THE

PRINCIPLES AND PRACTICE

OF

MEDICINE.

INTRODUCTION.

SYSTEMS OF MEDICINE.

BEFORE Lord Bacon, and before, in fact, all others whose writings have come down to us, Da Vinci, the architect, painter, and engineer, proclaimed in the first half of the sixteenth century, that in the study of natural truth we must consult *experience*, *experience* rather than reason. "Those," said he, "who in the study of the sciences do not consult nature, but authors, are not the children of nature; they are only her grandchildren." "Nature begins from the reason and ends in experience, but we must take the reverse course, begin from the experiment and try to discover the reason." "Theory is the general, but *experiments* are the *soldiers*."

Not that these were the first utterances in all time in favor of the value of observation and experiment in acquiring a knowledge of nature; but only that now, for the first time, these began to be the *governing ideas* of science and philosophy. Aristotle was a naturalist, although still more emphatically a dialectician; Leucippus and Democritus founded a school whose dependence was almost exclusively on the evidence of the senses; and even Cicero, who paid little attention to natural science, wrote this wise sentence: "Præstat naturæ voce doceri, quam ingenio suo sapere." But it is especially interesting to us to recall the fact that most clearly, perhaps, of all the ancients, was this reliance upon nature enunciated, and most practically was it exemplified, by Hippocrates of Cos. He asserted again and again in his works that "nothing should be affirmed concerning the nature of man, until after having acquired a certainty of it by the aid of the senses." And, although this may seem very obvious indeed to us, yet it is a familiar fact that the great intellects of antiquity, from the sages of the Vedas and from Pythagoras and Plato, downward, had more confidence in the truth-compelling powers of their own reason; and

even Hippocrates himself often forgot his own maxims, and became dogmatic beyond his knowledge.

It is not my purpose here to go into any historical discussion of philosophy; which would be inappropriate in this place. Nor will I attempt to crowd into a few pages the history of medicine itself. But it appears to me that I cannot better occupy space, in this introduction, than by endeavoring to place before the mind of the reader such a succinct view of the *most essential* phases and mutations of medical opinion, in times past and present, as will enable us to apprehend all that bears upon the aspects and prospects of the theory and practice of Medicine.

In the midst of the multitude of authors who have written upon medicine, in every age which has possessed a literature, the number of cardinal ideas, of distinctive methods, opinions, or principles, has not been great. Those who may be considered to have been original thinkers or leaders in medical philosophy have been few; or, if we cannot refuse to a larger number the credit of originality, yet that of actual novelty is not often theirs, as they have merely started anew an idea, a principle, a system, or theory, which had long ago its propounders, its advocates, and its opposers, although it may have been again forgotten.

Yet, few as these essential ideas have been, it will be impossible to do more than mention them, as it were, in catalogue at present.

A work, for example, might be, and more than once has been, written upon the doctrines of Hippocrates, and of the writings classed under his name alone. Suffice it for us to recollect, that the leading idea of this greatest of physicians was *reliance* upon, and *observation* and *imitation* of *nature*. Yet he theorized upon health and disease, upon the four elements and the four humors, and his system has, therefore, been styled *Dogmatic*. To him, also, is traced the principle of medication by contraries; *τα ἐναντια των ἐναντίων ἐστιν ἰήματα*. The greatest value of the Hippocratic writings undoubtedly consists in their numerous and admirable descriptions of the symptoms of disease, and of the relations of symptoms to prognosis. The study of hygienic laws and influences also received from his school much attention.

Contrasted with the Hippocratic reflective or dogmatic method of studying nature, was the more detailed and less systematic plan of the contemporaneous Cnidian school.

Later, with Philinus and Serapion of Alexandria, the distinctly *Empirical* method was promulgated; in which observation, and this alone, especially as to the use of remedies, was urged. No reasoning about *why* or *how*, but only *what*, engaged the minds of these industrious men; whose materials thus accumulated only too fast for their limited powers of classification. Their most elegant writer was Aretæus, who is not always credited to them, but whose descriptions of disease have seldom been equalled, even down to our own day.

