

ARTICLE VI.

THE
PROGRESS OF MEDICAL SCIENCE.

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MR. PRESIDENT AND FELLOWS OF THE SOCIETY, —

IF I were required to give "a reason" why I occupy this place to-day, my reply would be, I am here, not voluntarily, or "on instinct," but "upon compulsion." The counsellors have imposed upon me, perhaps rather inconsiderately, the solemn duty of addressing you on this occasion of our time-honored anniversary meeting; and I felt that there was no alternative left me but to attempt to fulfil the duty. I am not insensible to the honor they have conferred in assigning me this duty, but appreciate it most highly; and can now only regret my inability to perform the service required, according to the standard of literary and professional excellence exhibited by my distinguished predecessors.

I propose to speak of the progress of medical science; and beg your indulgence, while I endeavor to illustrate it, by referring to a few of the facts in medi-

cal history, and some of the methods which have been employed in different ages for its promotion and advancement.

The primary object of all science is the discovery of truth. In the march of scientific improvement, medicine has been no laggard, but has kept equal pace in all ages with the other departments of science, even if it have not at times gone in advance of them. Truth is everywhere so mingled with error, and obscured by it, that it often requires much experience and sound judgment to discriminate the one from the other. The discovery of scientific truth has, consequently, been the result only of patient labor, generally taxing the energies of many minds to demonstrate its reality and define its limits. Absolute truth is eternal, — immutable. It is affected by no conditions, and never changes. Relative or conditional truth is more or less affected and varied by circumstances and relations. The animal organism is exposed to so many contingencies, and influenced by so many circumstances and conditions, external and internal, in health and disease, that the latter form of truth must necessarily constitute to a great extent the basis of medical science. Hence there can be no universal theory or absolute law, applicable to all cases, at all times and under all circumstances. Such a law has been earnestly and perseveringly sought by medical men for more than twenty-five hundred years at least, and the history of medicine clearly demonstrates the futility of the pursuit. Medicine, then, — more especially practical medicine, — can not be

classed among the exact or demonstrative sciences. It must be constituted of such general principles as may be philosophically deduced from facts and observation, and can only be successfully applied by the exercise of reason and judgment. There is no sectarianism in true science: it is liberal, charitable, beneficent, always progressive, and always conservative. It knows no such distinctive phrases as "old school" or "new school:" they do not belong to its vocabulary.

In reviewing the history of medicine, one can hardly fail to be struck by the fact, that two prominent methods have been pursued, for the improvement of their science, by medical philosophers of all ages, — the one by speculation, the other by observation. The votaries of the former method have sought to establish their doctrines upon hypothetical bases, by logical subtleties, reasoning upon the nature of things; or by bending facts, so far as they were able, to the support of imaginary theories.

The method of observation, the one which almost universally prevails at present, has had its occasional adherents in ancient as well as modern times; has been adopted by men of a more practical character, of less imagination, but more common sense; men of patience, content to watch carefully the operations of nature, to examine *things* instead of ideas, to record facts and gain knowledge by experience and the sober deductions of reason, rather than seek it by speculating upon fanciful abstractions.

The prevailing tendency of the ancient physicians

was to speculate and theorize, rather than observe ; yet there were practical observers in ancient as well as in modern times. HIPPOCRATES, the reputed father of medicine, was eminently a practical man, an attentive and patient observer of nature, and, to a certain extent, a really inductive philosopher. His accurate descriptions of acute diseases, his histories of epidemics, and the atmospheric constitutions of different seasons, have hardly been surpassed by observers of any succeeding age. His writings contain so much that is true to nature, and so much of wisdom, that they have been received with reverence even down to the present time. He had his theories, indeed ; but they were always subordinate to the teachings of experience and a sound judgment.

The ancient Grecian philosophy maintained, that all matter is composed of four elements, — fire, air, water, and earth ; and medical theories may have generally taken their hue from the current philosophy of the time. On the doctrine of the four elements, therefore, Hippocrates may have founded his doctrine of the “four cardinal humors,” — of “blood, bile, black bile, and phlegm.” Health was supposed to be dependent on the due quantity, quality, and mixture of these elements or humors. Any derangement of this proper balance of the humors, it was supposed, would generate morbid humors in the organism, which were assumed to be the prolific cause of disease. In order to restore health to the system, the process of “*coction*” of the natural humors of the body was supposed to be instituted, by which the morbid ele-

ments were to be separated from the tissues, elaborated into a morbid material, and in this form expelled from the system. The period required for the completion of the "*coction*," and expulsion of the morbid material, was regarded by Hippocrates as critical. Hence the theory of crises, or critical days, which was founded partly on observation, and partly on the above hypothesis of the humors, and contains some truth mixed with some error. Whatever may be the proportion of the one or the other, it is a matter of history that crises in acute diseases have been regarded with more or less favor by the majority of physicians, down to the present age, though they have been explained upon different principles at various times. In his theory of critical days, Hippocrates recognized a great fact, which, though he probably had no distinct perception of its true import, dimly foreshadowed a fundamental truth or principle in nature, which it was reserved for a distinguished Fellow, and former President of this Society, first clearly to define and exhibit to the world, as manifested in the class of "self-limited diseases."

Passing over many distinguished names, and a period of some five centuries, we come to another illustrious individual, GALEN, who created a memorable epoch in the history of medicine. He flourished in the latter part of the second century of the Christian era, and, by his commanding genius and great learning, exercised almost absolute control over the medical opinions of his own and many succeeding ages. Galen adopted the Hippocratic theory of the

four humors constituting the human body; and assumed three attributes or faculties of the soul, as governing the vital functions of the system, which he assigned to different regions of the body. The first he called the vegetative faculty, and supposed it to be seated in the liver, and its office to regulate and govern the "reproductive, augmentative, and nutritive" functions. The second, or irascible, he located in the heart; and the third, or reasonable, in the brain. In addition, he assumed the existence of certain vital spirits, generated in the several organs, whose agency was to execute the commands of the soul, in regulating the functions of the body in health, and restoring it when diseased. In his pathology, Galen assumes agencies and entities quite as hypothetical and absurd as those he attributes to the soul, in carrying on the natural functions of the body. Among his voluminous speculations, Galen is said to have written much of practical value, the result of observation and experience. He was a disciple of the philosophy of Plato and Aristotle, thoroughly versed in all the metaphysical subtleties of his age; a most skilful dialectician, believing that principles were only to be deduced from a contemplation of the nature of things, and not from observing the things themselves, and the principles thus discovered: "dialectics should suffice to determine their application." Galen is said to have written more than three hundred volumes; and by his vast learning, the acuteness of his logic and the power of his eloquence, he was able to overwhelm all adversaries, and to hold the medical opinions of the world

in complete subjection to his dogmas for a period of more than fourteen centuries.

