scruple dose, will take to-morrow with impunity, perhaps with benefit, a dram or an ounce of it, under the spasms of tetanus, the protracted agonies of neuralgia, or the throes of passion and despair.

It is true that our views of pathology are unsettled; that our doctrinal systems are disputable and hypothetical, and our therapeutic in great measure empirical, varying and dissentient. But we have seen that there is nothing more conclusive in the mythical notions concerning "nature in disease;" nor in the suggestion of a *vis medicatrix*, a Hippocratic spirit, an intelligent Archæus, a reasoning or unreasoning "congeries of causes," a spontaneous power of resistance and renovation in the organism, or a mechanical and resilient necessity of a reflex, sanative, expulsive and eliminatory action, or an instinctive demand or *nisus*. We ask for manifestations of this innate

energy, and the Coan school set itself earnestly to watch for them, chiefly with a view to prognosis—that they might be able to predict whether the sick would die or recover, and thus acquire the lofty repute of prophecy. Surely, although knowledge of every kind is desirable, this—if it were all—would be most unsatisfactory. These attentive observers could not help finding among prognostics the frequent resumption of certain suspended or impaired processes of excretion and elimination, and it was easy to infer that disease was in this way thrown off or got rid of. Ascertaining farther that important changes or *crises*, on which they laid great stress, were coincident not only with these natural and normal eliminations, but occasionally with others in themselves morbid and unnatural, such as hemorrhages, fluxes, eruptions, they were led to consider these also as efforts of the *vis medicatrix*. It became apparent further, that these palpable phenomena did not include all the various classes of cases, some of which recovered without obviously throwing off or getting rid of anything cognizable. Not only the profluvia then, and the exanthemata, but fevers generally—in many of which a great confusion and vehement disturbance of all the functions and organs were the only notable marks of the struggle—came to be regarded with an eye of favor, as somehow salutary. Nay, by parity of reasoning, convulsions have recently claimed to be considered in this light; and Todd distinctly maintains epilepsy to be a mere explosion of dangerous elements, thus beneficently disposed of.

Embarrassed by these inscrutable obscurities and insurmountable difficulties, Sydenham in his simple adhesion to truth, quaintly confesses that “in all acute diseases (which comprehend more than two-thirds of distempers) and most chronic ones, it must be owned, there is *something divine** or some specific property, which is not discoverable by any search into the structure of the human body,” and freely admits that this mystical indication is not always to be trusted. In pleurisy, he warns us, that “not to mention the tediousness of the method by which nature endeavors to expel the morbid matter, it is likewise unsafe!” And of the plague he says, that “Provi-

* “Omnino fatendum est Ti Thëion inesse.” 4to Latine, p. 339, vol. i.

dence which has graciously pointed out a certain method of expelling the morbid cause in other diseases, has given us for this scourge of our transgressions, only a very uncertain one; whence it clearly follows," I am quoting literally, "that the physician, who in the cure of other diseases must tread closely in nature's steps, must here renounce her guidance."

Far be it from me to seek to mislead you by pretension to knowledge, where doubt, conjecture and ignorance still prevail; or to deny or palliate the alleged obscurities or uncertainties of the theory and practice of physic. But I propose to maintain from the considerations above stated, and from facts and reasonings yet to be adduced, that in the urgent demands of afflicted humanity for succor, there is an indispensable necessity for action and effort; for vigorous effort; efficient action. The studies and observation of a long life and an extensive practice, have compelled me to this conclusion. While then I should in the strongest phrase insist upon a prudent choice of means, I cannot help advocating the duty of prompt and decided interference in all serious emergencies, involving danger to our patients. We must be bold and ready under such contingencies; we must abrogate utterly the supremacy of nature in her perverted and deranged and morbid conditions; we must often contend *against* her with all our energy, all our resources; depress when she exalts, constrict when she relaxes, relax the tension she sets up, and rouse her when languid. And yet occasionally we must accept suggestions from her very caprices. Nausea we must sometimes indulge with an emetic, sometimes subdue with a stimulant or narcotic. We heat the shivering cold stage, or administer the douche, or apply ice as we judge expedient, submitting to no embarrassing restraint either of similar or contraries. If human testimony can establish anything, it proves that these contrasted measures have all been directly curative; it proves that perturbation, simply and emphatically as such and by no means rarely, has been beneficial, remedial. You must not understand me, however, for a moment, to intimate that it can ever be indifferent *how* we perturb. There is in every case a best method, and a safest, and he is the most skillful and happy amongst us who oftenest finds it. We may well ponder profoundly too, the question whether such choice