It is less easy to characterize, in a few words, the school curiously called *Methodist;* which originated with the opinions of Cleophantus of Alexandria, and of Asclepiades the Bithynian, the friend of Cicero, and was established by Themison, their disciple, at Rome. Dismissing the expectant study of the course of diseases,

inculcated by Hippocrates—which they laughed at, as a "meditation upon death"—and denying his theory of "coction" and "crisis," they dogmatized in a different way, upon the changes occurring under disease in the condition of the solid structures of the body, and in the movement of its atomic components. Making but two essentially different pathological states, the "laxum" and the "strictum," they simplified the theory of medicine very much. Chiefly, however, was Asclepiades distinguished for the moderation of his practice; rejecting complex, violent, and perturbatory remedies, and aiming, as he said, to cure "tuto, cito, et jucunde." A somewhat complicated course of alterative treatment is, however, ascribed to his successors, by Cœlius Aurelianus, under the name of the "metasyncritic circle."

The most judicious, as well as one of the most learned of physicians, was Aulus Cornelius Celsus. He selected, from the opinions and practice of his predecessors and contemporaries, those of the greatest soundness; so that, not having propounded any exclusive dogma, nor yet being limited by the narrow results of observation alone, he may be justly styled *eclectic;* or, as that term has been made odious of late by the usurpation of a set of pretenders, *episynthetic*, or *comprehensive* might be a preferable title.

Galen, less carefully selective, although undoubtedly an admirable man, excellent practitioner, and learned writer, renewed and added further strength to the hypothetical as well as the practical views of Hippocrates.

From this time, but little of original force appeared in medical literature, until after the period of eight or nine centuries of mediæval darkness had been broken in upon by the revival of learning and intellectual activity, in the fifteenth and sixteenth centuries.

In this revival, it was natural that much recourse should be, at first, had to the treasures of the ancients. Plato and Aristotle divided the newly-revisited realm of philosophy; while Galen, as the exponent of Hippocratic doctrine, almost monopolized that of medicine—until Da Vinci, Telesius, Cæsalpinus, Campanella, and *Bacon* established the *inductive* method of observation and experiment, most obviously necessary for advancement in the physical sciences, of which medicine is one; one, too, which, as Lord Bacon expressed it, had been previously "more labored than advanced."

Chemistry, which had already received much attention from the Arabians, and which, under the fascination of alchemy, had reached valuable discoveries—which, in fact, in the hands of Albertus Magnus, Roger Bacon, Basil Valentin, Isaac Hollandus, and others, had performed wonders; and, in the trumpetings of Paracelsus, had made still more extraordinary pretensions—chemistry was now ripening into a great science. In the seventeenth century, its influence upon physiological and pathological theory much increased; and the practice of medicine could not fail to be consequently affected. By Sylvius, of Amsterdam and Leyden, and by Thomas Willis especially, a school of *Chemiater*, iatrochemists, or chemical physicians, was instituted.

Following the discovery by Harvey of the circulation of the blood, in the investigations of Sanctorius and Borelli, of Pisa, *mechanics* likewise found a place in the study of the functions of the body, in health and disease. An *Iatro-mechanical* school may be thus said to have existed, to which the distinguished Sénac, physician to Louis XIV., among others, contributed, in a work of great ability.

Boerhaave, professor at Leyden, endeavored to combine these, the chemical and mechanical modes of studying the body, and its disorders, into an ingenious but complex eclectic system of his own; which his influence, as a man of genius, and one of the first of modern clinical lecturers, enabled him to extend far and wide. It was rather a dogmatical than an empirical eclecticism.

The latter was admirably exemplified in the writings of Sydenham; who has been well called the modern Hippocrates. Certainly there was a great resemblance between the methods of the Greek and English fathers of medicine.

At the beginning of the seventeenth century, there grew up, in the University of Halle, two opposing theories: the *Animism*, or psycho-vitalism of Stahl, and the *Solidism* and neuro-pathology of Hoffmann. Stahl's doctrine was, in brief, that the *soul* of man governs health and disease. An expectant or do-nothing practice naturally followed from such a view. Hoffmann taught a less simple scheme; but that part of it which seemed to the renowned and learned Cullen, the nosologist of Edinburgh, to be the most worthy of his adoption, was his appreciation of the importance of the *nervous system* in the production of the phenomena of disease.

