Lectures.

MEDICAL HIGHWAYS AND BY-WAYS.

A LECTURE DELIVERED BEFORE THE STUDENTS OF THE MEDICAL DEPARTMENT OF HARVARD UNIVERSITY, MAY 10, 1882.

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I PROPOSE to point out some of the stepping-stones and some of the stumbling-blocks which have helped or hindered the progress of the Art of Healing. When I look at the long array of the volumes of Sprengel; when I remember the stores of learning contained in the eight quartos of Haller's *Bibliotheca*; when I notice the space occupied by the condensed accounts of Bostock and Alison, all now antiquated and constituting a mere prelude to the medical history of the last generation, I smile to think of the task before me and the scanty hour allotted for its performance. Evidently I have little time to waste in the way of introduction.

But in looking back over the past history of medical science and art we find the prospect like that of the forest settler with a burnt district behind him. Here and there a tree may be standing, but the eye ranges over charred and lifeless trunks with their feet in the ashes of their leafy raiment. Why should we linger among the blackened stumps and the desolate scenery?

Everywhere the stumps of old theories, the ashes of futile experience, fill the landscape, and we feel tempted to turn away from a view so barren and hopeless. Yet we must remember that these wrecks of old beliefs have in their time furnished shelter and shade to the generations that knew them living. We must not forget that they ripened the seeds of growths yet vigorous with deeper roots and stronger branches. But still we shall find a few rapid glances over the burnt district of the past enough for our purpose.

There must have been a time when human beings had nothing but their instincts to guide them to the means of relief when suffering from accident or disease. Animals know enough to rest an injured part and to lick their wounds. An idiot girl, mentioned by Dr. Carpenter, gnawed the umbilical cord to separate herself from her new-born child. There is a popular notion that instinct directs some animals to the natural antidotes of poisons. But instinct in the human race is so soon replaced by experience that a very brief chapter disposes of it. It is enough to say that it is a guide always to be listened to and sometimes to be trusted. Cold drinks and cold affusion have often been asked for, and proved useful to the patient who longed for them. But a draught of cold water has frequently caused sudden death. A promising youth, son of a former President of Harvard College, put his head under the stream from the nose of a pump one hot day, and died of sudden peritonitis in consequence.

The first lessons of experience must have been often painful and sometimes fatal. Poisonous berries would look tempting; various kinds of dangerous food, or what was taken for food, would play false with those who ventured upon it. When our Pilgrim Fathers first landed on Cape Cod they found certain mollusks on the sandy shore which looked desirable, and were naturally inviting to the half-starved wanderers, long

caged in the little Mayflower. They indulged freely in the unknown mollusks, which, in the expressive words of the old chronicler, did cause them "to cast and to scour," and thus gave them one of those medical lessons which must have been common in the early history of mankind. In this way food, poison, helpful drugs, were first discovered. One notable drug, *nepenthes*, a narcotic, perhaps opium, or hyoscyamus, or haschisch, it may be, was known before the days of Homer, for our old friend, handsome Helen of the Iliad, an erring sister, but now reclaimed, as we find her in the Odyssey, and living with her much-enduring husband, mingles it in the draught she gives her guests as a night-cap to ensure their peaceful slumbers.

The next stage of medical history finds the treatment of disease in the hands of priests and sorcerers. How the idea of good and evil supernatural agents springs up in every human tribe I need not attempt to show. But if malignant beings are believed to exist nothing can be more natural than to attribute disease to them. Then the evil spirit must be driven off, — by smoking him out, as in the Apocryphal story of Tobit, or by howling and "making a hellish noise" about the sufferer, as our Indians were wont to do.

Next to the supernatural or magical period would follow in due order that of physical theories. As the phenomena of the macrocosm or outer world were first philosophically studied, the generalizations arrived at would not unnaturally be applied to the microcosm or lesser world of the living human system. So it came about that as four elements, air, earth, fire, water, were recognized in one, four corresponding elements were recognized in the other. These were blood, phlegm, bile, and a fourth less definite fluid known as black bile. Changes in the quality and in the quantity, absolute or relative, of these four fluids were assumed to be the cause of the different diseases to which man is subject. This was the doctrine known as the humoral pathology, that of Hippocrates and Galen, the most prominent one in medical history, and kept in constant preservation to this day by its unconscious embalmers, who insist that they are *bilious* whenever their digestion is out of order.

By and by it would be felt that the solid parts of the body, as well as its fluids, must be concerned in disease. Then would come into existence a school of *solidists*, such as the sect known as the *Methodics*, who found the cause of disease to consist chiefly or largely in spasm or relaxation; the *strictum* and *laxum* of Themison, — the physician satirized by Juvenal in the familiar line

Quot Themison ægros autumnno occiderit uno.

Behind all these phenomena it would necessarily be felt that there was some *power* at work of which these were the effects; what we should call the vital force; a form of agency which, whether seen in the acts of the individual cell, or the coördinated working of the entire organism, is phenomenally distinguishable from the movements of brute matter. This force, which Hippocrates recognized as *φύσις* or *φύσεις*, nature or natures, would assume more and more importance as the living actions in health and disease were studied. In this way we arrive at last at the metaphysical stage of the *animists*, which culminated in the *Archeus* of Van Helmont, a conscious agent governing the bodily actions, natural and morbid, and requiring to be man-

aged, to be conciliated, to be governed, without knowing it, as a sharp-witted woman manages, wheedles, and eventually subjugates a refractory husband, and in her turn is bridled, harnessed, and driven by her petted offspring. Whatever other theories we may hold, we must recognize a *vis medicatrix* in some shape or other. "*Je le pensay et Dieu le guarit*" (I dressed his wound and God healed it), was the saying of Ambroise Paré, which you may read to-day on the walls of the lecture-room of the École de Médecine in Paris. The operator amputates a limb and leaves a bleeding wreck after him. What surgeon who looks on the rounded and cushioned stump a few weeks later can help owning

"There's a Divinity that shapes our ends,
Rough hew them how we will?"