Medicine was cultivated and much was written by the Arabian and Egyptian physicians, men of great learning; and also by the Grecians and Romans, for several centuries after the death of Galen; but all adopted the doctrines of their great master, and but little substantial improvement was made.

Then followed the long, dreary period of the dark ages, and the "chaotic confusion consequent upon the barbaric invasions," during which, whatever of learning and science was left on earth, was shut up in the cloisters of monks; and the practice of medicine, as of other liberal professions, fell into the hands of ecclesiastics; and "priests, abbots, and bishops officiated as physicians to kings and popes."

From the ninth to the fourteenth century, the church assumed the responsibility of regulating all things, — the practice of medicine among others. Medical education was neglected; some of the female religious orders were introduced as medical practitioners; the qualifications for the practice of physic became reduced to the lowest standard; and, in this state of things, "crowds of low, ignorant persons, barbers, bathmen, and women, assumed the titles of curers of disease."* A most extraordinary parallel this, to a large class of practitioners in the middle of the nineteenth century!

The revival of education was commenced in the

* *Medico-Chirurgical Review*, for April, 1847, p. 399; from Renouard's *History of Medicine*.

thirteenth century, when the ecclesiastical schools of the cathedrals were erected into universities by the popes, in which medicine and law, as well as theology, were taught; all, however, under the strict surveillance of the ecclesiastical power.

These institutions wrought no notable results for medical science until after the commencement of the fourteenth century, when an extraordinary individual appeared upon the stage, at Montpellier in France, in the person of GUY DE CHAULIAC, who distinguished himself by his devotion to observation, by his writings, by urging the importance of dissections, and by introducing many improvements in surgery; operating for cataract and for the radical cure of hernia, and performing many other minor operations. Malgaigne quotes from him a most noble and beautiful description of the qualifications of a surgeon, which is worthy of all praise and imitation, even in this enlightened age. A surgeon, he says, "should be well read, expert, ingenious, and very moriginous," that is, "bold in sure things, careful in danger; he should avoid bad cures and practices; he should be kind to his patients, indulgent to his colleagues, and wise in his predictions; he should be chaste, sober, compassionate, and merciful, not greedy or extortionate for money; receiving a moderate recompense, according to his labors, his dignity, the circumstances of the patient, and the nature of the issue or event."

The study of medicine was revived and pursued more vigorously during the fourteenth and fifteenth

centuries; but the bigotry of the people, as well as the prohibitions of the papal power, prevented human dissections: anatomy and physiology, therefore, the only foundation of true medical science, still remained a sealed book. The minds of the profession were bound, as in chains, by the dogmatism of the ancients; and little progress could be made in the actual condition either of the science or the practice of medicine. Indeed, we are told that no one dared to "admit any thing contrary to the authority of Galen," on pain of being considered a perverter of the laws of nature, and an enemy to legitimate authority. A growing conviction of the importance of anatomical knowledge was felt for a long period; but the desire could only be satisfied by the inspection of the bodies of monkeys and other animals, which was practised in the schools of Italy and at Paris.

In England, the first medical professorships were founded at Oxford and Cambridge by *Thomas Linacre*, a man of great learning and energy, who had visited the Italian schools, and enjoyed the benefit of instruction in all their ancient literature. In 1518 he laid the foundation of the College of Physicians in London, the first institution in that country for the examination of candidates for the practice of physic.

The ancient authority maintained its sway over the medical opinions of the profession until near the middle of the sixteenth century, when *Vesalius*, a man of true courage and surpassing genius, appeared upon the stage, "and, stealing his first subject from the gibbet itself," prosecuted the study of practical ana-

tomy with great enthusiasm and success; and, in the year 1543, published his celebrated work on the structure of the human body. At the same time he attacked the ancient theories, exposing their errors, and, with the aid of other cotemporaries, succeeded in "laying the foundation of *Modern Anatomy*."

About the same period, Ambrose Paré, in France, was driven by the force of circumstances, during a military campaign, being deprived of the usual supply of oil, to substitute the ligature of arteries for the suppression of hemorrhage, instead of cauterization with boiling oil, the common practice of that time.

These brilliant discoveries served to shake the confidence of physicians in the supremacy of the scholastic philosophy of the ancients, and gave a new direction to the inquiries of other independent observers, who were to follow. The before *terra incognita* of the human body had been partially explored, knowledge had been increased, and the foundation of a truer science had been laid. Observations began to be made in other branches of science, a multitude of new facts were discovered, which did not tally with the doctrines of the schools, and a new epoch was evidently about to dawn on all the sciences.

The leading physicians were, at this period, devoting themselves to the examination of the structure of the human body; among whom were Servetus, Columbus, and Cæsalpinus; who all examined the heart, discovered the cardiac valves, and seemed to have conceived a correct idea of their uses. It now appears marvellous, that, having gone thus far, they

had not proceeded further, and discovered the circulation of the blood. But such is the influence of theory, that it often blinds the minds of otherwise sagacious men to the most obvious deductions of reason.

Servetus imagined that only the more subtle material of the blood was conveyed through the lungs from the right to the left ventricle, which in its transit being changed by agitation and contact with the air,—having parted with its fuliginous vapors,—became vital spirits, and was attracted by the diastole of the left ventricle, and flowed out through the arteries, according to the theory of Galen.

Columbus (Realdus) labored under the same delusion; for although he had examined carefully the structure and understood the uses of the tricuspid and mitral valves, and of the sigmoid valves, and saw that the blood, once having entered the ventricles or the arteries, could not go backward, yet he seems never to have conceived any true idea of the circulation, but, like Galen, continued “to regard the liver as the origin of all the veins,” and to suppose the nutritive circulation to be carried on by a flux and reflux of the blood in these vessels to and from all parts of the system.*

The time had not yet arrived for the entire liberation of even the most sagacious minds from ancient authority; and the theory of sanguification in the liver only, and the supposition that the veins and right

* *Vide Willis's Life of Harvey, published by the Sydenham Society.*

cavities of the heart contained and circulated blood, while the arteries circulated only attenuated vital spirits, of which the left ventricle was the great reservoir, still clouded the mental vision of the wisest of the profession.

The progress of medical, as well as of all science, was nearly arrested during the latter half of the sixteenth century. It was a period when mysticism, eccentricities, and vagaries of the strangest kind, prevailed; and knowledge was not increased. But, says Renouard, "errors of science, superstitious prejudices, religious exaltation, and the thirst for riches, concurred at the same period to propagate the follies of the cabal; and never were there seen such numbers of sorcerers, possessed, astrologers, and alchemists; never were prophecies, visions, and prodigies of all kinds, so common."* Among the alchemists, Paracelsus stood pre-eminent, and did good service, if in nothing else, in battling down the errors and absurdities of the ancient dogmatism of the schools.