But the most brilliant of the meteors that have crossed the horizon of medical science, not disappearing, indeed, any of them, without leaving some solid precipitate of knowledge, was the *Sthenic* system of John Brown, of Edinburgh; the pupil, friend, rival, and enemy of Cullen.

All life, according to this bold and able, although too reckless dogmatist, depends upon *stimulation;* all disease upon too much or too little excitement, causing direct or indirect debility. Ninety-seven cases of sickness out of a hundred, in his therapeutics, require stimulation for their relief or cure. Wonderfully simple this! Haller's doctrine of the irritability of organic tissues was, very possibly, its source; but so nearly akin was it to the great idea of *vitalism*, dimly seen by Pythagoras, announced by Hippocrates, but lost for ages until revived and distorted by Van Helmont and Stahl, and afterwards rendered more positive by J. Hunter and Bichat—so near was it to this imperishable idea, that Brown's theory, thus supported at once by ancient philosophy and modern discovery, had an unprecedented influence upon medicine. All theories, and theorists, during and since his time, unless we except the discreet vitalism of Barthez, of Montpellier, have reflected or refracted, with various modifications, the Brunonian ray.

What have we had since, in fact? Rasori, in Italy, adopted Brown's physiological basis, but considered that excitability and excitement were *multiple*, and *unequally distributed*, in disordered states, in different organs; and, moreover, that *over*-excitement

was much more frequent, and demanded more attention in practice than Brown had supposed. Hence arose his sedative or "contro-stimulant" method, by large bleeding and tartar emetic; so famous once, especially in the treatment of inflammatory affections of the chest.

Broussais, in France, proceeding upon the same original basis, saw in *local irritation* and *inflammation*, mostly of the alimentary canal, the seat and centre, the *fons et origo* of the dynamic or excitational error which caused all diseases. His practice varied from both Brown and Rasori; his whole object being to calm and allay the central irritation by diluents, demulcents, local depletion, and counter-irritation, avoiding all heroic treatment.

In this country, which can hardly be said to have had a system before Rush, that noble and independent mind was also influenced by the Brunonian radiation; although a still different view of pathology and therapeutics resulted from his reflections and observations. The "unity of disease" was, with him, a favorite idea. Although his strong good sense did not allow this to exclude from his appreciation remedies and modes of treatment not easily reconciled with such a scheme, Rush evidently leaned much toward the opinion that all acute diseases were but different "states of fever;" for the mitigation of most of which the lancet was the most potent and indispensable remedy. In this he resembled Rasori rather than Brown or Broussais. Even earlier than the universal dissemination of the teachings of the latter, the distinguished successor of Rush, Dr. Nathaniel Chapman, of Philadelphia, claimed and afforded evidence that he had first taught the theory of the local origin of fever, in irritation of the alimentary canal; but he did not allow it to modify his practice in the same manner as Broussais. A part of the practice of Brown has, under the teachings of the late Dr. Todd, of London, constituted a medical "fashion" of the day, as an almost undiscriminating alcoholic *stimulism*.

Now, let us look back. Who have been the ἰατρό-προφῆται, the great leaders in medical speculation, the reformers and deformers of medical practice? The list is not a long one, although its scope of time reaches over two thousand years. Let me hazard their enumeration. Hippocrates, Serapion, Asclepiades, Celsus, Sylvius, Harvey, Borelli, Sydenham, Boerhaave, Stahl, Hoffmann, Haller, Cullen, Avenbrugger, Brown, Jenner, Hunter, Bell, Bichat, Barthez, Pinel, Rasori, Rush, Hosack, Laennec, Broussais, Louis, Liebig, Virchow.

And what have been their essential *ideas*, stripped of all their complexities and environments? *Naturalism*, *empiricism*, *eclecticism*, *humoralism*, *solidism*, *chemicism*, *mechanicism*, *neuro-pathology*, *stimulism*, *phlogisticism*, *pyrexism*, *vitalism*, and latest, of the present date, *cellular pathology*. I leave out of the list the Thomsonian extravaganza of thermalism, and the Hahnemannic homœopathism, as, however serious may have been their detrimental effect upon the welfare of the public at large, they have scarcely influenced the progress or present status of medical science either for good or evil.

