

Darrach (W.)

LECTURE

INTRODUCTORY TO THE COURSE

OF

THEORY AND PRACTICE OF MEDICINE

IN THE

MEDICAL DEPARTMENT

OF

PENNSYLVANIA COLLEGE,

PHILADELPHIA.

FOR THE SESSION 1844-45.

BY WILLIAM DARRACH, M. D.

✓
SURGEON

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1844.

CORRESPONDENCE.

Philadelphia, Nov. 12, 1844.

DEAR SIR:

At a meeting of the students of Pennsylvania Medical College, held in the lower lecture room, (Mr. WM. T. BABB, of Pennsylvania, in the chair, and Mr. N. C. SKINNER, of North Carolina, Secretary,) it was unanimously

Resolved, That a committee be appointed to request a copy of your very able and interesting introductory address for publication. We, as that committee, take great pleasure in making known to you the wishes of our fellow students, and in cordially uniting with them in their request.

Yours respectfully,

JOHN L. HILL, Ohio,
R. WALTON, Penn.
C. H. LEISTNER, Tennessee.
DANIEL HERSHEY, Penn.
C. A. COWGILL, Delaware,
A. FRAZIER, Penn.

Prof. WM. DARRACH.

Philadelphia, Nov. 15, 1844.

GENTLEMEN:

As the topic of my introductory lecture is one of acknowledged importance, and which I am desirous to have more deliberately considered by each of my pupils, than could possibly have been done during its mere public delivery, I with great pleasure accede to the polite and complimentary request of the class through you for its publication.

Very affectionately and respectfully,

Your humble servant,

WM. DARRACH.

Messrs. Walton,
Leistner,
Hershey,
Cowgill,
Hill,
Frazier, } Committee.

INTRODUCTORY.

GENTLEMEN :

The Faculty of this medical school give you a sincere and hearty welcome. And to those of you, gentlemen, who are from our county and neighbouring counties and states, and elsewhere, we welcome to our city of Brotherly-Love—reserved in her manners, it is said, yet, be confidently assured, she will improve on acquaintance, and prove to be a very quiet and comfortable place for a student of medicine. We welcome you to the society of her medical men;—to her cabinets;—her hospital;—her medical societies, and to her medical schools. And permit this Faculty to tender to each of you who may not yet have decided which of the three schools to attend the present session, permit us, gentlemen, to tender you that more familiar welcome which is kindling in our breasts, by recognising among you the members of our former class, and some of our alumni.

Gentlemen! you have come prepared to receive medical instruction.—Will you receive it from us?—Shall we have the honour and pleasure of becoming your teachers?—Another question of more importance—What inducements can we, ought we, to offer you? There are other teachers—those not only in the other schools of Philadelphia, and of Baltimore, and New York; but those also in the schools of the farther north and south; and of the far West,—all with knowledge and capabilities—impelled by a zeal which shall *secure* prosperity—*secure* the advancement of American medicine—*secure* American co-operation with the efforts of Europe to act better and better, more and more, the part of the good Samaritan, towards a diseased and suffering world. We are not unmindful of these considerations, nor of our relative responsibilities, and therefore we ask ourselves with the deepest solicitude, What inducements can the Faculty of the Medical Department of Pennsylvania College offer you?—What is the ground of confidence in ourselves?—Can we promise you no disappointment—none to your medical preceptor—your parent or guardian—and above all, no disappointment to our suffering fellow-creatures.

If, then, gentlemen, it shall be, that we are to become associated as pupils and teachers—to become, to each other, the givers and recipients of medical knowledge, until you receive the seal and parchments of this Institution, and become physicians,—physicians who will take honourable and useful posts in various sections of our country; or become the soldier's or the sailor's comfort; or a pioneer in heathen lands to battle with unchecked and aggravated disease. Or, indeed, quitting the duties of a physician, to apply your knowledge of or-

ganic life and chemical agencies to the farming interests of our extensive continental country,—if, I say, such is to be the case, then permit us to repeat our welcome. We hope to be able, and will be delighted, to set the means of all this usefulness before you.

But what inducements can we offer you? They are as follow:

1ST. We offer you that, which may, in your own unbiassed judgment, be associated with the outlay made by the faculty since the last session. There is now an extensive medical cabinet of anatomy, materia medica and pathology, to illustrate the several subjects which shall be taught in this school. Each department of this cabinet is under the special care of the professor, whose branch it illustrates, and who shall constantly enrich it. This illustrative cabinet will be always opened for the use of the pupils.