An important revolution in medical doctrines was introduced, in the beginning of the seventeenth century, by Van Helmont, who is represented as a bold innovator and reformer, learned and eloquent in disputation, a believer in alchemy and mysticism, and a practical chemist. He successfully attacked the ancient medical philosophy, and prostrated false systems, only to erect upon their ruins others equally false. Under the name of "Archeus, or sentient soul," he assumes

* As quoted and translated in the *Medico-Chirurgical Review*, No. 108, p. 408.

the existence of a power in the animal economy, residing in the mucous membrane of the stomach and in the spleen; also another subordinate power, by the title of "Blass," the regulator of the voluntary movements; and certain other ferments, all under the control of the *Archeus*. All disease was supposed to originate in the mucous membrane of the stomach, and the symptoms, to represent the intelligent efforts of the *Archeus* to restore order and harmony in the economy of the system, when it had been deranged by the operation of injurious agencies. The business of the physician was, then, to consult the pleasure of the *Archeus*, and prescribe such remedies only as he should find to be agreeable to this presiding divinity, "not neglecting magical words, charms, and amulets." "Van Helmont," says Renouard, "founded no sect; but several sects borrowed from his ideas. The chemical school owes to him the idea of ferments, and from him the animists and vitalists derived that of the vital principle."

But a new epoch in the history of medicine had now opened its light upon the world. The inductive method of Bacon and Newton and Locke had shaken the confidence of medical philosophers in the dialectic discussions and abstract theories of the schools, and turned their attention to the observation of nature. This change in the philosophy of the time opened the way to the discovery of the circulation of the blood, which was the foundation of a new and truer physiology; and although its scope was not to be fully realized for ages, yet it was destined gradually to

expand, by repeated accessions, into a consistent and beautiful system of vital philosophy.

William Harvey first announced his great discovery of the circulation of the blood by the action of the heart, at the College of Physicians in London in 1615, but did not publish it to the world till 1628. Harvey's discovery of the circulation was the result of inductive reasoning, and not of entire demonstration; as he never traced the complete course of the blood through the capillary system. The facts on which he founded his discovery had been known to others for a long period. Columbus and Cæsalpinus had examined and described the valves of the heart, and the valves at the entrance of the aorta and pulmonary artery, and conjectured their uses. Fabricius ab Aquapendente, his anatomical teacher at Padua, had observed the valves of the veins, and directed the attention of Harvey to them. "Yet did no one," says Willis, "mastering these facts in their connection and sequence, rising superior to prejudice, groundless hypothesis, and erroneous reasoning, draw the inference that now meets the world as irresistible, until the combining mind of Harvey gave it shape and utterance."*

As a striking illustration of the subjection of the minds of the men of that age to scholastic authority, and their reluctance to yield theory to observation, we are assured by the historian, that more than twenty years elapsed before Harvey's views were admitted beyond the Alps, — and then only when the

* *Vide* Life of Harvey (Sydenham Society's Pub.), p. 66.

good Plempius of Louvain, a distinguished but vehement opponent of the doctrine, undertook to examine the matter for the purpose of refuting it, by which he became fully convinced of its truth, and publicly acknowledged his conviction. The discovery of the circulation produced a radical revolution in the doctrines of physiology. The microscope, which had been some time in use, aided materially in further demonstration of the new discovery. By the aid of this instrument, Malpighi of Bologna traced the globules of the blood in their transit through the capillary vessels from the arteries to the veins, and thus proved to the senses what was only a matter of inference with Harvey.

The thoracic duct was first discovered by Pecquet in 1647; and he demonstrated that the lacteals terminated in this duct, and not in the liver, as supposed by Galen; a fact at once fatal to the ancient hypothesis, which ascribed the function of hæmatosis exclusively to the liver. In 1661, Malpighi, by aid of the microscope, discovered the cellular tissue of the lungs; and the lymphatics were described about the same period by Bartholin and others.

Among the independent observers who succeeded Harvey, and contributed largely to the progress of medicine, Sydenham stood pre-eminent. He utterly disclaimed all allegiance to theories either past or present, and relied on observation and induction as the only means of acquiring a correct knowledge of his art. "In writing the history of disease," he says, "every philosophical hypothesis whatsoever, that has

previously occupied the mind of the author, should be in abeyance. This being done, the clear and natural phenomena of the disease should be noted,—these, and these only. They should be noted accurately, and in all their minuteness.”* He justly viewed this as the only method through which the natural indications of cure were to be derived. And by this method of closely scrutinizing the operations of nature, after the manner of Hippocrates, and carefully watching the effects of remedies, he introduced many essential improvements into the practice of his time. In small-pox, for example, it was deemed necessary to shut up patients in close, heated apartments; and the common treatment was, first to bleed, then to stimulate, and finally to sweat them, wrapped in “scarlet cloth.” Sydenham, wisely, and much in advance of the knowledge of his age, repudiated this plan of treatment for smallpox, and other acute diseases, and introduced the cooling regimen and medication, with free ventilation, and allowed “nature to do her own work, requiring nothing of the physician but to regulate her when she is exorbitant, and to fortify her when she is too weak.” He was a believer in the humoral pathology, but permitted no theory to warp his judgment, or divert his attention from facts. His observations upon epidemic diseases, and the epidemic constitutions of the atmosphere peculiar to different seasons, were not only original, but bear in them the stamp of truth, have been confirmed by subsequent observers, and are none the less worthy

* Latham's Translation of Sydenham's Works, p. 14.

of consideration now for having been recorded two centuries ago.

The knowledge of anatomy and physiology, though greatly improved, was yet deficient in many important particulars, and especially in regard to the nervous system. Tendons, ligaments, and nerves were confounded under the general name of nerves. Even as late as the seventeenth century, all the vital movements were supposed by Baglivi to be "derived from the heart and dura mater."

The ancient hypothesis, that sensation was the result of a peculiar elementary affinity between external objects and the organs of the senses, still maintained its influence. The luminous particles of bodies were supposed to be attracted toward the eye, because that organ was of a resplendent nature; and the ear in like manner, being of an airy nature, was believed to attract the sonorous molecules.

The existence of some primary or inherent power, to guide and control the various functions of the living system, has been acknowledged as a necessity by philosophers and physiologists of all ages. This power has been recognized under various names, as nature, spirit, archæus, soul, &c. The functions of the economy have at one time been ascribed to the operation of the archæus, as the ruling power. They have been supposed to result from chemical action and reaction of the elements, and the fermentation of the humors of the body; and they have been explained as dependent on the laws of mechanics.

The chemical pathology was introduced by Sylvius,

an eloquent professor at Leyden, a chemist and eminent anatomist, who based his exposition of the functions of the animal economy exclusively upon the laws of chemistry; adopting the ferments of Van Helmont, and attributing all diseases to the vitiated and acrimonious condition of the fluids of the system. The theories of Sylvius were popular for a time, and quite extensively adopted, not only on the continent, but in England.