By *naturalism* I mean dependence upon nature, and systematic

imitation, in practice, of her spontaneous curative processes. We have already referred to this as the leading Hippocratic idea. It was rejected by the early Methodists, practically repudiated by Cullen, and systematically excluded by Rush. More recently it has been conspicuously illustrated and defended in the lucubrations of Sir John Forbes, following those of Dr. Bigelow, of Boston, upon "Nature and Art in Disease;" to the former of which the sobriquet of "Young Physic" has been applied.

"Expectancy" is a term now frequently used, to dignify what amounts sometimes to absolute inertness of practice; upon an idea, latent or declared, that all medicines are impotent, and that active interference with the self-limitations of disease is never justified by science. This is but a reaction, certainly extreme, from the *polypharmacy* and *hypertherapy* of the past.

Empiricism is strict adhesion to experience; the accumulation of means of treatment simply by observation and experiment, independently of physio-pathological reasoning. The most favorable example of this among the ancients, was Aretæus; of distinguished moderns, Sydenham, Laennec, and Louis.

Eclecticism or *episynthetism* is, of course, the selection or combination of what is deemed best in several methods, as, in practice, of means or measures, some of which have been obtained by mere observation, and some from physiological reasoning or deduction. Celsus afforded the most beautiful early example of this; it has been exemplified, although at the same time, somewhat paradoxically, derided, in our own period, by Trousseau, of Paris.

All of the other systems which I have named are phases of *Rationalism*, which is the proper antithesis of Empiricism.

Solidism, first broached perhaps by the ancient school of Asclepiades, with its *laxum* and *strictum*, was urged to its farthest limit in the *mechanicism* of Borelli, and in the neuro-pathology of Hoffmann, Cullen, and Henle. It was taught in Philadelphia for twenty-five years by Professor Chapman.

Humoralism, the older view, which saw in changes of the fluids all that was essential in disease, pervaded the system of Galen, and the Galenists of the fifteenth and sixteenth centuries. The chemicists generally have had a natural leaning towards it. In this country it was represented at one time by Dr. Hosack, of New York. A very distinguished example of it has lately been known and respected in England, in the lamented Robert Todd, of London.

Chemicism was boldly inaugurated by Sylvius De Lebö, in the seventeenth century, but has received its ripest contributions in the two last decades; especially from Liebig and the other chemical physiologists, Lehmann, Moleschott, etc.

Mechanicism, as an exclusive system of physiological or pathological reasoning, was never permanently established; its influence, as affording even a predominant bias, having been always confined to a few thinkers during a brief period.

Neuro-pathology has had a more important place; dividing with a modified humoralism the domain of medical theory, even down to the present hour. We can never dismiss the consideration of the nervous centres and their communicating nerves, from the

study of the human functions, healthy or morbid. So, that, although it is decidedly an error to say, as some do, that man is *all brain*, or that the "nervous mass" is the animal, yet the nervous system must be made prominent in all medical inquiries.

Enough has been said already to explain the nature and powerful influence of the Brunonian theory, of excitement, or of sthenia and asthenia, which I have named under the title of *stimulism*. It was one step toward the application to pathological and medical truth of that dynamic physiology, that study of the *forces* of the living body, in connection with the constantly acting forces of external nature, which is now, or soon, destined to rule supremely, not as excluding, but as *guiding* our investigations of the chemical and mechanical changes both of the solids and of the fluids. Life is *not merely* excitation; but normal excitation is one of the requisite *conditions* of the performance of all the functions of the body, not even excepting that of growth and development itself; since to this a certain degree of *heat* at least is essential.

Rasori was, moreover, right in saying that excitement is *not a unit* for the whole body, but may be unequal in its different parts; and, moreover, that *excess* of excitement of one or more organs or functions, is at least as frequently present in acute diseases as the reverse.

So, too, Broussais made a just amendment of the same scheme, to a certain extent, in noticing the *sympathetic* and *secondary* effects of *local irritation;* although he, as well as our Chapman, undoubtedly exaggerated the relative importance of irritation of the stomach and intestinal canal.