can by any possibility be uniform or the same in the hands of different practitioners of equal sagacity and intelligence. Nothing is more injurious to our profession than the uncharitable intolerance which, erecting its own limited sphere of results into a standard, discredits or perhaps denies the claims of those who differ in opinion and practice. You will never find me, I pledge myself, regardless of the true and orthodox ; but I trust I shall always convince you of my sincere desire to be just. I have lived with and among my brethren, not without occasional and even earnest conflict, but with ultimate harmony and mutual respect everywhere ; and I am bound to acknowledge that I have often been surprised to see how fortunate many of them were in following out methods of treatment which have appeared to me unequivocally injudicious and hurtful. I do not hence conclude that it is ever in any degree unimportant what course we pursue. The inferences which I draw are, first, that the individual ability of the practitioner is of vastly more consequence than the system to which he has given in his adhesion ; and secondly, that all the varying modes of active treatment may be not only safe, but beneficial in skillful and prudent hands. We are driven to the alternative of rejecting the statements which they proffer to us as positively false, which I dare not and will not do, or accepting them and admitting that they as well as we were successful and useful. I shall not shrink from the critical discussion of all such documents ; I shall attempt a fair valuation of them, and shall endeavor to teach you to profit by what there is in them of good, and to avoid what is not eligible or available to you. We feel and know that there is truth somewhere, and that we must seek for it indefatigably. How shall we know when we have found it ? We must not expect or wait for demonstration, certainty. We must be content with a reasonable probability, and must arrive at this position by the most rigid and impartial estimate of facts, the most strictly logical reasoning. We cannot suspend our opinion ; we are compelled to decide. The river of doubt will flow on forever at our feet, if like Horace's rustic we wait, expecting it to run by. What does experience tell us ? What are the recorded facts ? Cullen could never have intended the saying ascribed to him, that " there are in our science more false facts

than false theories," in the sense thus paradoxically expressed. A fact is irrefragable and defiant; no power in the universe can alter or obliterate it. A fact is always true—always a truth; it is eternal. But, how to discern it; how to distinguish the real from the apparent; this is the point of difficulty; here lies the inlet to error, to falsehood. Admit the greatness of the difficulty, acknowledge our liability to error; what then? We must determine; we must accept the attainable data, and from the premises draw some conclusion upon which to act. We must follow the guidance of our senses and our reason whithersoever they lead us. It will be of vast advantage to us to have educated our senses, to have trained our reason; to have enhanced the nicety of the first and improved the power of the second. The advocate and the judge acquire by frequent exercise a wonderful dexterity in such intellectual efforts, and learn to extract the disguised or hidden or perhaps unknown truth out of the most entangled mass of confused surroundings, and from the most stolid, incompetent and reluctant witnesses. Canning was so ingeniously penetrating that in the shrewd game of "Twenty Questions" he was rarely, if ever foiled, however intricate or remote the answer. Cultivate assiduously each of you, the portion of talent that you possess in this kind. We all know the immense differences in perspicacity that exist among us. One practitioner will discover, almost at a glance, the actual condition of a patient, or, in the most obscure case, will detect, by persevering, well directed examination and cross-examination all that can be ascertained; while another shall ask a thousand promiscuous questions, only to be more and more puzzled by the replies elicited. Obtaining the facts, taking cognizance of the phenomena, we press forward with our investigation; we seek in the past the history of the cause or causes; we peer into the future to anticipate, in order to gain power to avert the consequences.