The fertility of the imagination was unbounded during this age, and medical theories rose and fell with every prominent champion that appeared in the ranks of the profession. Another sect of medical philosophers invoked the aid of mechanics as the foundation of true physiological and pathological principles, and attempted to support their hypotheses by anatomical facts, hydraulic calculations, and microscopic observations, which, "by their apparent mathematical exactitude and simplicity," together with the ability by which they were enforced, rendered them generally acceptable to the profession. Sanctorius of Padua, and Borelli of Pisa, were the prominent founders of this mechanical sect. Borelli was an accomplished anatomist; and, notwithstanding his visionary physiological theories, added many new facts to the then existing stock of anatomical knowledge, and corrected some false notions before entertained, especially in regard to the amount of muscular power required to perform locomotion and overcome any other resistance, and the principle of its application.

Baglivi, at Rome, was a disciple of the mechanical

school, and attempted to found a pathology on the hypothesis that two conditions only of the *solids* exist in disease, viz.: too great tension or constriction, and too great softness or relaxation; rejecting all ideas of the humoral pathology. Later in life, he repudiated his own theory, and relied in his practice on the Hippocratic method of observation.

In the beginning of the eighteenth century, Boerhaave published at Leyden his great work, "The Institutes of Medicine." He professed to be an *eclectic*, and attempted to establish a universal system of pathology, by combining the anatomical, chemical, and mechanical theories; advanced the hypothetical doctrine of lensor of the blood, and "error loci," or misplacement of the globules in the capillaries, causing stasis of the denser parts of the blood in those vessels and constriction of the same, as the prolific cause of disease. His views were sustained and enforced by commanding genius, and great learning and subtlety of speculation; but they had so little foundation in truth, that they hardly survived beyond the lifetime of their author.

Another hypothesis prevailed in Germany about the same period, of which Stahl was the author, founded on the supposed "*Anima*, or immaterial soul," as the controlling genius of the functions in health and disease; and a similar dogma of *vitalism*, in France, of which Barthez, of Montpellier, was the champion: but these were little more than modifications, perhaps improvements, of the Archæus of Van Helmont.

It is only about a century since physiology had any valid claim to be considered a distinct science. Up to this period, it had been based chiefly on mere assumptions, figments of the imagination, instead of ascertained facts. In 1747, Haller, by experimental researches upon living animals, succeeded in establishing the fact of the irritability of the living tissues, which had been advanced only as an hypothesis by Glisson some years before, and clearly demonstrated the distinction between this vital force and "the mere contractility of tissue," showing that the laws of vital action are entirely distinct from those of chemical and physical forces. Haller had successfully proved the principle of irritability to exist in the muscular fibres. Bichat followed up the subject by indefatigable labor, until he completed the theory, proving it to extend to the function of every tissue.

While the physiologists were thus employed in investigating the existence of the vital forces inherent in the organs, and the laws of their operation, a more practical direction was given to the labors of medical philosophers in other departments of the science; and morbid anatomy began to be studied early in the eighteenth century. Numerous observations were made and published by Bartholin, Tulpius, Ruysch, and others; and, in 1760, Morgagni published at Venice his celebrated work on the "Seats and Causes of Diseases," containing an immense collection of dissections of diseased bodies systematically arranged according to the organs affected. The observations

and facts recorded by Morgagni are none the less valuable, in the view of sensible men, for being nearly a century old. "The sciences are formed by successive additions; and the same men cannot lay their foundations, and conduct them to perfection." This was the remark of a sensible man more than four hundred years ago.* But the impatience of the human intellect impels some men to seek knowledge in speculations beyond the known or the possible, rather than labor, in the humbler sphere of observation, to learn the qualities and conditions of things, before they attempt to determine their laws.

The Royal Academy of Surgery was founded in Paris in 1731, which greatly improved the character of surgery in France. This institution, under the old regime, published its last volume of *Memoirs* in 1774. In England, John Hunter commenced his celebrated course of lectures on the principles of surgery, in the following year. He was an original genius, a most indefatigable student of nature, and had little reverence, either for theory, authority, or antiquity. He accumulated a vast amount of anatomical facts and observations, cultivated comparative anatomy, and, by original experiments, contributed much to the improvement of physiology. He demonstrated, to a certain extent, the vitality of the blood, defined the different varieties and processes of inflammation, first explained the nature of adhesive inflammation, taught union by the first intention or without inflammation, established the distinction between this and suppura-

* Guy de Chauliac.

tive inflammation, and the more complicated processes of cicatrization. He also introduced many scientific improvements in practical surgery, especially in the treatment of gunshot wounds, and in various surgical diseases, which were not before well understood. Malaigne remarks, that "surgery, as the middle ages had left it, was little else than a handicraft; A. Paré and J. L. Petit made an art of it; and John Hunter constituted that art into a science."

During the last century, the domain of human anatomy was quite thoroughly explored, and considerable progress was made towards a more correct physiology; surgery was greatly improved in its principles and practice, and a vast amount of clinical observations on practical medicine accumulated; the authority of ancient theories and the dogmatism of the schools had nearly faded away before the light of a purer science and a more liberal exposition of truth; yet the predominant idea, which had been for so many ages vainly pursued, of a universal theory, by which all diseases, with their protean forms and phases, might be reduced to a single pathological standard, still held possession of the minds of many of the leading men of the profession.

Near the close of the last century, the celebrated system of nosology and medical theory and practice of Cullen was published, and received with universal favor by the profession. This, for a quarter of a century, maintained a controlling influence over the principles and practice of medicine. Cullen considered the brain as the centre and source of all motive-

power in the system ; and assumed that the various functions and movements of the living system are but modifications of the *energy* of the brain ; that this *energy* is continually liable to, and *is* actually suffering, alternate excitement and collapse ; and, according to his theory, diseases are the result of a collapse or declension of the cerebral *energy*, produced by the application of certain deleterious forces, — contagions, miasms, cold, fear, &c., — which act as remote causes of disease. This declension of the cerebral *energy*, most prominently exhibited in fevers and other acute diseases, pervades the whole system, causing universal debility, but chiefly affecting the extreme vessels, throwing them into a state of spasm ; and in this, the cold stage was supposed to consist. During the successive stages, of fever, for example, the debility and consequent spasm of the capillaries continue, and operate as an indirect stimulus to the heart and larger arteries, whose action is thereby increased and maintained till the *energy* of the brain is restored, and its regenerated power extended to the extreme vessels, which removes the spasm and restores their normal action ; and the final result of the series is relaxation of the excretory vessels of the skin, and the flow of perspiration. Cullen was a man of great learning, a most eloquent lecturer and able writer, and fortified his theory by such an apparent array of facts and plausible arguments as to secure its general adoption by the profession. His therapeutics were generally judicious, and founded more upon the observation of the phenomena of disease and the indi-

cations of experience, than upon the validity of his pathology.