We need not pause for a moment over the Stahlian theory of the organic soul or *autocrateia;* although very lately a view much like it has been again taken, by Laycock and Morell, under the cognomen of the "unconscious soul."

The last phase of revolution in the scientific basis of medical opinion, has been that which, in the language of its most eminent leader, Virchow, of Berlin, we may designate as *cellular pathology*. Associated in similar, although not quite identical views, have been Prof. Bennett, of Edinburgh, and the late Dr. Addison, of London.

It has been a favorite idea with the physiologists of our period that, in the general law of organic cell-genesis, in the fact that every living being, human, animal, and vegetable, springs from a globoid *germ-cell*, while most of the separate tissues also have the cell for their first starting form; that in this we have the great central radical fact of physio-pathology, out of which (as in physical science out of the Newtonian law of gravitation) all truth in the history of the animal organization, and thus in medicine, must grow. But Dr. Bennett, an earnest teacher of molecular physiology,[1] denies that to the cell-doctrine can be awarded such a place or potency; as it is not a *universal* law, but has its manifest exceptions. Dr. Beale, also, a leading British authority in histology, insists upon some essential modifications in Virchow's theory.

It does not belong to me to discuss this point here; but, as it

[1] Clinical Medicine, Introductory Lecture.

bears largely on the theory of medicine, I will merely say, that if there *be* one fact or idea which more than any other is the gravitative centre of all truth in physiology, pathology, and medicine, it is that of the peculiar agency and supremacy in the body of the *life-force*, and of its intimate relations with the other physical forces;[1] of its being, in fact, capable of *degrees* of *life temperature*, like those of heat temperature, in the body as a whole, and in its various parts and organs; of its manifesting *attributes* or *laws*, like the other forces or phases of impetus and molecular movement in nature; which must be much more patiently and thoroughly studied than they have yet been, before we can be said to understand the human economy, even so well as astronomers now do the solar and sidereal systems.

This brings us towards the conclusion of our inquiry. We have been examining, in this brief manner, several schemes of *rationalism*. But as the use of facts and ideas in the *practice of medicine* is our standpoint, we must now ask, Is rationalism *available* for the treatment of disease? Is physiology perfect? How much of it is positive?

We are compelled to answer—Physiology, and with it necessarily pathology, is one of the least matured, because one of the most complex of the sciences. What would be said, then, were a man to undertake to repair a watch, when he had never seen its *works in motion*, and had no *proven* knowledge of the mode of action of nearly all its machinery? If he should find on *trial*, that hanging it up, or laying it down, or shaking it when it stopped, or keeping it warm or cold, promoted its good time-keeping—very well; let him do so. But if, in this state of uncertain knowledge, he should seize and alter, with fingers or forceps, the delicately arranged and complicated wheels and springs, would not the chances be that he would do more mischief than good? Nor would reasoning about possible or probable watches, theories in chronometry, avail him much toward the medication of the particular timepiece in his hands. Yet this is our position, as physicians, regarding the present relation of physiology and pathology, to the actual treatment of disease. It seems, therefore, only a slight over-statement of Trousseau's that *Rationalism in medicine leads only to absurdities.*

We might easily confirm Trousseau by other authorities, early and late. Stahl spoke of the materia medica of his time as a "stable full of offal." Sydenham complains that practice was "pestered with too many eminent remedies." It is said that when Sydenham was asked by Sir R. Blackmore, what book to begin his medical studies with, he replied *Don Quixote*. Bichat denounced the vague theories of medication prevalent in his day, and declared that but little was really positive in our knowledge of the action of remedies. Pinel had so little confidence in therapeutics, that his only study of disease was for a naturalistic classification: "Given a certain malady—to find its place in the nosological system." Laennec considered physiology and pathology "vain amusements

[1] See *Grove*, *Carpenter*, and others, on the Correlation of Physical and Vital Forces; *Inman*, Foundation for a New Theory and Practice of Medicine; *Chambers*, Renewal of Life, etc.

of the mind." Says Lebert, "We cannot yet, unhappily, construct therapeutics on the basis of scientific medicine; and with the best intentions in the world we can regard the greater part of its precepts but as the result of empiricism."