No matter what theory prevails, or has prevailed, physical, metaphysical, humorist or solidist or animist, there always are and always have been those who are content to study disease as they see it, without regard to any *à priori* opinions or deductive generalization. So there is one broad division running through medical history, sometimes, as in the school of Alexandria, separating medical practitioners into hostile camps; that of the Dogmatics and that of the Empirics, — the believers in "*It ought to be, because my theory says so,*" and the believers in "*It is, because I see it.*"

If you wish to know something of these, and of the various theories which have prevailed in ancient times, — I will refer you to the Preface of Celsus to his work *De Medicina*. Let every student learn enough of Latin to read this, for its clear narrative, its philosophic breadth and dignity, its lesson of simple style and elegant Latinity. Then let him read the treatise of Cabanis on the Revolutions of Medicine, — in French if he can, in the translation if not in the original, — and he will have an outline of the earlier history of his calling which he can fill up at his leisure from the larger histories of medicine. There is a small volume, published within the last year, which contains much that may be found in the two authors I have mentioned, and a good deal more which will prove interesting. Its title is *Medical Heresies*, its author Professor Smythe, of the college at Indianapolis, its publisher Presley Blakiston, of Philadelphia.

I must leave all these, and come to the two modern periods.

The new birth of anatomy dates from the great work of Vesalius, first published in different editions about the middle of the sixteenth century. From the study of normal anatomy arose in natural order of succession the knowledge of the organic changes effected by disease or constituting it. In 1679 Bonetus published his *Sepulchretum, sive Anatomia Practica*, a great collection of more or less imperfect accounts of fatal cases, with autopsies and comments, the cases having been gathered from a vast number of authorities. With all its imperfections, this massive work was the foundation for after-builders. From this time speculation about the causes of disease was more and more regulated by the observed changes in the parts affected. The science of Medicine had started on a new career. The publication of Morgagni's work, three quarto volumes, entitled *De Sedibus et Causis Morborum*, established the reign of pathological anatomy, founded by Bonetus. One of the most intelligent of my fellow-students, as I remember, read through these three volumes of Morgagni, doubtless under the

advice of an instructor. He might have done worse then; to-day he can do better.

Another century passed before the art of healing found a new teacher in the person of a physician who was born with that power of observation, that tact and sagacity, which are the supreme gifts of the practitioner. In the words of the illustrious Dr. Thomas Young, "Physic is one of those departments in which there is frequent necessity for the exercise of an incommunicable faculty of judgment, and a sagacity which may be called transcendental, as extending beyond the simple combination of all that can be taught by precept." This "incommunicable faculty" is the same quality which Cabanis speaks of as that tact which alone can render available at the bedside all the stores of knowledge and all the powers of reason.

The Father of common-sense practice in England was *Thomas Sydenham*, "the restorer of true physic," as Hume calls him, a man whose name is coupled with exalted praise in the pages of Johnson and Macaulay, and gives its title to one of the most useful and distinguished British Medical Societies. He had his hypotheses like others of his time, — he talked about the humors as preceding generations had done, but he kept his eyes open, he watched the progress of disease, he noted the influence of times and seasons, he recognized the meaning of the efforts of nature in the cure of disease. He ordered free ventilation for diseases in which the patient had been "stified in bed;" he directed horse-back riding for consumptives; he prescribed a roast chicken and a pint of canary for a nervous young man whom the pedants and the pathologists of his day would have probably bled and drenched, — in short, he was a man of excellent judgment and much more than common sagacity, and did not allow his theoretical speculations to blind him to the facts of disease before his eyes. It is almost two hundred years since Sydenham died, but there is wisdom in his writings which never grows old. Many among you know of the late Dr. John Brown, of Edinburgh, by his charming story, "*Rab and his Friends.*" I fear that fewer of you have read his "*Locke and Sydenham,*" and I commend to your special attention this most interesting account of the great English philosopher, who was also a physician, and the great English physician, who belonged to that best class of philosophers who, in the words of an old hymn I half remember,

Not only know,
But always practice what they know.

You may be surprised that I have not devoted some considerable space to the wonderful discovery of Harvey. But it has been said, and I think with some truth, that no great change in medical practice was effected by this physiological discovery. I will not attempt to investigate the indirect influence it may have had on medicine, and especially on surgery. It is a part of that connected series of ascertained data of the laws of life which, when it does not lead directly to practical consequences, often points the way which experiment is to follow, and on which it remains for experience to pass its judgment.

The last half of the last century was rendered illustrious in medical history by the names of John Baptist Morgagni, Albert von Haller, and John Hunter. Of the first I have already spoken. Haller was the most learned of medical scholars, the stateliest figure in our historical portrait-gallery, a man of civic dignities and of literary celebrity, a botanist, a physiologist whose the-

ories have had wide influence, whose work on that branch of science is monumental; a scholar whose three Bibliothecæ, — Anatomica, Chirurgica, Medicinæ Practicæ, — are precious storehouses of medical bibliography, enriched with brief, enlightened criticisms, conveyed in a style at once clear and elegant. Not to know and value his works implies a somewhat narrow horizon of instruction.

John Hunter, unscholarly, obscure in expression, uncouth in diction, bears for all that the greatest name since Harvey's in the annals of English anatomical and physiological science. Two generations ago English and American practitioners held the name of Hunter in such reverence that they almost paused in their speech before mentioning it, as Robert Boyle is said always to have done before uttering the name of the Deity. A great comparative anatomist, a great physiologist, the creator of a vast museum, the author of innumerable original observations of interest to medical science, a surgeon of distinction, a man of powerful native genius, insatiable in thirst for knowledge, indefatigable in accumulating it, his works have been treated as quarries by those who came after him, as the Coliseum was used to build up palaces for the Roman nobles of later ages.