Cullen was a benefactor to medical science, and did much to aid its progress and improve its practice ; but his splendid theories were destined soon to fall before the light of a more accurate and extended observation ; and they have long since gone, with their predecessors, to the tomb of the Capulets.

About the same period, the prophylactic power of vaccination against that most loathsome scourge of the human race, smallpox, was discovered by Dr. Jenner. This most beneficent of all discoveries was not the result of any hypothesis or theory, but of observation and induction from facts, — facts too familiarly known to require repetition. Putting two facts together, he logically deduced a third, the truth of which he proved by repeated experiments, continued through many years, before he promulgated it to the world. The name of Jenner stands among the most illustrious of the benefactors of mankind.

Early in the present century, another distinguished medical reformer appeared in France, in the person of *Broussais*. He was led, by a conviction, as he says, of the “imperfect and erroneous notions of disease which were then prevalent,” and by the failure of the nosologists to give any satisfactory explanations of chronic diseases, to adopt a better method of arriving at truth ; which was by a course of observation of all the facts that actually occurred in disease during life, and all revealed in the tissues after death. In 1804, he published his first work on the chronic

phlegmasia; and, some twelve years later, his great work, in four volumes, on acute diseases. Broussais' observations, aided by his imagination, led him to the conclusion, that "no disease is ever primarily and essentially general," but that "disease begins always in one individual organ," whether it is produced by a cause which vitiates the fluids and humors of the body, or the solids; therefore "all diseases ought to be regarded, primarily, as local affections." And Broussais discovered, or thought he discovered, the comprehensive fact, that all diseases, of whatever nature, have their primary seat in the mucous membrane of the stomach. Hence, according to his system, all manifestations of disease, whether acute or chronic, are simply symptomatic of "Gastritis;" or from the fact that the primary phlegmasia generally involves the intestinal mucous membrane, "Gastro-enteritis."

The theory of Broussais, under the specious name of the "physiological system," was promulgated with great exultation by its author, as the perfection of medical science. The simplicity of its pathology and therapeutic indications, and the dogmatic assurance with which it was maintained by its advocates, rendered it quite attractive, and gave it currency for a time. It was enthusiastically received by the profession in France, and in the Middle and Southern States of our own country, but was not extensively adopted in the Northern States. In England and the north of Europe, it scarcely gained a foothold. In therapeutics, the followers of this system rejected the use of all active and disturbing medicines, and relied on free

general and local depletions, fomentations, starvation, and the internal use of gum-water and ice. The author himself thus sums up his treatment of disease: "In short," he says, "our treatment is comprehended in three things, viz., local bleeding, external warmth, and frictions of the surface; and, lastly, patience." The great error of Broussais' system consisted in his magnifying an occasional pathological condition into a universal fact; and, when this mistake was exposed by the more rigorous and accurate observations of Louis, in his works on Phthisis and Typhoid Fever, the "physiological system" was at once overthrown and demolished; and now there is "none so poor as to do it reverence."

Only confused and speculative notions were entertained of the anatomy and physiology of the nervous system, until within the present century. And it is since 1820 that Sir Charles Bell promulgated his great discovery of the distinct and separate origin of the sensory and motor-nerves; the one arising from the posterior fasciculus of the medulla oblongata and spinal marrow, and the other from the anterior fasciculus of the same parts; and, as he supposed, another system, the respiratory, arising from the middle column of the medulla oblongata and cervical spinal marrow. Sir Charles was led to these important discoveries by a long series of ingenious experiments upon living animals, and not by any preconceived theory.

More recently, Dr. Marshall Hall has, by various observations, discovered the reflex action of the nervous system, by means of which impressions are trans-

mitted from the extremities of the sensory, through the medium of the brain and spinal marrow, to the extremities of the motor-nerves, and there excite various involuntary muscular movements, which he calls the excito-motory friction. Though the views of these two distinguished individuals have not been fully acknowledged by all physiologists in all their particulars, yet their observations have thrown great light upon the functions of this complicated system. Much, however, remains yet to be learned before a perfect knowledge of the nervous system has been achieved.

The publication in 1819 of the great work of Laennec on Auscultation introduced a new and more exact method of diagnosis in pulmonary and cardiac diseases, both acute and chronic; and greatly improved the treatment of those diseases, by enabling practitioners to make more accurate distinctions of the different forms of the diseases of those organs.

A similar improvement in the diagnosis of cerebral diseases was effected by the labors of Rostan, Lallemand, and Foville, about the same period, who more accurately marked out the distinction between apoplexy, ramollissement, and encephalitis, and the paralysis of the insane, which were confounded under the general name, encephalitis, by the Broussaisian school.*

Since the demolition of the "physiological system" of Broussais, about twenty-five years ago, no notable

* *Vide* Medico-Chirurgical Review, April, 1849, p. 548; as quoted from L'Union Medicale.

attempt has been made, in the legitimate profession, to construct a general medical theory, under the Utopian idea that all diseases may be reduced to a single pathological, or treated upon a single therapeutic principle. The phantom, theory, which has for hundreds and thousands of years dazzled and tantalized so many of the medical profession, only to lead them astray, has at length vanished. A clearer and more substantial vision has now opened to the view of medical men of the present age. The votaries of our science have learned to labor and accumulate, instead of dreaming to speculate; and, when they philosophize, to reason from facts, and not from hypothesis; facts, not fancied, but proved; facts, not partially noticed and imperfectly recorded by incompetent observers, but such only as have been rigorously observed, tested, and verified by numerous laborers in the same field. And never before has medical science progressed with such rapidity as during the last quarter of a century, by the method of rigorous observation and induction. New facts are continually accumulated by earnest laborers; old ones are corrected, confirmed, or disproved; and new relations or analogies detected, and important distinctions discovered which had not before been recognized. The progress of medical science has been greatly aided by the extensive researches in natural history and comparative anatomy of the present day, while human anatomy has been nearly, if not quite, exhausted, so far as it can be demonstrated by the dissecting-knife; and, when this fails, the microscope takes it up, and

discloses to the astonished vision the ultimate molecules, or vesicular constituents of all the tissues.

Physiology has been revolutionized in the last twenty-five years. The revelations of the microscope, and the developments of animal chemistry, have nearly transformed it into a new science.

The same instrumentalities have brought to light an immense number of facts in morbid anatomy. The molecular changes wrought in the tissues by various organic diseases, before unknown, have been satisfactorily determined by the microscope; and their mode of development, once involved in mystery, has been clearly explained. Important changes in the fluids have also been revealed by the aid of animal chemistry.