But, some may exclaim, this is treason! This would remove the practice of medicine from science altogether, and leave it at the mercy of Paracelsus, and Cagliostro, and the old women! Not so. We have only to turn back to the grand platform of Bacon, on which all modern science is built, to see that to found the practice of medicine on *observation* is to make it *eminently* scientific. What science can do without empirical observation? Can physics, or astronomy, or chemistry? None of them. How irrational, then, to attempt to reason out, *a priori*, therapeutics, or to place it upon any other principal basis than clinical observation! Blind, uninstructed, unsystematic empiricism is a bane to society, and a disgrace to the human intellect.[1] But *scientific* empiricism constitutes the most rational practice attainable, while physiology is imperfect. What is most wanted now, is more *positivism* in medicine; more *exact observation* of clinical and therapeutical facts. It is otherwise in most of the natural sciences. Agassiz, one of the great leaders in science, has remarked, that *thought* and *generalization* are now especially required amongst naturalists; who are in danger of being buried among their multitudinous detailed facts, as knights of old, sometimes, were borne down by the weight of their own armor. But it is not so in our science. *Medicine needs more fact and less theory.* I could sustain these positions by argument, by citation, and by example; but we have no room. The proposition must be barely stated, that the most complete knowledge possible of a disease will never *alone* inform us, what will be the effect upon it of any remedies, until *experience* has put them to the test. The two blades of the scissors of practical medicine are, diagnosis and clinical proof. Nor does our total ignorance of the *modus operandi* of any agent in the least interfere with its availability in the treatment of disease, when that treatment has been proved to be successful. We do not know—nor does the chemist require to know—*why* sugar is sweet, or sulphuric acid sour; or why the latter will redden litmus, while an alkali will render turmeric brown. It is no more *necessary*, although it would be interesting, to know how bitters improve the appetite, or iodide of potassium cures syphilitic rheumatism. We may use opium to produce sleep, or lull pain, although we know little more than Molière's doctor—"opium facit dormire, quia est in eo virtus dormitiva."

It was, in fact, as was long ago observed, "only after men had found remedies, that they commenced to reason upon them." The most remarkable treasures of medicine have been discovered almost by accident, and have obtained their place in the materia medica often against the protests of the theorists. Opium is one of the

[1] I advise no one to imitate the follies of Cato the Censor; who, while he forbade his son ever employing a physician, yet dosed his own wife to death, attempted to reduce dislocations by repeating magical words, and wrote a book, in which he recommended cabbage as a sovereign emedy for many diseases.

oldest of drugs.[1] Iron is nearly as ancient. Mercury was a contribution of the alchemists. Arsenic and colchicum appeared first as secret remedies. Iodine (in burnt sponge) and sulphur were popular and domestic before they were professional medicines. And did not the French Academy formally denounce tartar emetic? Did not all the schools disbelieve in cinchona, because it neither sweated, puked, nor purged? And Jenner, who drew the idea of vaccination, by a most sagacious induction, from a popular tradition of the country, against what strong theoretic opposition did his noble discovery have to establish itself!

Nolens volens, then, we have to acknowledge our indebtedness, in therapeutics, to empirical observation. But it is the vocation of the true physician to make it scientific. To know that two cases of disease are *really* alike, and not only apparently so, in order for the application to them of the same remedies; to make *accurate comparison* of the virtues of different modes of treatment, avoiding the "post hoc propter hoc" fallacy; and to appreciate the conditions and circumstances which *modify* the actions of medicines, as they do the course of diseases; these are tasks, which enlist the highest faculties of analysis, as well as of observation.