2D. The same commodious room which contains the cabinet is well furnished—and well supplied with all the medical journals, text-books, and newspapers, to constitute it a reading room and place of study; no loud talking being permitted in it. It is the only medical reading room in the city, and the only medical cabinet constantly opened for the benefit of medical students.

3D. Each teacher has determined to instruct abundantly and clearly. And thereunto has made liberal expenditures to obtain illustrated paintings on the materia medica, obstetrics, pathology, and relative and surgical anatomy. These will enable the teacher to instruct through the medium of both eye and ear, and thereby make each branch the more illustrative. I may remark here that it is our wish and will be our endeavour to make distinct impressions of fact, in a strong and lively manner, upon the mind of the pupil, believing that then that mind will reason—and so pupil and teacher will think together on the various topics of the lectures.

4TH. The lecture rooms have been remodelled and made more comfortable and commodious. And on the room of practical anatomy no expense has been spared to eminently adapt it to its purpose. It has been enlarged to 50 by 60 feet, its newly constructed tables with their metallic covering and supporters, ensure an unusual cleanliness in dissection; its elevated position gives it light and air: so that the room now has every possible convenience. The professor of anatomy will be daily present to make demonstrations, and at each table. No one can enter this room without a deep sense that all is consecrated to Anatomical Science. One enters there with the eye of reason, to look into and admire the wonders of his own construction.

We offer you also as inducements, the efforts, which shall be constantly sustained, to give the most recent and practical information; the practice of daily and weekly examinations to impress the topics of the stated lectures which shall be *full* on the several branches; namely, Anatomy, Physiology, Medical Chemistry, Materia Medica, and Therapeutics, Midwifery and diseases of children, principles and practice of Surgery, and the principles and practice of Medicine. Every Tuesday evening will be used for the purpose of medical conversations, between the pupils and teachers, on interesting medical topics, successively introduced by each professor. And, gentlemen, among our house-arrangements, I must not forget that of a courteous and faith-

ful janitor, who will protect you against petty perquisites. That Annoyance!! which, like a house-fly, again and again returns to tease you, though as often driven off, is no where in this building,—not even in the dissecting-room. The system of perquisites is not allowed in this Institution.

Such, gentlemen, are the inducements offered by our outfit.

We have others of a higher and more important character, or you might justly turn your back on this institution.

In regard then to more important matters, permit me to say, that the faculty of this school have in view, in the lectures to be delivered, a *system* of medical knowledge subservient, wholly so, to the great and single object of making the pupil a physician.

I owe it to the medical profession, to say here, that medical lectures have been *too much* after a separate and isolated manner. Each professor has held *too much* an irresponsible and independent position—becoming thereby a champion for his own theory or fancied discovery, or his method—forming thus his own party—or school within a school. The idea of sustaining a uniform set of principles has been too little regarded. This is a desideratum, which, we sensibly feel, is difficult to supply in the yet dialected constitution of medical schools. Nevertheless, we venture here to express a hope that the lectures and other sources of the medical instruction here will be inductive, and will have the effect of one undivided collegiate system, on the mind of the student. The professor of anatomy and physiology will demonstrate to you the elements and organization of the human body, together with its mechanism and functions; the professors of chemistry and materia medica will make known to you the nature and curative effects of external agents; the professor of the practical branches will thereby be enabled to point out the vital and autopsic phenomena, raise the signs, form indications, plan treatments, and apply curative means.

Such is our system. It is simple—may I not say, beautifully simple? Any deviation from it is a deviation from the inductive system—the system of Hippocrates,—of Sydenham and Rush—the Grecian,—the British, and American system—the system of Rational Experience which constitutes medicine a science.

Some medical men, like the ant, have accumulated facts—and they have neither classed them nor thought on them. Others, reasoning where experience failed, have, like the spider, spun flimsy theories from themselves. But there have been a few, and *but* few comparatively, who have industriously accumulated facts, have patiently and cautiously compared them, and thereby have founded medicine on a Rational Experience.

What is Rational Experience?