When we come to the broad field of medical practice we shall find that nothing was felt so widely all over it as the jar of that fierce battle between the adherents of Cullen and Brown in the last quarter of the last century. William Cullen had his theories like other teachers, but he was not the less a sound and sensible practitioner. John Brown, the father of the so-called Brunonian system, was essentially a theorist, and deduced his practice from his theory. His doctrines of sthenic and asthenic diseases and the treatment based on his doctrines had a very wide, if a temporary, influence. He had got hold of a truth, but there is nothing more dangerous than a truth allied with a falsehood, a fiction, an illusion, and applied without regard to the language of experience, which the false prophet always interprets to suit himself.

We find ourselves brought down to the close of the eighteenth century and the beginning of that which is now in its last quarter. We have reached a period with the history of which you are supposed to be better acquainted than with that of the long succession of preceding ages over which we have been casting our hasty glances. I need only indicate the leading lines along which the steps of medical progress have passed within the range of our more immediate vision.

The great discovery of the protective power of vaccination against small-pox, made at the close of the last century, came into general recognition in the first years of the present one. *Inoculation*, introduced into England from the East, first into America by Zabdiel Boylston, of Boston, — encouraged, let it be remembered, by Cotton Mather, — had been practised since 1721. In Dr. Waterhouse's collection of papers on vaccination may be found the following table: —

NATURAL SMALL-POX. A Contagious Disease.	INOCULATED SMALL-POX. Non-contagious.	KINE-POCK. Non-contagious. Never fatal.
One in six who take it dies. It is like an attempt to cross a dangerous stream by swimming, where one in six perishes!	One in 300 dies. It is like crossing the stream in an old, leaky boat, where one in 300 perishes.	It is like crossing the stream on a new and safe bridge.

Next to this, among the grand discoveries which irradiate not merely the foot-path of Medical Science and Art, but the great highway of humanity, is that of

induced anæsthesia. Its cradle was the Massachusetts General Hospital, as surely as Faneuil Hall was the Cradle of Liberty. Not that the earliest hint of either of them was first breathed under those roofs. The Messiah was long promised and expected, but he was born and cradled at Bethlehem. In spite of the not infrequent attempts to appropriate elsewhere the credit of this Heaven-sent gift to mankind, of which the most extraordinary is that of the late Sir James Simpson in the eighth edition of the *Encyclopædia Britannica*, quietly superseded, I am pleased to say, in the ninth edition of the same work, Boston is the Bethlehem of this divine birth, and will, in the light of that fact, remain one of the sacred shrines of humanity as long as the waters wash her feet and the winds blow over her dwellings.

Next in importance to the practical application of anæsthesia we may mention the introduction of physical methods of exploration, — auscultation, formally brought before the world by Laennec in 1819, and percussion, revived by him after more than half a century of comparative neglect. Of this I can speak with some confidence, for I was once well acquainted with it practically, and I have made many an ante-mortem autopsy with my stethoscope and pleximeter. There is no need of insisting on the value of a method of ascertaining the existence of disease so obviously of great assistance. But it may be carried too far, and I am afraid sometimes is so. I have often felt, when seeing hospital patients worried by hammering and long listening to their breathing, in order that the physician might map out nicely the diseased territory, the boundaries of which he could not alter, as if it was too much like the indulgence of an idle, and worse than idle, curiosity. A confessor may ask too many questions, — it may be feared that he has sometimes suggested to innocent young creatures what they never would have thought of otherwise. I even doubt whether it is always worth while to auscult and percuss a suspected patient. Nature is not unkind in concealing the fact of organic disease for a certain time. What is the great secret of the success of every form of quackery? *Hope kept alive*. What is the too frequent fatal gift of science? *A prognosis of despair*. "Do not probe the wound too curiously," said Samuel Sharp, the famous surgeon of the last century. I believe a wise man sometimes carefully worries out the precise organic condition of a patient's chest when a very wise man would let it alone, and treat the constitutional symptoms. The well-being of a patient may be endangered by the pedantic fooleries of a specialist.

Perhaps the medical use of the thermometer is the next in importance of the medical improvements of our century. But of this I have nothing to tell you which you do not know or will not soon learn. Of the ophthalmoscope and laryngoscope I can say nothing of my own knowledge.

With the beginning of the present century we have entered upon a new era, that of General Anatomy or Histology. For an exalted, perhaps extravagant, estimate of Bichat, its illustrious originator, I must refer you to the well-known work of Mr. Buckle. The *Anatomie Générale*, given to the public in the year 1801, changed the whole character of anatomical and pathological investigations. Tissues were studied where organs only or chiefly had been considered, and a new light was thrown on the laws of health and disease.

But General Anatomy was working mostly with

unaided senses, as the astronomers before Galileo explored the heavens. The improvement of the compound microscope, — say rather its new creation, — by rendering its object-glass achromatic, was destined to make a far wider and deeper transformation in anatomy, physiology, and pathology than even the splendid and fertile generalizations of Bichat. Between 1830 and 1840 the results obtained through the use of the perfected instrument began to appear in the great work of Ehrenberg on infusoria, the treatises of Schleiden, Schwann, Henle, Gerber, and many others. From that day to this the microscope has been the Urim and Thummim of the priesthood of biological science.

Its largest revelation has been that of showing the history of the cell and its relation to the organism in health and in disease. We have learned that the law of life in a complex animal organism is local autonomy, with universal suffrage; the individual cell being the citizen of a federal republic; the various departments being distributed among the different viscera, its senate and legislature in the nervous centres, the chief of which is under the dome that crowns the living structure. Here was prefigured what we Americans consider the adult and completed development of civic order.

I cannot resist the temptation of a moment's digression.