These improvements in the elements of our science have been accompanied, *pari passu*, by improvements in its practical application. By extensive clinical observations, and the other means already enumerated, greater accuracy of diagnosis has been attained; the distinction between functional and organic diseases, between the curable and incurable, has been, and is, more accurately defined; consequently, painful and unavailing surgical operations, once resorted to, are now abandoned; and the sick are spared much useless, or worse than useless, medication. The recuperative powers of nature are better understood; consequently they are less frequently thwarted by officious interference than formerly. A knowledge of the errors of the past has proved a valuable auxiliary to the progress of truth in the present age. Let me

not be misunderstood. I would not represent the medical literature of the past as all error — far from it. The records of medicine, both ancient and modern, are largely imbued with truth, and contain much that is worthy the consideration and study of every physician. But error is everywhere prevalent, and often so mingled with truth as to render it most difficult to separate and distinguish the one from the other. And so often is this difficulty experienced by physicians, that they are proverbially distrustful and cautious of receiving new facts or principles as truth, until they have been tested by repeated observation, and their value established by reason and experience.

For many years of the present century, the attention of medical men has been specially directed to the study of Hygiene; which has resulted in the accumulation of a vast amount of facts relating to the physical, mental, and moral condition of the masses of the people, especially of the poor, in large cities and towns; and led to the enactment of sanitary laws, of greater or less efficiency, for the preservation of the public health, protecting all classes from the incursions and diffusion of epidemic diseases. Improvements in ventilation, in the construction of houses for the poor in large cities, in reducing the hours of labor for operatives in manufactories, in diet, exercise, in the habits of cleanliness and temperance, and all things conducive to health and morality, have been mainly effected by the beneficent operation of the principles of medical science and the active agency of medical men. In other branches of science, chemis-

try and natural history, including geology, zoology, botany, &c., medical men, the world over, have been among the most active and successful laborers. The Massachusetts Medical Society, let me say, has the distinction of bearing on its rolls the names of many gentlemen engaged in large practice, who have, nevertheless, made most valuable contributions to these several branches of science. My limits do not allow me to go into further details on these subjects. But from the foregoing brief historical sketches of medical theories, and statements of facts, I have endeavored to show that medical science has been, and *is*, *progressive*; that its progress has been effected, not by speculation and theory, but by observation and experience, and their logical results,—philosophical induction. The improvement of the science has given the profession a greater control over diseases from age to age, and added to the comfort and happiness, as well as increased the duration, of human life.

So far as the records of mortality have been preserved in several European countries and our own, vital statistics show clearly that the duration of life has gradually increased during the last century. I have no time to go into details on the subject; but a single extraordinary case may be named, which goes to confirm the above statement for a much longer period. In the ancient city of Geneva, the only city in the world probably where tables of mortality have been kept almost uninterruptedly for nearly three centuries (from 1560 to 1845), the value of life has more than doubled during that period. In the last half of

the sixteenth century, 18 years only was the average duration of life. In the seventeenth century, it was 22 years. In the first half of the eighteenth century, it averaged 31.8 years; and in the latter half, 33.1 years. In the first fourteen years of the nineteenth century, it was 38 years; and from 1838 to 1845, it was 41.7 years.*

It has not been my object, as you will readily perceive, in this desultory sketch of some few only of the most prominent medical theories and discoveries of the last twenty-five hundred years, to write a connected history of medicine. This would require many volumes for its full elucidation. I have simply designed to exhibit the fallacy of abstract speculation in medical matters, and of all theories based upon it; to show, in short, the utter worthlessness of such theories, or that they have contributed *little, if any thing*, to the progress of true science. Progress in medical as in other sciences has been achieved by observation of nature and the accumulation of well-attested facts, from which alone true principles of science can be deduced.

The legitimate medical profession of the present age have little respect for theory. The science of medicine is now based exclusively upon rigorous observation and induction; and never before did it stand upon so firm a basis, or embrace so much of truth, or promise so much toward the prevention, mitigation, or removal of disease, as at the present time. And

* Dr. Marc D'Espine. Translated from *Annales de Hygiène*, for *British and Foreign Medico-Chirurgical Review*, January, 1848, p. 281.

yet now, in the middle of the nineteenth century, with the multitude of hypothetical systems of medical doctrines which have been received for a brief period, and then repudiated as worthless, before us, and in the face of all the experience of more than two thousand years, and of all common sense, we have medical sects among us propagating dogmas founded upon baseless assumptions, without facts, and without any rational experience to sustain them; and, what is more extraordinary, these absurdities are received as truth, and paid for, by multitudes of the people, — not the ignorant and superstitious only, but by many people of intelligence, who move in the higher walks of society; while the regular profession, the only true exponent of medical science, is scouted by the same individuals as antiquated and obsolete.

Allow me, Mr. President, to relate an incident which occurred some nine or ten years since, while I was stopping, for a day or two, at a village-hotel upon the Hudson River, in the State of New York. I found there a pseudo-doctor, — “a great swell,” — and I soon learned that the good people of the village, and all the region round, had been notified by a vaunting handbill of the advent of the renowned Doctor Bamboozle, from the city of New York, who could cure all the sick, and would lecture on medical subjects to those who were not sick, and communicate to them very important information. I happened accidentally and unobserved to hear a dialogue between the doctor and his first patron, a female, quite illiterate but shrewd. The doctor began to interrogate; but she

declined to answer, saying, "If you know what you pretend, and can cure me, you can tell what ails me." "O, yes," quoth the doctor, "I can tell you all about it, and cure you, too. I don't wish you to say a word." After a pretty extensive manipulation of her person, every now and then popping a question as to her sensations, the doctor, with infinite pomp, exclaims, "I have it! I see what ails you! *your mucous membranes are affected!*" "No, doctor, that's not my complaint." The doctor renewed his examination; said he had found a new symptom, and varied his diagnosis, assigning the disease to another organ. "No, doctor, that's not my case, nor nothing like it." "But, I must be right, and no mistake," said the doctor. "I have no such complaint," said the patient, "and you don't know what ails me." "Why, you must know, my good woman, that I have a *system*, — a *new system* of my own! I don't practise according to any of your *old-school* doctrines! I go by *my system!* *my system* is *infallible!* *by it there can be no mistake!* and, according to *my system*, I have told you your case exactly." The patient, however, continued inexorable to the doctor's logic, and taunted him for his lack of skill, until he was glad to retreat, covering his reputation only by the asseveration, "If I have mistaken your case, it must be because it is one that *don't belong* to *my system.*"

And now, pray tell me on what better foundations do the dogmas of the pretended "new-school" medical reformers of the middle of the nineteenth century rest, than the "*infallible system*" of this New York

mountebank? Some of them may, indeed, be garnished with more of the learned mockery of science, enveloped and mystified by sonorous but meaningless phrases, pedantically compounded from Greek and Latin; but, strip them of all verbiage, and of what they borrow from the current medical science of the day, and you reduce them to mere theories, based upon naked assumptions most preposterous, unsupported by one particle of evidence worthy the consideration of any reasonable man. One would think, surely, even from a cursory review of medical history, that the world had had sufficient experience of the futility of medical theories and hypothetical systems, to lead men to some more substantial method of medical reform.