It is nothing new.—It is the Old Interpreter of Nature—the Revealer of secrets. It is reasoning from facts. Our senses are the sources of our experience. The spontaneous action of the mind upon this papulum mentis results in the creation of principles which, seed-like, reproduce.—Hence science and all the arts of man. All is the fruit of Rational Experience, which is to

man what instinct is to inferior beings. It is then the matrix of the science of Medicine.

Let us trace this medical empiralogy; and as in contrast with it, the *εμπειρια* of the ancient empirics, and the long unbroken line of medical theories,—the Bee, the Ant, and the Spider of medicine. I will endeavour to exhibit each of them,—and then, gentlemen, I shall feel satisfied that I have done my duty to the Faculty and to you, in presenting our strongest inducement in the clearest light.

In the first place then I would remark, that when the human constitution, by simple habits and exposure, was inured to external agents, the sicknesses of the human family must have been few and incidental, except, indeed, those from pestilence. Medicine, in accordance with this state of things, must have been scarcely else than rudimental—an *εμπειρια*!

This *εμπειρια* must have been practised by the more kind-hearted and self-denied. The unassisted senses, without much exercise of the reasoning faculty, obtained for such, accidentally, by design, and by imitation, an experience which active benevolence daily increased. Such, I presume, must have been the character of Acron, Philenos, Serapion, and the skilful Heraclides. They and their worthy contemporaries were physicians in the simplest meaning of that term—practitioners—men set apart—going about—disregarded by the healthy—having an exclusive object with a single eye to heal the sick. Such were the ancient empirics—a *mean* Experience.

But again, when man ploughed up the soil of wild land in hot climates, and caused miasm; built cities and produced idio-miasma; navigated and thereby imported disease: and when by the combination of all these circumstances, man became more artificial and luxurious in his habits, and subjected to political ferments; his *sicknesses* became more *multiform* and *mortal*. In accordance with this state of things, medicine became more than a mere *εμπειρια*,—more than mere *observation, record*, and substitution of similar experience; the *tripod of Empiricism*.

An exercise of merely the perceptive faculties became insufficient. Socrates and Plato appeared in behalf of science, and reasoned, and between them, the one his senior, the other his junior, came Hippocrates.—He came to think with the Franklins, and act with the Howards of his day; and blending thereby reason and experience—to make a Rational Experience.

Let us pause! Our subject has led us upon consecrated *ground*, and into the presence of immortal *sages*. Socrates! Hippocrates! and Plato!—we cannot hastily pass this triumvirate. They shine like a cluster of stars. They were born together, in the same age, under the same horizon, and were appointed to *reason*—to reason on the accumulated experience of past ages, and induce principles. Their progenitors collected materials: they, like Solomon, erected the temple, the temple of science.

More than 23 centuries have passed since their day—myriads have lived their little life; and the bodies also of these *Three Men* have returned to the dust! Plato's is in the grove and garden which had been the scene of his philosophical labours; that of Socrates is near it; and the *dust of Hippocrates*

is in Thessaly on the way between Gortona and Larissa: but the reasonings of these great masters still exist—a living reality influencing the mind.

All this is especially true in respect to the Coan-Sage. One, speaking of Hippocrates, has said, “it is not Hippocrates that speaks, but nature, speaking through the lips of Hippocrates; ‘the Lip of Truth.’”

Who was Hippocrates? When and where was he born and bred? And we would know what he thought; and how he felt and acted toward his fellow-creatures! that nations for ages considered him a benefactor, and medical men always and every where call him Father. Suffer me therefore to make a few remarks on this venerable parent of our profession.

His birth place is one of the Ægean isles—the beautiful island of Coas. We admire its city and its lofty temple dedicated to his great ancestor. We admire there the works of art, the paintings of Apelles. We wonder at its inimitable purple. We delight in its groves of orange and lemon, and its vineyards which vied with those of Chia and Lesbos. These are the objects of our admiration, wonder and delight; but more than all, we love and consecrate this favoured isle, for our Patriarch was born there.

Oh! that I could show you Hippocrates! his youth, manhood, and more especially, show you him in his old age! when, *even yet*, his senses failed not, nor was his strength abated. But I cannot.