Already in the first man who trod the soil of our planet the great mechanical and chemical discoveries of uncounted coming ages were anticipated. His tissues were woven in a loom no Eastern fingers, no Western machinery, could rival. Where strength was needed a power of resistance like that of iron was given to strands of fibres finer than the spider's thread, seen only as it glistens in the sunbeam. Where elasticity was wanted a substance like caoutchouc exuded and solidified. The pillars which support his frame would crumble under it were they not many times stronger in substance than the columns which support his temples. The leverage of his limbs is adjusted to his needs with an audacity which no engineer would venture. The hydraulics of the circulation are but clumsily imitated in our aqueducts and their distribution. And what are all the flood-gates of human contrivance compared to those delicate translucent valves which we were so recently studying, which stand guard at the mouth of the great artery, and arrest the solid column of blood coming back upon them like the blow of a hammer day and night, seventy times a minute, for seventy years, and so many more as life may spare us? Man is more than a machine, but as a machine he is an ever-present miracle. His heart is a time-keeper which counts the seconds for a century with one winding up. The heating apparatus of our dwellings in the surfaces of its radiators and the pots of its furnaces only repeats the valvulæ conniventes and the villi of our own mucous membranes. No telephone conveys a message so faithfully as the membrane of the tympanum transmits it to the listeners in the recesses of the labyrinth. No steam-engine can work with so little fuel as the human organism; no dye-house can reproduce the glow of a youthful cheek; no laboratory can manufacture a grain of albumen; no musical instrument can reach the human heart like a woman's voice; no lens can adapt itself to light like the human eye. And so we come back to the microscope, the perfection of which was developed by imitating as it best might those achromatic arrangements, the darkening pigment, the diaphragm, the adjustments for distance, which were all

complete in the first man who opened his eyelids on creation.

The latest great accession to the list of the gains we owe to the microscope is the discovery of the part played by different microscopic organisms in the production of disease and the preventive and curative methods growing out of that discovery.

You must permit me to enumerate in the briefest possible manner some others of the changes that mark the progress of the time over which my own knowledge extends, and which belong to the history of medical science.

The treatment by hypodermic injections has enabled the physician to stay the anguish of dyspnoea and arrest the thrills of neuralgia, as the harper stills the quivering cords of his instrument by laying his hand against them. Old measures of treatment have fallen into disuse. Bleeding is almost a lost art, so rarely is it employed. Medicines once in daily request, such as antimonials and mercurials, have taken the back shelves, and left others, the iodides and bromides, especially, in the foreground. Sulphur, "once so prominent," says Mr. Metcalf, "in medicine and theology [is] now almost eliminated from both." "Fifty years ago," he says, "it came at this season into almost every family, like any other form of spring-cleaning, and with the same disagreeable results." I need not say how much has been effected in the way of rendering drugs less odious to the smell and taste. Happy the child born since the days of "brimstone and molasses;" who has not sickened in anticipation at the very name of ipecac, and felt his whole life embittered by the flavor of rhubarb!

If I should do more than allude to the subdivision of medical practice into specialties; if I should do more than hint at what the Gynecologists, the Dermatologists, the Laryngologists, and the other long-established specialists have accomplished in their several departments, I should be at the beginning of a volume instead of beyond the middle of a lecture. In surgery the *felix audacia* of ovariectomy has achieved the greatest triumph of operative art. I know by report something of what has been accomplished by antiseptic treatment. American ingenuity has been conspicuous in the departments of plastic surgery and mechanical dentistry. You know what the distinguished Professor of Surgery in this School has done for his art; the world knows it too. How many living surgeons, how many living or dead American surgeons, can claim to have done so much for their branch of the Profession as the man who rekindled the torch of Sir Astley Cooper, and flashed his electric light on the path of Sir Henry Thompson? I may remind you also of the employment of paracentesis, with aspiration, of the thorax in acute disease, the introduction of which has added the names of Bowditch and Wyman to those of the benefactors of the race.

There are many memorable events in recent medical history. Yet there is one gain so vast that we can hardly compare any curative measure with it for importance; I mean the knowledge which has been gained in the art of *preventing* disease; the hygiene of cities, the construction of hospitals, the better study of all those conditions, including climatic influences, which favor health in the two sexes and at different ages.

Leaving the practical side of medical science for a moment, I will barely allude to the results obtained in physiology by the invention of instruments of precis-

ion, like those of Marey, for instance, and the skilful use of vivisection, a mode of acquiring knowledge justifiable in its proper use, odious beyond measure in its abuse, but not a proper subject of censure to the sportsman who mangles the bird he does not bag, to the fisherman who takes a hundred trout when he does not want more than a dozen, to the huntsman who runs down a fox or a hare until, when he can drag himself no further, he is torn to pieces by the hounds, nay, to the man who asks the blessing of God on what is before him and swallows a dozen living oysters, unless he prefers them as they come from the gridiron, where they have died by the martyrdom of the broiled Saint Lawrence.

It only remains to speak of new methods and theories which have been the product of our century. I will briefly allude to two: the doctrines of Broussais, and the numerical system of Louis. "Broussaisism" is obsolete, almost forgotten, at the present day. Louis, Andral, Chomel, Trousseau, and others, better observers, and less run away with by theory, killed it. I have heard Broussais lecture often: savage, virulent, a powerful old man, who did more perhaps than we give him credit for to localize diseases which had been considered general; to get rid of what he hated in medicine, *ontology*, and substitute local *irritation* for its ideal diseases, especially to recognize inflammation of a mucous membrane in the place of essential fever.

Of Louis and the numerical system I could say much. He was my loved and honored instructor, and has had a great effect on the medical science of this country through his numerous American students. But I prefer to leave too tempting a subject, only saying this, that the numerical system can teach a wise and honest and diligent man a great deal, and that it can make a foolish, dishonest, careless man a greater fool, impostor, blunderer, than nature ever intended him to be.

In touching upon the subject of Homœopathy I shall find it hard to be very ill-natured. For it so happened that once, on the occasion of delivering a literary lecture, I found myself unexpectedly assigned to the hospitality of a homœopathic practitioner. If my host had consigned me to a chamber in one corner of a compartment of a hollowed-out mustard-seed; if he had offered me the ten millionth dilution of a drop of coffee on a globule of sugar of milk, and a microscopic fragment of a muscular fibril, with a fraction of a starch cell, and a smell at a pat of oleo-margarine, I might have felt as a patient ought to feel who has been insulted with pharmaceutical infinitesimals equally preposterous and absurd. But I was courteously entreated and handsomely entertained, and in remembrance of that open door and soft bed and well-spread table, I will try to speak of homœopathy, not exactly as Isaac Walton says the angler should treat his frog, "as if he loved him," but at least as kindly as frogs are treated in our physiological laboratory.