But what says the disciple of Hahnemann? "I have a general firm principle," — "a *fixed law* of cure." "I lay aside all arbitrary and useless classification of diseases." "I examine the symptoms as closely as though such another [case] had never occurred before." "It matters not how diseases may vary at different times, and under different circumstances." "Experience, — that most deceitful guide in medicine," — and "the private judgment" of the physician, are not to be trusted! But "my fixed law of cure," "*similia*," &c., is always at hand! I select "a medicine, the effects of which resemble" — "those of the disease before me," — reduce it "by process of trituration and shaking with neutral substances, till I succeed in developing the internal atoms of a drug-mass, so as to have none of the matter left to dissolve on the tongue or in the stomach," and my work is

systematically accomplished. We have no occasion for "experience" or "private judgment"! "Our therapeutic law is as firm as gravitation," and "our other principles are perfect."*. And what, in the name of reason, follows? Why, verily, "*our system is infallible:*" by it *there can be no mistake!* Do you say this is a caricature? I deny the allegation. It may be absurd; but, if so, it is no fault of mine. I utter no slander, but simply exhibit before you the naked figments of the system, in the veritable language of one of its champions.

Every sect must have its "system." The Thompsonian, of humbler literary pretensions than his antipode, the globulist, has his "system" also, founded on the dogma that "heat is life, and cold is death." According to his philosophy, heat and cold are antagonist entities, contending against each other. So long as the former prevails, all is well; but, if the latter get possession of the body, or any part thereof, death approaches. He has *his* "fixed law of cure;" but with him it is, *Contraria contrariis curantur*. He, too, disregards all arbitrary and useless classifications and distinctions, having, as he supposes, a surer guide, a universal "fixed law of cure." If the demon "cold" enter the body, he is to be dislodged by the introduction of heat, externally and internally applied, not in imaginary "atoms," but in potential quantities.

Another famous "new-school" sect is the "eclectic," as they arrogantly style themselves; a sort of offset from Thompsonism. They are rampant "reformers,"

* *Vide Putnam's Magazine* for December, 1853, pp. 641, et seq. *Defence of Homœopathy.*

assuming the garb of science, but possessing none of its substance. They evince their ignorance by their fondness for the use of technicalities they do not understand, and their proneness to appropriate to "their system" such pedantic, senseless epithets as "physopathy," "physomedical," "eclectic," "eclecticism," "new-school practice." *These*, together with other clap-trap phrases, such as "medical reform," "innocent and sanative medication," "all medication should, as far as possible, be both sanative and innocent," are the changes continually rung before the public. They are clamorous and obtrusive in their denunciations of all regular practice, calling it by the senseless term of "allopathy," "old-school practice," "obsolete systems," &c.; and, by such miserable devices, they have had no inconsiderable success in operating upon the prejudices of the people in many parts of our country. They have so far succeeded as to obtain charters for pseudo-medical colleges from the legislatures of several of the States, in which to manufacture recruits for the legions of quackery. They are wholly indebted to the current medical literature for the little knowledge they possess of medicine. They read lectures from the text-books of regular medicine; but they read them "*eclectically*." They instruct their pupils to study the same text-books; but, to be *sure*, they study them "*eclectically*." What is "eclecticism," and who are the "eclectics"? Why, these wiseacres tell us they have made a wonderful discovery; and it is, that certain medicines, or rather "*their medicines*, always act in harmony with nature and the organism of the system"!

and, thus operating, they "*must always do good, and can never do harm.*" Therefore, "our system is infallible." It so happens, however, that these charming remedies, with a little addition, are the veritable Thompsonian "specifics;" bating, however, the process of steaming; instead of which, and yielding the consistency of Thompson, they "pack" in wet sheets. They do not condescend to give the proof, — the *reason* why their "remedies *always* act in harmony with nature." They sometimes *appear to others* to act in opposition to the safety of the patient. But no matter; they are "eclectics," — "progressives;" and why should they be called upon for proofs and reasons? If their periodicals, which are filled with the "crudest essays and the most fantastic lucubrations," exhibit a fair sample of their attainments, they have sadly mistaken the direction of their movement; for it has carried them back to the dark ages. It is *retro*, and not *pro-gressive*; and they may fitly join hands with their ostentatious prototypes, the eclectics of the fifteenth century.

It was said by a wise man of old, that "there is nothing new under the sun." Whether this ancient maxim proclaims a universal truth, is not yet, perhaps, fully determined; but there is truth in the declaration of Solomon. In the early traditional history of medicine, when it was professedly in the hands of magicians and pagan priests, and when the sick were exposed by the wayside, soliciting the passengers in the streets, and all who thought themselves competent, to prescribe for their diseases, we are informed there were

Temples of Health in Greece and other neighboring countries, dedicated to the worship of Æsculapius.* These temples, it is said, were erected in airy and healthful places, in the vicinity of springs of pure water, or mineral waters, and were presided over with great pomp by a sort of medical priesthood, — the Asclepiadæ. The sick were here received, — subjected to strict discipline, — put upon very abstemious diet, — required to occupy their whole time in some exercise or amusement. On entrance, they were subjected to immersions and ablutions, and regularly required to take courses of bathings, and douches, and frictions, and shampooings. “Charms, enchantments, amulets, magic incantations,” and the like, were brought to bear upon the imagination of the sick, or those who fancied themselves sick; and to these were added religious ceremonies, and whatever might excite or amuse the fancy or arouse the senses. The Asclepiadæ also enjoyed clairvoyant visions of internal diseases, and actually “prescribed drugs as indicated in dreams.” What a marvellous coincidence between the practices of these priest-magicians of ancient Greece, and that of some of the “reformed practitioners” of the middle of the nineteenth century! Verily, has not the prefix *pro* changed places with *retro*? and are not our modern *pro*-gressives really retrograding with railroad speed into the very heart of antiquity? But “I have a system,” — “a new system of my own,” — says the

* Vide Adams's Life of Hippocrates; J. R. Coxe's Hippocrates and Galen; and Renouard's History of Medicine, as translated in Medico-Chirurgical Review, April, 1847.

hydro-*pro*-gressive; "cold water is always in harmony with nature," and can never be wrong!

Indeed, have not all these sectarian reformers blindly plunged into the dark abyss of hypothesis and mysticism? and, in their deceptive visions of progress, fallen back upon the sophistries and delusions of the dark ages? For, like the mystics of the sixteenth century, they are confident in their own powers, — have unlimited conceit and impudence. They are sectarians, at one time denouncing and disparaging each other, and at another uniting in opposition to the regular profession, and consistent in nothing but this opposition.