The record of his life is on high. He spent it among the children of suffering, he was no egotist, and had no Boswell. All the incidental notices of him are, that his youth was at Cos, under the teaching of his father, and partly at Athens under Herodicus and Gorgeas, where he studied philology, rhetoric, and logic. Afterwards he was at Abdera under his favourite Democritus, to learn geometry, astronomy, and philosophy. When just passing into manhood, he returned home to study medicine under Heraclides his father, and Hippocrates the second, his grandfather, the honoured descendant of Asculapius. And lastly, it is mentioned, that he became, and continued to old age, a perpetual itinerant—a self-sacrificing man, travelling through all parts of Macedonia, Thrace, and Thessaly; and that during these travels he recorded his observations, and on them, and them alone, he reasoned. These accurate and important observations, and these cautious inductions constitute the medical writings of the great reasoner on Experience. They are, first, his books of Epidemics; second, his books of crisis; third, his books on prognosis; fourth, those on air and food; and fifth, his aphorisms. These are the base of medicine.

The moral character and reputation of Hippocrates are not a part of my subject; for you perceive, that I am endeavouring to call to remembrance the salutary and too much neglected truth, that medicine is based on a Rational Experience—and I may here remind you also, gentlemen, that it is more than this. Our science, jeered as it is, by the other departments of science of less date, is the old inductive system—the parent of sciences, the old organon—and that therefore Hippocrates has more honour than Bacon.

But we may be told that Bacon was a Christian man, and that our Hippocrates was a Heathen. One who shed only the cold light of intellect without

one warm and heart-cheering ray of virtue. No! Not so. The facts of his life don't say so. He lived, it is true, before the bright shining of Christianity—nevertheless, a heavenly influence constantly controlled him. He was a lover of truth; he could not be tempted to reason when experience failed. He was a lover of man—a patriot and philanthropist. Of high ancestral dignity, one of the Asclepiades; yet, in the spirit of true democracy, he cast off those inherent honours, that he might the more benefit mankind. His ancestors, like the other order of the heathen priesthood, hid all medical knowledge under a cloak of sanctity. Hippocrates, disgusted with their imposture, ambition, and cupidity, renounced, with their invented juggleries, all his ancestral honours and station; and divulged with a noble candour, for the benefit of the world, all the knowledge of his order; separated it from philosophical subtleties, and then founded medicine on observation and reason.

We have said that he travelled much, but his travels were not for literary idleness. They were to succour the distressed; it is his own truthful testimony that he never went to place or house but at the call of human suffering. Hippocrates was an unpretending man, plain in his dress. He was amiable and humane. Galen has said of him, that there was but one sentiment in his soul, the love of doing good—and one act of his life, the act of relieving the sick.

Was not then Hippocrates essentially a Christian man as well as Bacon? And he had no cupidity. The precept he taught his pupils, he followed, viz. “to take up with the common necessities of life as a proper measure for their ambition.” In agreement with this precept, it is related of him that he refused a fee of 1500 guineas from the city of Abdera, for his services to her philosopher and senator Democritus; and on another occasion he refused a fee of 15,000 guineas offered him by Artaxerxes, with the reply that he was “too rich to accept honourably any proffer that could be made by the declared enemies of Greece.” Is not all this in evidence, that there was in Hippocrates more than mere intellect? That he possessed that higher excellence which acts independently of sensuality and external objects,—that humble, child-like dependence—which constitutes the Christian character. It was this excellent grace in him which made the people love him as a father, and which has rendered his name imperishable. Kings decided to honour him. Sages admired him. Plato proposed him as a pattern—and Aristotle chose his style as the rule of his writings. At Argos the inhabitants erected a statue of gold to his memory. The Athenians ordered for him crowns of gold; they initiated him into the mysteries of Ceres; conferred on him the rights of citizenship; supported him at the Prytanium; and to honour, even the place of his birth, they decreed that all the male children born at Cos might come and pass their youth at Athens, where they should be treated as offsprings of Athenian citizens.

Such was the Father of Medicine, the reasoner on Experience. We associate such an one with but few.—Alfred, Washington, and such-like! They appear among men as the oak among the trees, and the Lion among the inhabitants of the forest, and the Eagle among those of the air.—Men of strong minds and noble hearts.

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The science of medicine, and the character of Hippocrates, stand out before the mind as two distinct and separate topics of admiration; and yet the one must inevitably suggest the other: for what else is medicine than the inductions of Hippocrates, to which have been added the inductions of subsequent medical men. Not that our science is complete, but that the contemporary of Plato and Socrates has laid the broad base of Rational Experience, on which many have built during a long period of more than 2,000 years.