Moreover, medicine is progressive. Even an incompleted physiology may suggest safe and proper experimentation. And for good *diagnosis* we need pathology; for pathology, physiology is indispensable. We do not admit, then, with Laennec, that these beautiful sciences are but "vain amusements." We look forward to the day, when the laborious and intelligent culture they are now receiving, will be repaid by a tenfold harvest, practical as well as abstract. The time *may* come, when the why and the how of therapeutics may be largely as well as accurately explained. But practical medicine, having its crying necessities, cannot wait for such an era; let it use its facts, and not be misled by false expectations.[2]

Yet, we must remember, that it is the facts, not of the experience of an *individual*, which most of all is "experientia fallax," but of the *aggregate* experience of the *whole profession*, in *all time*, that constitute the body of therapeutical science; which should, as Dr. Todd has said of pathology, be reviewed and reconsidered from time to time; but which can never be abandoned or rejected. It is not well, then, to call the great physicians, our predecessors, as Dr. Bennett has done, "blind guides." Rather may we, with the late Dr. Alison, believe that a disagreement between a newly-broached pathology and the practical experience of all time, is a much better reason for setting aside the new pathology than the old practice.

We may now sum up the substance of the foregoing remarks, by asserting that the therapeutical methods or principles upon which we may deal with the treatment of disease are essentially

[1] Pereira.

[2] "When there is no certain knowledge of a thing, a mere opinion about it cannot discover a sure remedy." "Medicine ought to be rational; but to draw its methods from the *evident* cause; all the obscure being removed, *not from the attention of the artist, but from the practice of the art.*"—CELSUS, *Treatise on Medicine.*

three:[1] the *natural*, hygienic, or expectant; the *specific* or purely empirical (including the tentative); and the *conditional* (including the perturbative or alterative). Of the first two quite enough has been said. Of the last it will suffice to say that it is the most of all open to suggestion from positive physiology and enlightened pathology. It comprises the rational treatment of diseased conditions of the body, for which no direct or *specific* remedy has been discovered; a part of medicine of very great importance, but in which the greatest variation has necessarily occurred in the past, and continues yet to exist. This is the debatable ground, upon which tournament upon tournament and crusade after crusade have been fought; the world at large looking on sometimes with more amusement than profit. The lesson of these petty wars, however—pre-indicated clearly by the old classical writers upon medicine—has been at last tolerably well learned: *Not to do harm when we are unable to do good;* the reversal of the old maxim, "melius anceps quam nullum remedium," because, in the restoration of a patient from disease, the physician is not the only nor even the stronger agent, nature being the principal, he only the accessory.[2] Some have given credit for this medical gospel to distinguished recent writers, as Dr. Bigelow and Sir John Forbes; but they are revivers of the doctrine only, not its discoverers. Hippocrates distinctly recognized the self-limitation of many diseases. Τὰ κρινόμενα καὶ τὰ κεκριμένα ἀρτιως μη κινέειν μηδὲ νεωτεροποιέειν, μήτε φαρμακέῃσι μήτ' ἄλλοισιν ἐρεθισμοισιν, ἀλλ' ἐᾶν.[3] So also did Asclepiades, notwithstanding the protest of his sect against Hippocratism, when he said, that the best cure for a fever is the fever itself.[4] So did Sydenham[5] and others who wrote long ago. We may, perhaps, safely divide the progress of historical medicine (as to its predominant tendencies) into three great periods. 1. *Indefinite*, often heroic, always venturesome *tentative* practice; lasting from archaic times down to near the middle of our 19th century. 2. Under a somewhat despairing reaction from this has come the era of medical *scepticism*, *minimism*, *expectancy;* which qualities characterize much of the ordinary practice of to-day. 3. Following this, it may be hoped, will yet come the *scientific medicine of the future:* definite in its facts, clear in its indications, positive in its therapeutic measures; in accordance with a well-ascertained knowledge of the body, in health and disease.

And now, although Dr. Bennett, of Edinburgh, has predicted the "approaching downfall of empirical practice," yet his co-laborer, Dr. Todd, of London, urged in his last words the importance of its support in clinical research, and the philosophic medical historian, Renouard, seconding the efforts of Louis, the founder of the numerical method, and followed lately by the lamented Niemeyer, has foretold the coming *triumph* of *rational empiricism* or *inductive medicine*. We may well believe that this prophecy will yet be fulfilled.

[1] Lordat. See Renouard's Hist. of Medicine.

[2] Chomel.

[3] Aphorism 20, Section 1st.

[4] Cœlius Aurelianus.

[5] "To imagine that nature always needs the aid of art is an error, and an unlearned error too."