The only excuse I can offer for devoting any time to the subject is the fact that it has a certain hold on the community, that it has organizations and institutions which present themselves to the medical student as having a better doctrine and a more effective treatment than what it is pleased to call "the old school," for which "old school" Hahnemann invented the nickname, sometimes used by those who ought to know better, of "allopathy." I require this excuse for introducing the subject, for homœopathy has no *status* among the biological sciences, and has nothing of any

practical value, so far as I know, to offer the Medical Profession. It began by promising to prevent scarlet fever, which it miserably fails to do, and from that day to this it has been a romance of idle promises slipping through the fingers like quicksilver, evaporating without residue like ether from the palm of the hand. If any one of these promises had been fulfilled, if any single remedy brought forward by homœopathy had proved trustworthy and efficacious, it would have been thankfully accepted by the Medical Profession, which welcomes every method of help unless it shows itself with false pretences, and even then will appropriate any fraction of truth which underlies the deception or delusion. *Sanabilia sanantibus curantur*. If a drug is proved to be a remedy for any disease or symptom it is no objection to it that it is capable of producing similar symptoms in a healthy person. It seems to be forgotten that the *Materia Medica* has long recognized a class of remedies under the name of *alterants* or *alteratives*. Under this general head every so-called homœopathic remedy would find its place if any proved really valuable. We might expect that half a century of experience would have something tangible to show for itself.

Forty years ago I delivered and published a Lecture entitled Homœopathy and its Kindred Delusions. The three dogmas with which I had chiefly to deal were these: I quote from the Lecture as published during the year of its delivery:—

(1.) "The one great doctrine which constitutes the basis of Homœopathy as a system is expressed by the Latin aphorism '*Similia similibus curantur*,' or *like cures like*; that is, diseases are cured by agents capable of producing symptoms resembling those found in the disease under treatment."

(2.) "The second great fact which Hahnemann professes to have established is the *efficacy of medicinal substances reduced to a wonderful degree of minuteness or dilution*. The dilution of the original millionth of a grain of medicine contained in the grain of powder operated on is carried successively to the billionth, trillionth, quadrillionth, quintillionth, and very often much higher fractional divisions. A dose of any of these medicines is a minute fraction of a drop, obtained by moistening with them one or more little globules of sugar, of which Hahnemann says it takes about two hundred to weigh a grain."

(3.) "The third great doctrine of Hahnemann is the following: *Seven eighths at least of all chronic diseases* are produced by the existence in the system of that infectious disorder known in the language of science by the appellation of *PSORA*, but to the less refined portion of the community by the name of *ITCH*." "*PSORA* is the sole true and fundamental cause that produces all the other countless forms of disease, which, under the names of nervous debility, hysteria, hypochondriasis, insanity, melancholy, idiocy, madness, epilepsy, and spasms of all kinds, softening of the bones, or rickets, scoliosis and cyphosis, caries, cancer, fungus hæmatodes, gout, yellow jaundice and cyanosis, dropsy, — gastralgia, epistaxis, hæmoptysis, asthma and suppuration of the lungs, megrim, deafness, cataract and amaurosis, paralysis, loss of sense, pains of every kind, etc., appear in our pathology as so many peculiar, distinct, and independent diseases." Can you believe that I am not imposing on your credulity when I say that I translate these words literally from Jourdan's French version of Hahnemann's Organon?

What has become of the first of these three dogmas? The *Encyclopædia Britannica*, in its 12th volume, published in 1881, quotes the following confession from a Homœopathic journal called the *Medical Investigator*, of the date of 1876: "How many claiming to be homœopaths are daily disregarding the law of *similia*! It is getting to be quite a rare thing to hear of a homœopathic practitioner conducting a serious case from beginning to end without using as such cathartics, sudorifics, diuretics, etc., in direct opposition to our law; not only are these drugs used in this way, but there are some also go so far as to say that they cannot be dispensed with."

As to the second grand principle announced by Hahnemann, there is abundant evidence that many, if not most, homœopathic practitioners make use of various remedies in their ordinary doses. I have had interesting revelations of this kind from my friend the late Dr. Edward Hammond Clarke. But I was hardly prepared for the statement of Dr. Wilde, Vice-President of the British Homœopathic Medical Society, that "although many believe that the action of the infinitesimal in nature can be demonstrated, its use in medicine is practically by a large number in this country all but abandoned."

The discovery of the *acarus scabiei*, the little insect which proves to be the true cause of itch, has sufficiently disposed of the third of the homœopathic dogmas which I passed under consideration in 1842.

What there is left of a three-legged stool after one of its legs is pulled out, and the other two are sawed half or three quarters through, seems hardly worth sitting down upon.

So far as I can take account of the stock, the present assets of homœopathy consist of a pleasing and sonorous designation, a nomenclature of symptoms, with sets of little phials, containing globules, which are the prettiest and most fascinating of amulets, arranged to correspond with the nomenclature, a collection of "provings" which prove more about the prover than about the questions to be proved, and a doctrine which slips on or off like a kid glove, according to the company in which the practitioner finds himself. Why homœopathy should have so much popular currency in this country as compared with the land of its birth, or with Great Britain, is a curious question. It has been attributed to the state of medical education, but it might be found, I suspect, to be in intimate relations with another very interesting matter, too delicate for me to meddle with here, namely, the potential influence in our community of the imaginative sex, and its psychological leaders and followers.

A few words with reference to Hahnemann, whose vagaries still lie in the way, to be stumbled over by here and there one whose mental twist or imperfect scientific training has betrayed him into the misfortune of taking the wrong direction.