All along that vista, in all its ages, is seen over every archway the insignia, *Rational Experience, Rational Experience*,—and under that insignia are seen successively the names, first of Hippocrates, in large letters at its portal. Then along the line are seen the names of Praxagorus, Herophilus, Asclepiades, Dioscorides, and Aritæus. But, gentlemen, I should tire you with names!—There are about one hundred or more of these sturdy reasoners on facts. I'll point you, in addition, to only some of the more prominent, for example, Fallopiæ, Beringer, Sylvius, Eustachius, and Vesalius,—then follow, Sydenham, Borelli, Mead, and Harvey. After them, Haller, Malpighi, Aselli, Duverney, Zin, and Hunter. Then, fresh in the light of our own day, the names of Abernethy, Bell, Cooper, and Brodie, and with these, those of our own country—Rush, Physick, Miller, and Warren. All these men have been the supporters of the Hippocratic system, and their discoveries by induction constitute the progress of medicine.

Now, gentlemen, let us examine the merits of this Rational Experience more accurately. What have been its fruits? I answer, all that has made the advance of knowledge in the several branches of our profession. In proof, I call your attention to a single item, the blood and its vessels. The dawn of knowledge here was with Praxagorus. He first distinguished arteries from veins, introduced the doctrine of the pulse and counteracted hemorrhages of vital parts by venesection. After him Herophilus so accurately observed the functions of the pulmonary vessels as to give, at that early day, the correct names of arterial veins to the pulmonary artery, and that of venous artery to the pulmonary vein. He drew attention also to the magnitude and fulness of the arteries, the frequency, strength and rythm of its beats, and its equalities and nequalities; bringing thereby more prominently into view than did Praxagorus the important subject of the pulse. Rufus then discovered the difference of structure and capacity of the right and left ventricle. Antyllus subsequently distinguished the proper veins of phlebotomy. This precedent knowledge enabled Brissot to notice the good effects of abstracting blood as near as possible from the seat of inflammation, and Paracelsus to make the important discovery that blood, healthy blood, contained a healing glue, a coagulable lymph, and that by it divided parts were reunited, and ulcers filled and covered. This discovery put an end to the barbarous mechanical use of sutures and ointments, and has become the principle of Hunterian surgery, and through Dr. Physick, the pupil of John Hunter, of American surgery. In the line of successive discoveries, come next that of the semilunar valves of the heart, by Beringer, those at the termination of the vena azygos by Cassianus, and those throughout the whole venous system by Fabricius. Then appeared Servetus, the dis-

coverer of the pulmonary circulation, and then Cæsalpinus to hint at the existence of the greater circulation, and then Harvey! that mid-day light! In 1616, he, by tying an artery, showed that the artery swelled between the ligature and the heart, and collapsed, for awhile, in the opposite direction; and, by tying a vein he showed that it collapsed between the ligature and the heart, and swelled up in the opposite direction. He reasoned on these facts; namely, the ligature on the artery stops the motion of the blood from the heart, and the ligature on the vein stops the motion of the blood toward the heart—this is a progressive motion of the blood from and to the heart. The fixed belief of centuries had been that the blood ebbed and flooded like the tides, and that to and from the liver; but Harvey knew otherwise. He repeated his experiments, and again reasoned, and so until 1628, when at Frankford he published his “*Exercitatio anatomica de Motio, cordis et sanguinis in Animalibus.*” Harvey thus startled the world with that glorious induction, that rich product of Hippocratic Rational Experience, the circulation of the blood.