And here again upon the threshold of our etiological and pathological discussions, stands the philosophic doubter to bid us beware! and warn us of the extreme intricacy of the general topic, and of the special uncertainties which beset the physician. With potent sneer and keen sarcasm he sets before us the intrinsic obscurity that envelopes the relation of causative agency,

the thousand mistakes, the serious and the ridiculous blunders of those who have fallen, as so many do fall, into the weakness of hasty inference and ill-founded deduction. We will not deny this lamentable fallibility of human judgment, nor extenuate the wide-spread propensity to grasp at the near and prominent, to accept the seeming as the actual. The only method known of inferring the causal relation is the observation of coincidence or constant sequence. If our sphere of remark were wide enough, and our opportunity sufficiently protracted, it would always avail, would never mislead us. It carries us sometimes astray by premature application; because "life is short, and art is long, and limited experience fallacious." But in due process of time—in the progress of generations we assist and correct each other. We detect slowly but surely the failure of coincidence and of uniform sequence, and we revise our conclusions. When we know all the circumstances, apprehend the entire tissue of facts, and appreciate precisely their import and value, we shall then attain the end of all philosophy, and arrive at what the Latin poet regarded as absolute felicity. We shall know at last "the causes of things." Meanwhile, in acting upon our imperfect, though happily progressive knowledge, we may console ourselves with the reflection that such is the universal lot of mankind. The engineer is sometimes "hoist with his own petard;" the mechanist cannot always regulate or control the explosive power of vapor; but gunpowder and the steam engine are not therefore abandoned. What we have attained we make practically available. Little as we can affirm clearly of malaria, we are able to indicate its localities and the contingencies that aid and impede its evil influence; we avoid and counteract it; we prevent, and we arrest and remedy its poisonous effect. We are in the dark concerning the relation of vaccine to small-pox; but we apply it most beneficially to diminish the frequency and mortality of that pestilence. As yet totally unaware how chloroform impresses the sensitiveness, we exult in the certainty that it relieves anguish and takes away the susceptibility to pain.

In our therapeutical views and expectations, we shall necessarily be greatly influenced by the biological opinions we may have adopted. If we regard a living organism as nothing

more than a laboratory, in which physical action or change of the same kind, chemical and mechanical, which affects inorganic masses and molecules, suffices to account for all the phenomena manifested, then we shall be content to seek, in the chemical or mechanical qualities of our medicaments, for the power, capacity, or adaptation that makes them remedial. From such speculations, however, we shall, in the present condition of our science, derive little or no practical benefit. As I apprehend the data now in our possession, they seem to point out two separate classes of morbid affections; one we may properly term static, as resulting from the presence within the body of certain material substances, injurious in their tendencies and action. These are sometimes palpable; at others they are inferred clearly and unequivocally. Of the palpable we have examples in the impregnation of our solids and fluids with poisons coming in contact with or introduced into the body, as arsenic, lead, mercury, alcohol, &c., and certain parasites and deposits, tubercle, calculi, parasitic fungi, animal and animalcular forms. Of the impalpable, instances may be offered in the contagious maladies, hydrophobia, measles, typhus; the epidemic, cholera and influenza; and the malarious, dysentery and periodical fevers.

The dynamic affections, alike numerous and familiar, seem, if possible, even more obscure in their history and causative relations. Here we find hysteria, epilepsy, neuralgia, often unassociated with any cognizable alteration in the structure of the body or its parts. The phlegmasiæ proper, which begin we know not how or why—the pneumatoses—the gastric and cardiac disorders which haunt the refined life of modern civilization—the plethoric and anæmic conditions upon which so many and varied diseases are built up, may also be arranged here. It is not rare that these arise from mental or emotional shocks, merely presenting at their origin phenomena of disturbed vitality, manifested simply in its abnormal movements. There has arisen among physiologists a strange hostility to the admission of the existence of a vital principle, strange I say, for nothing can be more natural and instinctive than such a belief. At every step, even if we cannot demonstrate, it seems necessary to assume it. I will—I grieve—I rejoice—I fear—