Hahnemann was not an ignoramus, by any means, but something a great deal worse. He was a hopeless subject of cerebral strabismus, beyond all medical, all surgical, treatment. A squinting eye can be set right, but a squinting brain is too much for the art of gods or men. Whether the strabismus involved the moral as well as the mental faculties of Hahnemann, I will not stop to discuss. But when a man misinterprets all that he reads; when he borrows the most foolish things from the most foolish or erratic writers that he can possibly get hold of, then the less he knows about

books the better. In mentioning the authorities from whom Hahnemann probably borrowed his two best known dogmas, I do not mean to say that doctrines originating from unworthy sources may not be worthy of confidence. A rogue may have good money in his pocket; but his bills are more likely to be counterfeit than those carried by an honest man.

We know well enough what a braggart and pretender was Bombastus von Hohenheim, who called himself Paracelsus. Even his defenders would recognize him as the very type of the swaggering boasters who profess to work miracles by their wonderful skill and knowledge. Those who are curious will find the distinct statement of the *similia similibus* doctrine in his words quoted in an article in a recent volume of the *Encyclopædia Britannica*. Whether Hahnemann borrowed it from Paracelsus or not is of no very great consequence, but it is just the kind of hint a shrewd system-maker would be like to find in just the kind of author he would be like to be searching; and its source lays it open to suspicion.

The history of the probable origin of the infinitesimal medication is more interesting, and, so far as my limited reading has extended, has not been unearthed until I happened to strike the burrow the doctrine is likely to have come from.

I chanced to be looking through the *Ortus Medicinæ* of Van Helmont about a year ago, reading here and there as the titles of the chapters attracted me more or less. It was the Elzevir edition of 1652, and had stood on my shelves for many years. Among such titles of chapters as *Blas Humanum* and *Vis Magnetica*, I noticed one with this odd-looking prefix: FOUTLER.

I found this was the name of an individual, an Hibernian, a great personage formerly, as he represented, at the court of King James the First of England. At present, however, this distinguished stranger was provided with lodgings at the public expense in the jail of Vilvoorden, a town of Belgium. Here it was that Van Helmont, a very credulous, very whimsical man of genius, a believer in the sympathetic ointment and other nonsense of the kind, became acquainted with the distinguished stranger, who bore the family name of the Duke of Ormond. This captive wrought some wonderful cures, which Van Helmont reports. The first case was that of a monk suffering from erysipelas. The Irishman dipped a certain pebble quickly into a teaspoonful of oil of almonds, and instantly withdrew it. The patient took the oil, or some of it, and was cured at once. Second case: a washerwoman; complaint, hemiplegia. He dipped the same pebble quickly into a teaspoonful of olive oil, gave it a lick with his tongue, and put it back in his waistcoat pocket. He poured that teaspoonful of oil into a small vessel of oil. One drop of this to be rubbed on the old woman's head. Immediate and permanent cure. Stupefied astonishment of Van Helmont; — to whom the son of Erin, "My darling, if you don't get on so far that you can cure any disease with a single remedy you will remain a greenhorn (*in tyrocinio*) till you are a greybeard." The next patient was a nobleman; a bad case of gout, as it would seem. He was to touch the pebble every morning with the tip of his tongue, wash the lame parts with a cheap lotion, prepared in the laboratory of nature, and be well in three weeks. If he will make me well, says the count, I will pay him his own price and deposit it, so that he shall be sure of it. Our friend with the pebble

takes this in high dudgeon: will never help the miserable creature; does not want his money; is as good as he is. Van Helmont could not prevail on him to treat the case, and became sceptical. But not long afterwards a fat friend of his wanted to be rid of his obesity. Butler gives him a small fragment of the pebble, which he is to lick once, or touch swiftly with the tip of his tongue, every morning. In three weeks he was a span narrower around his thorax. Van Helmont begins to have faith again, and being himself ill, as he thinks from poison, sends a flask of oil to Butler, who is still in jail, and who dips his pebble in it. One drop to be applied externally in one or more places. Entire failure of relief. Sceptical once more, — our inquiring philosopher. But, next, his wife is relieved of a dropsical swelling, and a servant-maid of an ill-cured erysipelas, and a widow of a stiff arm, all by one or more drops of the oil, and an abbess of loss of power in her right arm by only touching her tongue to the pebble. "Then I asked Butler," says Van Helmont, "why so many women were cured at once, while I, at sword's point with death and full of pains in all my joints and organs, got not the slightest relief." The Irishman gave a plausible answer, which silenced if it did not satisfy the learned simpleton.

The essence of the infinitesimal doctrine is in this most curious chapter of the *Ortus Medicinæ*, which is well worth reading. Hahnemann mentions the name of Van Helmont in his *Organon*, and I have little doubt that he borrowed his infinitesimal doses, smelling of remedies, and other inventions from this chapter. And though such an origin does not prove their falsity or worthlessness, yet we are less disposed to yield our confidence to the pretensions which can be traced to the paternity of so questionable a personage as this exile of Erin.

Van Helmont, I may add, entirely anticipated Hahnemann in insisting upon the use of simple uncompounded remedies. "I believe," he says, "that simple remedies, in their simplicity, are equal to the cure of all diseases." "And consequently," he adds, "the Dispensaries, wishing to compound and correct many ingredients, lose everything, and by a hidden blasphemy, as it were, undertake to supply the divine insufficiency."

Where Hahnemann got his third great dogma, that itch is the cause of seven eighths of chronic diseases, I do not know, but I notice that Van Helmont has a good deal to say about that disease, from which he himself suffered for some months, and what he says may very probably have set Hahnemann thinking about it.