Let us more rapidly glance at similar products in respect to the pulmonary system. Centuries ago, it was discovered that a tube passed from the heart to the lungs, and another from the lungs to the heart. It was next discovered that from the former tube could be injected the cells of the lungs:—then that no air passed from the lungs into the heart. It was subsequently found that air was necessary for respiration, and that the florid colour of the blood depended on the atmosphere. Then became known the mechanism of respiration. Such were the preparatory labours of Herophilus, Lorange, Faber, Mayow, and Borelli. Borelli discovered another fact—one of prime importance, and the germ of all subsequent knowledge of the respiratory function, namely, that inspired air, though it becomes more rarified, is never entirely expelled. a. e. We do not expire all the air we inspire. Then what becomes of the rest? It is not, as such, admitted into the circulation or thoracic cavity as had been supposed, yet the properties of the blood were affected by a deprivation of air as demonstrated by the air-pump. It was subsequently ascertained that the average number of respirations per minute are about 20; the quantity of expired air about 40 cubic feet, the quantity of oxygen consumed, 30 cubic feet. Then was ascertained the production of carbonic acid and vapour per minute; and the great truth appeared to the mind of all, that respiration produces changes in the nature of the blood itself, constituting it the vital fluid. And the medical man confirmed by science the revealed truth, “that He breathed in him the breath of life.” It now became known that black blood, which had become unfit for vital purposes, came into the lungs, and bright florid blood fitted for the living processes, went out of the lungs. It has been since shown that carbon passes into the lungs and carbonic acid passes out. And recently, that in the greater circulation carbon and oxygen exist, and by combining every where, caloric is every where eliminated: hence animal heat. If so, here is another trophy of Rational Experience.

Again, what discovery has Rational Experience made in the absorbent system? Herophilus had a hint of the existence of lacteals, Marinus discovered the mesenteric glands, Aselini in 1622 discovered the lacteals in a dog. It

happened thus: he, on an occasion was examining the mesentery, and noticed a number of small white threads, which he regarded as nerves; but, cutting one, a white fluid issued. He repeated the experiment when none of the white lines appeared—then he reasoned that they were not nerves. He subsequently found out that they existed only recently after a full meal. Aselini reasoned on all these facts together, and the important truth appeared that these vessels are the *Vasa Chylifera*. Peirese and Wesling subsequently confirmed it in the human body, and in 1647 Pecquet discovered the thoracic duct, a great discovery, which completed the continuity of facts of animal life from mastication to interstitial deposition. Rudbeck next discovered the absorbents of the large intestines; Lower, Drelincourt, Lister and Musgrave shed light on the motion and changes of the chyle. In the seventeenth century the anatomy of the absorbents was greatly advanced by the labours of Nuch, Pacchioni and Duverney, in the eighteenth, pre-eminently so by those of Masgagni, and now by those of the Germans.

One more illustration, gentlemen. I would not weary you, but I feel deeply anxious to fix a permanent impression upon those of you who are but entering upon medical studies, that the progress of medical knowledge is an induction from facts,—a remark or two, therefore, in regard to the nervous system. The first step in knowledge, here, was the distinguishing nerves from tendons and ligaments, with which they had been confounded, and showing them subservient to motion and sensation, and that their origin is from the brain and spinal marrow—then the retina and fourth ventricle of the brain was discovered, and afterwards that some nerves were for sensation and some for voluntary motion. These were the labours of Herophilus and Rufus; then Marinus discovered the palatine nerve and par vagum; Cassinus traced the morbid sympathies of the nervous system. Then come the discoveries of Fallopi, Gastraldu, Sylvinus, Willis, and Malpighi; and in our day, the labours of Gall and Spurzheim, Cuvier, Bell, Brodie and Magendie. But I am becoming tiresome. Look into these things yourselves—there is a mass of medical facts for you to know. Examine and you will find that this Rational Experience “is a fruitful bough, even a fruitful bough by a well, whose branches run over the wall.”

I have given you, gentlemen, a specimen of the fruits of Rational Experience. You see, also, that a number of those who have built upon this Hippocratic foundation have been comparatively very few, and that it is surprising how much they have detected of the hidden things of nature, and that it is as surprising what a multitude of medical men there have been in all ages who have been mere idlers, and have been so because they have cast away from them *this divining rod*, if I may so call it, Rational Experience.

Medical Errors.—But let us not too much blame, nor, indeed, too much praise. Two thousand years! and so little effected;—so little known of animal organization, mechanism, and functions—so little of causes, diagnosis, and prognosis;—so little of the nature and operation of medical agents;—so much time and so little work!! And yet a *juster* wonder is, that so great an amount of medical truth has been attained! For the human mind is prone to err.

The human understanding, says Bacon, is like an unequal mirror which mixes up its own (corrupt) nature with the nature of things, distorts and perverts nature. To this general aberration of human nature, is to be added each man's respective temper, education, acquaintance, course of reading and authorities;—add also, that words strangely possess and force the understanding, putting all things in confusion and leading off to idle controversies and subtleties without number;—add besides, the vain philosophies, ancient and modern, which like so many stage plays show up nothing but fictitious and theatrical worlds perpetually and successively interposed between the mind and the real world of Nature. All the result of supreme selfishness.