I think—I feel. At each of these mental operations, a mass of phosphoretted fat and albumen takes on certain changes; phosphates are formed which are to be excreted by the kidneys—cholesterine which the liver must set apart—and meanwhile I speak, I weep, I laugh, I shudder, I reason, I suffer. It is utterly unsatisfactory to refer me to these coincident changes of composition in the nerve matter, or in the muscular cell, or the secretory gland, as in any degree relevant or elucidatory of what has happened. Such changes may be, perhaps are, effects or consequences, it is absurd to imagine them causative of the intellectual phenomena. Not more indispensable to the physicist is the hypothesis of an all-pervading ether in the received doctrines of attraction and repulsion, and the undulations of light, than to the medical philosopher in his reasonings, is the ancient faith in a vital principle, or, to accommodate ourselves to modern phraseology, a special life-force, as different from all other forces in nature known to us, as chemical affinity is different from gravitation, or this latter from heat. It is so far in correlation with all these forces that it modifies and is in turn liable to be modified by their influences; for living bodies must be in harmony with the universe which they inhabit. But it is altogether special and distinct; constituting the infinite difference which makes, by its presence and activity, the sentient, intelligent being, and passing away, leaves it—*dust* and a *shadow*. A fit of anger or other vehement emotion results in arrest of secretion or excretion—a horrid convulsion—a paralysis of the heart—a syncope—and the complex and active organism becomes a void and inert mass. I hold, strongly, with the profound and ingenious Matteuci, that “while living beings are endowed with the general properties of all natural bodies, and are therefore amenable to all natural laws, yet the phenomeua which they offer to our observation are not explicable by reference to physical and chemical forces merely, but that in all life there is something peculiar which modifies the action of those forces.”

As we argue that many and varied diseases thus arise from or consist in mere perversions of living action, so we contend for the dynamic efficiency of many of our medicaments, whose undefined and indefinable powers of impressing the organism

cannot possibly be classed in any known category, or inferred from the presence of any known qualities, physical or chemical. Let us illustrate by the example of our most unquestioned specific cinchona. If we investigate its mode of efficiency, we shall find it obscurely antidotal—acting directly without intermediate obvious impressions. La Fontaine, in his poem, “Quinquina,” embodies the views of the leading physicians of Louis XIV’s time, which, indeed, we find in the notes appended by Breschet and others. It was regarded, chemically, as neutralizing an acid humor or ferment in the fluids, while its bitterness was somewhat tonic. Note now the singularity of its effects and its eccentric limitations. In agues of ordinary character it is infallible, omnipotent; if the intermittent become a remittent, it is of little value, nay, sometimes hurtful; let the morbid agency be exalted still more into its intensest virulence, as in congestive fevers, it exerts again an imperial sway: while it has a doubtful and indirect influence only, upon the crowd of lesser and more chronic disorders ascribed to the same poison. These strange caprices are incompatible with the idea of its entrance into chemical combination with any supposed noxious element thus neutralized, or its suggested destruction of any imagined fungus or animalcule. We are surely then justified in referring its efficiency rather to some dynamic property, the nature of which we know not—calmant, stimulant, narcotic or corroborant, it matters not how we name it.

Hitherto, almost all our knowledge of medicines has been collated empirically, by tradition, by accident, by fanciful or exploratory experimentation; but we are beginning to penetrate with dim vision the palpable obscure in various directions, and of late have been led by reasoning to some striking discoveries. Anæsthesia may be offered as an instance in which progress was made intelligently, from the long previous notice of the qualities of the nitrous oxyd, through ether and similar compounds, to the crowning conquest of chloroform. Thus, too, Todd’s hypothesis of polarizing influence on the cerebro-spinal axis has set us to try the effect of one narcotic in opposition to another, as belladonna to opium, and to search for a contrast to strychnia and a cure for tetanus in such articles as stun with local or general palsy.

Meunier and Orfila saw the lamented Ellenberger swallow 30 grains acet: morph: with impunity, employing a few moments after a proper quantity of some preparation known only to himself: he had found also an antidote to strychnia, of which he has been known to take as much as $3\frac{1}{2}$ grains at once. He died alone, and suddenly; poisoned, no doubt, in some rash experiment; unhappily leaving no details of his valuable discoveries.