If Homœopathy has made any valuable contribution to therapeutics, of which I do not see the evidence; if it has been of indirect service, like the Unguentum Armarium and the Sympathetic Powder, in showing the public what professional men of common sense have always known, that most diseases can get well without active interference, it has done a vast amount of harm in another direction. I have in my possession one of those foolish little cases of little phials of minute pellets, — homœopathic amulets, — formerly belonging to a friend, now deceased. One at least of its amulet-holders has been largely drawn upon. Its owner watched himself for symptoms, and attacked each as it appeared with what his book told him was its specific. What is the consequence of this daily and hourly self-inspection by all the nervous and crotchety owners of these little

seed-capsules of hypochondriasis? They think themselves into every morbid condition they can find a name and a pellet for. These petty engines of great mischief stimulate into consciousness the very symptoms they pretend to subdue, like the rider displaying his horsemanship

While his left heel insidiously aside
Provokes the caper that he seems to chide.

It is a serious charge to bring, but I appeal to those who know the history of these cartridge boxes charged with imaginary maladies, to say if they have not called into and kept in existence an army of professional invalids.

There are *malades imaginatives* as well as *malades imaginaires*. Such are many of those who have recourse to the globule box as their fetish. The same class of persons, usually, however, in a somewhat different social sphere, have confidence in, and are fond of consulting the *quasi-supernatural* practitioners. A patient of my acquaintance, who died not very long ago while under the care of a homœopathic practitioner, was urged by some who were about her to call in a clairvoyant female. Why not? Would the disciple of Hahnemann have refused to consult with the seeress?

There is little to be done with the *malades imaginaires*; there is nothing to be done with the *malades imaginatives*. All plausible, large-promising false doctrines seize, like epidemics, on their predestined, because predisposed, victims. You will lose a patient now and then to a homœopathist or a clairvoyant; they go where they belong. "Ephraim is joined to idols; let him alone." But do not allow yourself to believe because this new country is the favorite breeding-place of Mormonism, of Homœopathy, of Clairvoyance, that polygamy is going to break up the sanctities of the American household, or the fancy practitioner displace the educated, scientific, rational physician in the abiding confidence of the great American public.

The other pseudo-scientific excrescences growing from the body medical are the systems belonging to the so-called *Eclectics* and to the *Clairvoyants*. After these come the advertising philanthropists who conduct "medical institutes," and who leave their doors ajar like the covers of so many box-traps.

The Eclectics are the lineal descendants and heirs of the Thomsonians of a past generation, whose botany, as Professor Asa Gray informs me, included not only *lobelia*, but also "*highbelia*." The eclectic writers and teachers seem to be a sort of half-armed medical militia, of the class that spells inflammation with one *m*, and whiskey without the *e* in the last syllable. I do not suppose their practice differs very much from that of those whom we call regular physicians. One of their "Professors," who recently left the eclectic for the regular ranks of the profession, gives as his reasons that the original and cardinal doctrines of the eclectic school, — opposition to blood-letting and certain mineral remedies on the one hand, and the use of various new remedies on the other, — have been largely adopted by the regular school of medicine. Whatever credit belongs to Samuel Thomson and his successors, the eclectics, let us not deny them. But the real change of medical practice, so far as it can be traced to any individual sources, may with a good show of reason be laid at the door of such teaching as that of Louis on blood-letting, of Dr. Jacob Bigelow on "Self-Limited Diseases," and of Sir John Forbes's "Nature and Art in Disease."

As to the clairvoyants, it seems probable that more patients consult them than we are aware of. Persons who carry horse-chestnuts about with them to keep off rheumatism do not care to have their pockets turned inside out before their neighbors and friends. So the patients of the wise women who see into simpletons, and are seen into by persons of ordinary sagacity, are shy, it may be suspected, of openly entering the sibyl's cave, and follow the example of Nicodemus, the same who came by night to visit his Master.

Do not let the existence of these outgrowths of science disturb your equanimity. The largest and most sensible part of all educated communities will always choose its physicians among those who have the highest mental and personal character, with the most complete training, and who are sure to find each other out and stand united as what we know as the regular medical profession.

The public can form a tolerable opinion of its physicians, — of such men as the late Dr. James Jackson, Dr. Jacob Bigelow, Dr. John Ware, Dr. Edward Hammond Clarke. This is the kind of men in whom the best part of the community always did and always will put its trust.

Of medical theories and practice the community is not a competent judge. Listen to the immortal sentence which stands first among the Aphorisms of the Father of Medicine: —

"Life is short, art is long, opportunity is fleeting, experience is deceptive, judgment is difficult."

If experience is deceptive for the trained practitioner, if a decisive opinion in cases of disease is difficult for him, of what value are the experiences and conclusions of wholly untrained individuals?

Any remedy, any plan of treatment, no matter what it may be, — by rain-water, by Butler's pebble, by homœopathic globules, — which can get itself tried by a thousand persons will be sure of formidable evidence, or what seems like it, in its favor. Of the thousand patients, nine hundred, we may say, will certainly get well, however they are treated. One hundred will begin taking the remedy somewhere near the time when they were to become convalescent. Fifty, or twenty, if you will, will happen to find themselves almost immediately relieved after taking the remedy or beginning the plan of treatment, and this on the supposition that the remedy is absolutely without virtue, and has nothing to do with the cure. How can you argue with these fifty or twenty people? They answer exactly in the same way with the blind man restored to sight, told of in the Gospel of Saint John. Whether this be a quack remedy, or no, I know not; one thing I know, that whereas I was sick, now I am well. And this argument, utterly fallacious as proof, will prove a sure defence to every form of quackery until the end of time. The underlying fact is that the great proportion of diseases tend to get well spontaneously, and a considerable crop of striking coincidences, looking like cause and effect, will spring up in any large field where any alleged remedy has been sowed broadcast.

Homœopathy, like every other system, true and false alike, has the advantage of this kind of deceptive evidence. The best thing it has effected has been to diminish the quantity of odiously smelling and tasting drugs with which patients, especially children, who could not help themselves, were by too many old-fashioned practitioners often unnecessarily dosed. This

one good influence we may in some measure, at least, attribute to the inoffensive, inert, utterly useless "globules," having all the virtues a name can give them, and no others. Not the less is homœopathy a system of false pretences. Who had not rather see "little Jack Horner" and similar myths in the nursery than books like the Newgate Calendar, full of true stories which would frighten the poor children out of their senses? But if a man comes along professing to teach history on the basis of Mother Goose; if he alleges as a scientific fact that a man did really scratch out his eyes by jumping into one bush, and did really scratch them in again by jumping into another similar bush, and takes this fact for the corner stone of ophthalmic surgery, I do not think the Professors of Harvard University would feel themselves called upon to recognize him as a scientific and professional fellow-worker.