These pretended "systems of medical reform," though diametrically opposed to each other, are adroitly compounded of truth and falsehood, — of some well-known and generally admitted truths, with crude hypotheses and unwarranted assumptions, so ingeniously mixed as to be easily palmed off upon the credulous and unwary, as the only true philosophy, — the very quintessence of all science; and multitudes of worthy people receive them as such, and congratulate the world and themselves upon the progress of knowledge.

The pseudo "reformers" really show some attainment in worldly wisdom, whatever else they lack. They industriously circulate journals and magazines, *professedly* medical, but *really* containing nothing but homœopathy, phrenology, hydropathy, or eclecticism; and, in these, they send forth most pathetic appeals for public sympathy and support. "In the contest with old modes, old theories, and antiquated errors," says an eclectic editor, "it is absolutely indispensable

that some means should be had to reach the public mind." Judging them by their contents, their journals are got up specially to "reach the public mind," and not for the promotion of science, which must for ever retrograde under such auspices.

The "public mind" is also reached, often misled, and sometimes corrupted, by the host of itinerant lecturers, "professors" of "physiology," "phrenology," and "psychology," who gather full houses to witness their too often indecent exhibitions of manikins and pictures, and to listen to their low ribaldry and obscene jests, under the guise of science.

Again, there is the army of vagabond practitioners, who wander from place to place, giving free lectures, to make known their wonderful "discoveries" and "infallible remedies," and their labors of love for the health of the dear people, always offering to "give advice to the poor gratis." From the complaisant and sometimes educated disciple of Hahnemann, down to the most vulgar professor of Indian skill, all have their theories and "infallible systems;" and their uniform method of introducing themselves to favor is by attacking and slandering the regular medical practitioner. Spurious medical periodicals, counterfeit editorials, and advertisements in the newspapers, and public and private lectures, are the vehicles through which they carry on their marauding forays against the profession. A favorite mode of attack with them is to seize on the cant of political stump-orators and other fanatical declaimers; and, by the continual reiteration

of such choice phrases as "old fogies," "allopathy," "old school," "antiquated systems," and "*mineral* poisons," mingled with falsehood and plausible sophisms, they have been quite too successful in perverting popular feeling and exciting prejudice — ay, inveterate hatred even — in the minds of multitudes of otherwise right-minded people, against regular medical men.

The magnitude of these evils may, indeed, be denied by some; but am I not right in affirming, that a large majority of physicians not only witness their existence, but see them increasing from year to year? They are realized and acknowledged by physicians, not merely because they are degrading to their own position in society, but as the cause of a vast amount of mental and physical suffering among that class of the community who embrace and are led astray by such false "systems."

In view of this state of things, what is demanded of the medical profession? Do they not, as philanthropists and Christians, owe a duty to society, not yet performed? Does it become them, as such, to wrap themselves in the dignity of science, stand aloof, and view with silent contempt only the predatory incursions of the armies of the aliens into the very domain of medical science; and allow them, unmolested, to seize and prey upon the vital interests of the community, so long as by their boastful sophistries they can contrive to cajole and delude them? The science of medicine itself is in no danger of being arrested or

retarded in its progress by the clamors of these boastful intruders. True science is never ostentatious. Men of science pursue their investigations quietly and in retirement; never prematurely obtrude their opinions, or the results of their labors, before the public. They do not generally make them known to their compeers even, till they have tested and proved them by repeated observation and experiment. It is not science that is to be affected by the attacks of such ignorant marauders; but it is the community, the *people*, who are to suffer from the immense evils of their "universal systems" and "infallible specifics."

Medical men, then, have an important mission to fulfil; and that is, to *instruct the people* on medical subjects. It is clearly the duty of the profession to teach the people the truth; to give them correct views, at least, of some of the elements of medical science. Increase their knowledge, and their confidence in the tricks of impostors and speculators in human life and health will be withdrawn.

Such instruction is demanded by the intellectual aspirations of the people, and by the spirit of the age. At a time when mental activity is so intense and so universal, when everybody is seeking intelligence upon all subjects, it is of vast moment that correct sources of knowledge should be accessible to all; that they may learn truth, and not error. The people *will* inquire into these things, *will seek* instruction of some kind. It is of vital importance then, and it is due, that they should be instructed; and the only question is,

Who shall be their teachers? Shall educated, competent, medical men perform this service, and teach them truth, science, knowledge that shall be useful? Or shall they be left to learn, as at present, the speculations and dogmas of loud-mouthed reformers; the tricks of legerdemain practised by vagrant "professors" of physiology, mesmerism, and psychology; and believe them to be the oracles of science?

Many facts and principles belonging to physiology, hygiene, and practical medicine, are easily comprehended by people of ordinary intelligence; this kind of knowledge is earnestly sought by them; and the physician in his daily walks may communicate much valuable instruction in his familiar intercourse with those he meets. But a more efficient method should be adopted, by lectures on medical subjects in lyceums, or by courses of lectures, and by popular publications. Every physician in every town should feel himself responsible for a course of lectures annually, to the people of his locality, or in the schools, upon medical subjects, in which they are all interested.

Young physicians may do a service to the community, as well as make it the occasion of introducing themselves to notice and business, by giving courses of lectures on medical topics; and older practitioners should not shrink from their duty to enlighten the public upon this all-important subject.

The modern reformers to whose dogmas I have referred are indebted to regular medicine for whatever of truth or science their systems contain; and, al-

though it is *sometimes admitted* that their absurdities have led to improvements in regular practice, I believe it may be affirmed, without fear of refutation, that they have *not added a single fact or principle of any value* to medical science or practice, and have incorporated nothing in their "systems" worthy of consideration, which did not originate in the regular profession, and was not well known to every intelligent physician.

Shall we, then, fold our hands quietly and selfishly, while we behold such delusions and their consequent evils, without making any well-directed effort to arrest them? Truth is powerful, and will prevail. Teach the people truth; not words and theories, but things; and they will no longer pursue phantoms. Let them understand that theories and systems and opinions are worthless, except they are based on facts established by observation of nature. Let them be convinced, that medical men are bound to no hypothetical systems of philosophy, to no arbitrary rules of medication; that their opinions and practices are founded only in common sense, judgment matured by mental culture and experience, by habits of observation, of analysis, and of rigorous induction; in short, that we seek only truth as our guide; — and our instructions to them, and labors for their good, "aided by truth, would work like the little leaven, influencing society, first in small and then in large masses, until the sphere of each one's influence would meet, not to clash and rebound, but first to yield, then merge, and

then coalesce in one large sphere, in whose centre would be placed the light of all truth ; from which the divergent radii, spreading to the distant circumference, would dispel the darkness of the night of ignorance, and introduce to all mankind the daylight of eternal truth."