It is often alleged against our profession, that we ignore or neglect the received rules of logical deduction. A strict adherence to them must indeed have led the partisans of "Nature in Disease" to a simple expectant method, a "meditation on death," as Asclepiades called it; or, at the farthest limit of adventure, into a timid resort to "similars," helping her, when struggling to effect her conjectured purposes, by nice adaptation of cautious dose; for it would have been an obvious violation of their own principle to thrust the auxiliary into the first place, or to take the affair out of the hands of the great restorer, not thus to be supplanted.

On the contrary, those who believe, as I do, that it is often our imperative duty not only to disregard, but to oppose the tendencies exhibited in disease; to control, as far as we can, the morbid movements going on; to restrain the misdirected energies of the organism; to traverse and change as promptly and thoroughly as possible the course of perverted and injurious action, are as fairly committed to a free use of all available remedies, and the institution of a series of persevering efforts of tentative character. Thus, we consistently press forward under the exigencies of severe disease into what is sometimes sneeringly called heroic practice, which, indeed, under such circumstances is the only "rational practice." But in regard to this matter, let us understand clearly that we must not confound diseases, nosologically considered, with *cases* of disease. I maintain the propriety, the necessity of interference, perturbation, in the treatment of disease generally. Let me impress upon you not less distinctly my conviction that in the very gravest maladies admitting of relief or cure, you will meet with a notable proportion of cases—in the milder perhaps a majority—with which you need not interfere, and,

needing not, you ought not, you must not. These you will sedulously distinguish, and manage by expectation, by regimen, or with placebos. Remember, that it is not permitted to you to treat any single patient that shall ever fall into your hands upon any pre-arranged plan, or according to any routine established on any average results, however obtained. Every subject of your care must be individualized, and regarded as an insulated unit. I have warned you that the laws which govern living organisms are not, as we now apprehend them, inexorable and immutable, like those of the inorganic world. They are bristling with seeming exceptions, alternatives, anomalies. The sick man before you may be the eccentric, irregular exception in your table of one hundred, whose life will be destroyed by the very means best adapted to preserve or restore the other ninety-nine.

Chomel's pithy maxims: 1. To take care to do your patient no harm; and, 2. To endeavor next in order, and in entire subservience to the first, to endeavor to do him all the good you can—are worthy of all acceptance. "Benevolence," in Gibbon's fine phrase, "is the foundation of justice; since we are forbidden to injure those whom we are bound to assist." Thus resolved and guarded, I go on to demand of you, as you hope to be useful in your day and generation, and as you desire to promote the advancement of the divine art of healing, a fearless as well as disinterested devotion. From my very heart I approve and honor the boldness of Marshall Hall in opening the trachea for the prevention of epilepsy; the courage of Trousseau and Bowditch, in the early resort to paracentesis for the removal of pleural effusion; the daring of Green in his now familiar manipulations on the larynx, and his audacious injection of fluids into the bronchi and lungs. I do not speak here of the merits of these methods of treatment; I refer to them as enterprises calculated to inspire you with lofty zeal and earnest emulation.

But, why should I defend, before a professional audience, the most unshrinking efforts to relieve suffering and prolong life! Hippocrates, the ever-lauded model of the worshippers of nature, carried venesection sometimes to syncope, and even advises purgatives occasionally to the production of deliquium

animi. Sydenham, also, used the lancet freely, and is profuse in his administration of the crocus metallorum. Dare we abandon or expel from our pharmacopœia prussic acid or strychnia, aconite or iodine, or denounce a Stoerck, a Magendie or a Fleming for having introduced into our prescriptions these and other virulent poisons? And while a Simpson in Obstetrics, and a Pancoast and a Gross in Surgery, daily resort to the inestimable anæsthetics, so recently acquired by us, let no one declaim against the most heroic practice! I employ them without hesitation. I witness with exultation and delight, yet never without profound awe and intense anxiety, their mysterious effects; the absolute physical insensibility; the mental unconsciousness; the exquisite relief from pain; holding my very breath in suspense, until the annihilating, death-like influence passes away, and life is resumed anew.