Again, we must not deny that there is such a thing as the *faith-cure*, quite independent of any special divine intervention. Every form of medical imposture can shew such cures, for the imagination is a very powerful physiological agent. They are numerous just according to the impressibility and the credulity of the class to which the impostor appeals. Women are oftener cured than men; nervous diseases oftener than others; peasants oftener than princes; poets oftener than men of science; clergymen more frequently than lawyers; Catholics are more favored than Protestants, — see the "collection of crutches" at Mount Ste. Anne figured in *The Century* for May. Such are the incidental good effects which the worst cheat who ever sold rain-water as a precious remedy for all evils may challenge as the result of his mendacity and impudence.

Let me illuminate the closing passages of my lecture with some words from three great authorities, whose names will add weight to its utterances: —

"Whatever efforts," says Cuvier, "have been made in the course of long ages by the men of genius who have practiced medicine, none of the doctrines which they have proposed under this name [medical theory] has obtained lasting assent. Young persons adopt them, each time as they come up, with enthusiasm, because they seem to abridge study, and furnish the clue to an almost inextricable labyrinth; but the briefest experience disabuses them."¹

And Helmholtz says, speaking of old theories, "If I were called upon to designate in one word the fundamental error of that former time, I should be inclined to say that it pursued a false ideal of science in a one-sided and erroneous reverence for the deductive method."

No, gentlemen, there is no exclusive *a priori* method which leads to the successful treatment of disease. You begin in the primrose paths of knowledge which are only preliminary to your real work. Anatomy is no more medicine than a child's dissected alphabet is literature. Physiology and chemistry throw gleams of light here and there on curative methods, but are apt to lead their votaries far away from practice. Pathological anatomy teaches a great deal, but it is, after all, like inspecting what is left of the fireworks on the morning of the fifth of July. It is very pleasant to dissect a muscle, to make a precipitate, to watch a contracting heart, to study a translucent slice of a healthy or diseased organ. These pursuits, sisters of her who pre-

¹ Hist. des Prog. des Sc. Nat., 1, 150.

sides over health and disease, are the sirens that won over Agassiz and Huxley and Helmholtz to their flowery realms. But just as zoölogy, chemistry, physiology, histology, are not the science of medicine, so neither is the science of medicine the same thing as the art of healing. To go hastily from the library of old books and the laboratory of new experiments to the bedside of disease is imitating the presumption of those rash profligates who, as Thomas Boston says, think they can take a "leap out of Delilah's lap into Abraham's bosom."

The medical student is in little danger now from the old theories which blinded the eyes of observers in former ages. He is more likely to forget his practical work, — which means giving his whole thought to the lesser as well as the greater needs of his patient, to all the little details of the sick-room, — in the fascinating pursuit of his scientific investigations. I would not undervalue the branch I teach. I recognize the incidental importance of all the subsidiary branches which form a part of the curriculum of this and other schools. Do full justice to them, or you will not probably do justice to your more immediately practical studies. But your hardest study must be at the bedside. Your real business will be to save life, to avert disease, to manage it so far as manageable, to save your patients all unnecessary suffering. And so doing may each of you be able to repeat the noble words of Thomas Sydenham, with which I will close this lecture. Two hundred years have passed since they were written, and they still speak in accents that can never grow old: —

"And, in truth, when I come to die, I trust I shall have the satisfaction of being inwardly assured that I have not only endeavored, with the utmost diligence and integrity, to recover the health of all those who have been my patients, of whatever rank or condition they were, none of whom have been otherwise treated by me than I desire to be, if I should be seized by the same distempers; but also that I have contributed, to the utmost of my abilities, that the cure of diseases might, if possible, be prosecuted with greater certainty after my decease; being of opinion that any accession to this kind of knowledge, though it should teach nothing more pompous than the cure of the toothache, or corns, is of much greater value than all the vain parade of refinements in theory, and a knowledge of trifles, which are perhaps of as little service to a physician in removing diseases, as skill in musick is to an architect in building."

Original Articles.

CASES OF WRY NECK.

BY E. H. BRADFORD, M. D.,

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CASE I. L. T., nine years old. The patient presented herself for treatment, with the following history: Nine months before she was suddenly seized, without known cause, with pain in the head and neck. On the following morning her head was permanently drawn to one side. After a while the pain disappeared, but the distortion of the head remained the same.

The child's general condition was good, and she complained of no suffering or trouble in respiration; the position of the head was so fixed and the distortion was such that in walking in the street she occasionally ran into people, being unable to see them on account

of the abnormal position of the face. From the line of the spinous processes in the cervical region it was evident that the spine was twisted to a marked degree. The head was movable to the right but not to the left. The muscles of the neck were not contracted, except the posterior muscles.

From photograph just before operation.

The patient was etherized, her shoulders were steadied by assistants, the head grasped between two hands placed on each side, and the deformity slowly rectified by manual force. The tendon of the sternomastoid was brought into prominence and divided by tenotomy, without evident advantage, however. Fibrous adhesions were felt to give way in the region of the spine, and after a time the axis of the face was brought in line with the axis of the trunk. It was found that a great deal of force would be required to correct the deformity, and it was not thought prudent to attempt this. In moving the head back toward the line of deformity it was felt to slip suddenly, as if returning to a position natural to the altered articular facets; on correction, however, the normal position was retained.

From photograph two weeks after operation.

A plaster-of-Paris jacket was placed around the trunk, covering the shoulders, and a steel rod secured in it reaching above, and bent so as to partly encircle the head. Silicate-of-potash bandages fastened the