None of these energetic measures should be lightly or indifferently instituted. I would abstain from them all, and refuse them peremptorily, unless in instances in which I conscientiously believed they were impressively indicated, and that their probable effects, including a fair estimate of every risk of injury, were less to be dreaded than the present and prospective danger and suffering of the patient. In making this estimate we take into the account the well known fact that a relevant and adapted remedy for any malady finds in the system an insusceptibility or resistance which exacts the administration of an amount proportioned to the degree of morbid force of action. Thus, intense pain calls for abundant narcotics and anæsthetics, now well borne and safely taken. Great prostration demands stimulants in almost incredible quantities. High vascular excitement, with rapid sanguification, justifies the profuse venesection, for which it is the ruling fashion to condemn our predecessors, surely not less sagacious or trustworthy than we. These results of *tolerance* are, perhaps, best illustrated in the unequivocal testimony offered us by the Italian Contra-Stimulant School, from whom, and much other undoubted authority, we are compelled to receive statements of the familiar and harmless, if not beneficial employment of immense doses of digitalis and opium and quinia, of mercurial, antimonial and arsenical preparations. The true rule is, as

I have said, that you should choose for your patient deliberately and with a due sense of your profound responsibility, the least of the evils impending and inevitable.

While writing these pages, I have had laid before me (B. and F. Rev. July, 1863) the statistical records of the two latest British expeditions to China. Each occupied three years; the first, 1840-1-2; the second, 1857-8-9. In the first, with a smaller force of men, the number of cases (dysentery) was greater absolutely; the hygienic conditions were, therefore, more unfavorable. The heroic or active treatment, by venesection, large doses of mercury, with opium, &c., was then in vogue. The patients were speedily relieved in several instances, but an unpleasant ptyalism supervening, the remedy proved worse than the disease, *as was thought*, and the convalescence was exceedingly protracted. On the whole, the result of the practice was not satisfactory. In the second expedition, with a much larger force, the number of sick was absolutely smaller. Reliance was placed upon milder measures, in compliance with the modern repugnance to all energetic medication. Nothing, however, was gained by the change; on the contrary, the results were far more unsatisfactory than before. The proportion of deaths was much more than twice as great, and the invalided more numerous by ten to one. The details are thus formulated:

1. Men,	15,470	Cases,	2,102	Invalided,	60	Died,	188.
2. " "	24,980	" "	2,006	" "	606	" "	465.

Upon which the reviewer comments fairly enough: "Taking a dispassionate and impartial view of the facts, the conclusion cannot be avoided that the treatment of dysentery in China has very decidedly retrograded."

So much for a comparison between heroic and mild practice in one impressive example. I add a similar comparison between heroic treatment and no treatment at all—"nature in disease" emphatically. In the Report of the Secretary of the Medical Board of Bombay, published in the second or third year of the prevalence of epidemic cholera in that region, it is asserted that "there is melancholy reason to believe that every individual unblest with professional aid, perished!—twelve hundred and ninety-four such instances having occurred in this single

district; no case having recovered in which medicine was not administered; while, on the other hand, the proportion of mortality was by the treatment resorted to—venesection, *free and large*, with *full* doses of calomel and opium—reduced to less than seven per cent.

I scarcely need remind you that it is not only the risk of life you are to consider in making the serious choice of evils I have been speaking of, but sometimes the mere harshness and inconvenience of the remedy. The venerable James Jackson recommends, for example, the universal administration of tartarized antimony, at the commencement of typhoid fever. His own words are—“Viewing the antimonial emetic administered on the first day as creating almost a certainty of a speedy and safe termination of the disease, I think I may say that the remedy ought to be employed *in every case* where there is an even chance that this disease has begun its course. For myself, in such cases, I should not hesitate.” (Sec. Let. p. 23.) This advice is doubtless good, as a general rule, but I meet with a notable proportion of attacks in which the emetic may be dispensed with, and I forbear to inflict it on such as do not seem likely to be injured by an indulgent discrimination. I have strong faith in the efficiency and value of the mercurial treatment of fevers, dysenteries and many visceral disorders, but I have seen so much suffering from it, and am aware of such risk of injury, that while I always hold it ready among my resources, and employ it frankly when it is definitely indicated, I resort to it, not of choice, but with a certain reticence and reluctance. I can present you, however, with no stronger illustration of the rule I am inculcating upon you than the following, from “Bachman and Audubon’s Quadrupeds of America.” Speaking of the “*mephitis chinga*,” the “common American skunk,” Dr. Bachman tells us—“The peculiar offensive liquor contained in the sacs of this animal has been sometimes applied to medical purposes. A venerable clergyman, an esteemed friend, for many years a martyr to asthma, requested me to procure for him the glands, which, according to the direction of his medical adviser, were kept tightly corked in a smelling bottle, to be applied to his nose when attacked by a paroxysm of his disease. For some time he believed he

had found a specific for his distressing complaint; but, having uncorked the bottle on one occasion, while in the pulpit during service, his congregation, finding the smell too powerful for their olfactories, made a hasty retreat, leaving him nearly alone in the church. Prof. Ives, of New Haven, administered to an asthmatic a drop of this fluid three times a day. The invalid was greatly benefited; all his secretions, however, were soon affected to such a degree that he became highly offensive, both to himself and those near him. He discontinued the medicine, but his malady returned. He again called on the doctor for advice, and the old and tried prescription was once more recommended; but the patient declined taking it—declaring that ‘the remedy was worse than the disease’”—which, indeed, we readily admit, in both instances.

To your own necessarily limited opportunities you must add from every available source, collating the records to be found in your libraries, and in the current journals which you must read constantly. To a certain extent you must confide in and learn from your predecessors and collaborators. But how much! how far! how implicitly! *Doubt* is inevitable to the earnest truth seeker; it is the only gate to knowledge. We must yield to testimony its full value; but we must closely estimate that value. We must accord its due weight to authority, but we must scrutinize its claims critically. Remember always, that our science admits no umpirage; no jurisdiction, no vote, no majority is of the least avail to fix an opinion, establish a doctrine, or dictate a method of practice.

Look with distrustful reserve upon all numerical statements. Quetelet speaks most scornfully of medical statistics, and although his strictures are unduly harsh, yet we cannot deny that such prepared tables are often unworthy an implicit confidence, and will mislead those who rely on them too simply, and draw inferences hastily from them. Beware of the *exaggeration* which will beset you through all your reading; of assertions, representations, expectations. Commencing with the beneficent studies of hygiene, peruse the sharp-cut, deeply-lined statements and portraitures of those who denounce with the irrefragable force of truth, all evil habits of living, and inculcate the need and value of pure air and water, temperance and cleanliness.

See how rashly they venture upon specification of cause and prediction of effect, and contrast these with the actual realities. No one can doubt that the habits and manners, all the modes of existence, all the social customs of civilized communities are greatly altered for the better within a century. Turn to the pages of Jortin and Fielding, of Macaulay and Thackeray; observe how much less intemperance prevails, examine the domestic architecture, and the improvements in ventilation, neatness, warmth, light; in our food and drinks and clothing. And yet all this advance in the right direction has availed us little, if at all, in averting the epidemic invasions which it was specially predicted would be thus influenced; such as scarlet fever, which Sydenham speaks of as "only the name of a disease," now amongst the most appalling of the figures on our annual registers of mortality; scarcely met with, sixty years ago, as Drake tells us, in our country, now dreaded by the faltering heart of every parent; bidding defiance to the received rule of acquired malignity in the hovels of the poor, the half-fed, the ill-lodged, it is affirmed to exhibit its greatest rate of fatal violence in the wealthier classes. Witness also typhoid fever, its small beginnings recorded a few lustrums since, now a universal scourge; and its congener typhus; and its frequent consorts erysipelas and dysentery, spreading far and wide, season after season: and cholera, a fearful variety of disease, a terrible substitute for plague now obsolete, vastly more unlimited in its spread, and more deadly in its devastation: and diphtheria, so magnified and enhanced in prevalence and mortality, as to constitute virtually a new pestilence. Sum up weekly the undiminished total of pneumonia, over which almost every modern treatise on medical practice vaunts enlarged control. Note the startling revival of small-pox, which Jenner boasted himself to have exterminated; and, above all, the appalling increase of consumption, setting at nought all our projects of repression and limitation.

Indeed, I almost shrink from expressing my fears that all our modern progress so exultingly proclaimed in the tables of insurance offices, and the reports got up from time to time by our census commissioners, and registrars, general and local, are to be continued merely as advances in what Struve has so well

treated of, under the title of "Asthenology, or the Art of preserving Feeble Life." Consult our examining surgeons, and learn from them the astounding proportion of real infirmity, latent imbecility and concealed disease, which exist round about us. Hear the aged family physician recount his experience of hereditary maladies kept down, checked, suppressed, but not extinguished, by earnest and anxious and skillful attention. Visit our lunatic asylums, and shudder at the diffusion of this worst of human afflictions!

Proceed next to therapeutics, and examine whether there does not exist here the same necessity for caustic inquisition and large subtraction. Experience will soon satisfy you that you will not find half the amount either of good or of evil resulting from the influence of your drugs, that you are led to anticipate from monographs, clinical reports, or tabulated statements. Poisons will not always kill, nay, will often seem to occasion no palpable injury; as we shall see in the tobacco-consumer, the temperate or intemperate drinker, and the blind purchaser of patent medicines. Nor will the energetic articles so vehemently denounced by the self-styled "rationals," the falsely named "eclectics," the expectants, and other worshippers of the shadowy deity "nature," be convicted of the injurious inflictions ascribed to them,—no, not even in their most promiscuous and unskillful employment.

But neither will you obtain from them, I fear, a moiety of the benefits which you are taught to hope for. Quinia will not always arrest, nor cure, nor prevent fever; nor is calomel an unfailing specific for syphilis, nor uniformly useful in croup, nor a sure deobstruent or febrifuge; nor will colchicum invariably relieve gout, nor veratrum control the pulse, nor alkalies expel rheumatism, nor opium put an end to pain or spasm, or even confer its expected blessing, sleep. These uncertainties, humiliating and deplorable, beset us ever, and perhaps will always continue to task our patience and our skill. Like the sailor, our pathway lies across a trackless ocean, where nothing seems fixed or permanent, and sky, and sea, and air embarrass us with perpetual vicissitude, and infinitely varying combinations of circumstance. Like him then, we must learn to make even the inconstant winds and capricious currents subservient

to our purposes, and attain the end of our course in spite of all opposing impediments.

A plain rule may be laid down for your governance. It is by their *tendencies* that all agents are to be judged and appreciated. From these only can we reason. Our hygienic maxims are of indisputable beneficence and salutary tendency, and are incapable of injury. Our medicaments properly indicated, and administered with judgment, prudence and reserve, tend to do good, and can be restrained from all evil influence. Thus much we know, and we must act on this knowledge.

One word more, and I have done. Your duties here should confine you for a few months, closely, but not with absolute exclusiveness to these lecture rooms, the halls of anatomy and the hospitals. Your parents and guardians fondly believe that while absent from their presence and control, you are engaged earnestly and faithfully in the acquisition of knowledge unattainable at home. For this they consent to lose your companionship, and your assistance in domestic affairs; for this they expose you to the temptations of a great city, the seductions of vice, the proclivity of ardent youth to imprudent indulgences. In the confidence thus placed in you, every generous mind must feel and acknowledge the strongest inducement to self-restraint; every sentiment of grateful affection must urge you to fulfill their hopes and wishes, and make you resolve never to inflict upon them the pangs of disappointment, or the stain of reflected disgrace.

For their sakes then; in the sacred names of father, brother, sister and mother, let me implore you to guard yourselves against all dangerous habits, to frequent no doubtful society. Avoid the haunts of vice, which like "the gates of hell lie open night and day" for you; turn away from the seduction of unhallowed pleasures, which will surely lead you to remorse and despair.

And when our course is ended, let us enjoy the proud gratification of restoring you to the arms of those who love you, with minds enlarged, elevated aspirations, bright hopes, pure reputation, and unsullied honor!

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