In view of this inherent defect of the human character—so much sensuality! so little exercise of judgment! (the exercise of which, says Fordyce, is so exhausting,) and not a particle of inherent virtue: and again, in view of all that Hippocrates has hinted at in his first aphorism, namely, that life is short, art long, experience fallacious, and judgment difficult. It is, I say, the juster wonder that medical science has so much advanced. We will not, therefore, blame. And on the other hand, gentlemen, be assured, that there exists no good ground for boasting. The history of medicine presents an unbroken succession of errors, whence has arisen all the quackery which has disgusted the *true* medical man and disgraced and injured the community.

Hippocrates was no sooner dead than his two sons and Polybus his son-in-law interpolated his works, and broached as a principle, “That where observation failed, reason might suffice.” I repeat this great and original sin in medicine, namely, where observation failed, reason might suffice. Ah! the father of medicine no sooner began his sleep in the grave, than the enemy of truth, and from his own house, sowed the tares which have ever since been growing in the field of medicine, and not to this day eradicated.

For centuries that false practice of reasoning without facts has been perpetually tempting the medical discoverer to erect a theory on his limited discovery, in place of humbly acting as a joint labourer on the great Hippocratic base. They have raised hypothesis upon hypothesis until the base of their system became the smallest part; standing, so to speak, upon its apex, and kept up by excitement as the boy's top, by perpetual whipping. Such have been the dogmas of the dogmatists and methodists, and such the Arabic, cabalistic, chemical and mechanical systems; such also have been the nosologies of Sauvages and Cullen, and the theories of Stahl, Darwin, Brown and Broussais. And, gentlemen, what shall I say of Galen? He also was but a system maker. But how shall I venture to say a word against a system which lasted fifteen hundred years? It is true that Galen revered the Hippocratic system, but it was only that he might use it as an unacknowledged foundation for his own ornaments and dogmas. He reasoned where experience failed, and thus became attached to false theory. But let us, by referring to his history, do him justice.

Claudius Galen was born at Pergamos, in the fifteenth year of the reign of Adrian. His father, Nicor, taught him belles-lettres, philosophy, astronomy, geometry and architecture; and, ambitious to instruct his son

Claudius in all the learning of the age, he sent him to the best schools of philosophy, namely, those of the Stoics, Academics, and Peripatetics. Such was the outfit of Galen. Filled, by a parent, with the impulse to be learned, he studied the principles of all the existing sects of philosophy, and as indicative of a strong intellect, he selected such doctrines as appeared to him rational, and rejected the rest, and he yet a beardless youth. At the age of seventeen years he fell in love with the science of medicine. It became his passion. The young enthusiast travelled in order to see and have conversations with intelligent physicians, and to learn the nature of drugs. He resided several years at Alexandria, the resort of men of science, and having the best medical school. He then visited Cilicia, Palestine, Crete, Cyprus and Lemnos.

The youths of Pergamos and Cos are not dissimilar, except, that the latter looked immediately at nature, the former through the minds of others. Hippocrates and Galen seem to compare with each other as Homer and Virgil, Demosthenes and Cicero, the one of nature, the other of art, this fashioned for the day, that a model for all time and place.

After Galen had ended his travels he returned to his native town to practise medicine and to study nature through the medium of the works of Hippocrates, to which he was devoted.

Galen's early parental training—his manly mind—his travels—and his studious habits made his an eclectic: but Galen was ambitious, and consequently restless. Rome at that time was the great centre of power; and in the palace of the Cæsars that power dwelt. Galen, at the age of thirty-five years, a most ambitious age! left the obscure town of Pergamos to establish himself at Rome. Ah! to establish himself at Rome. Why so? To heal the sick? Were there no sick at Pergamos? Hippocrates left Cos in obedience to the voice of suffering and disease; and did Galen also, for that Howard reason, expatriate himself?

See him on the Appian way, entering that mighty city, Rome! unknown, yet ambitious. Eyes were soon upon him, though he knew it not. The established physicians there were dogmatists, methodists, or empirics. The new comer was an eclectic, learned and intelligent, and they threw in his path the rumour "that he was a theorist and a dealer in magic."

Other eyes than of jealousy were also regarding him. Eudemus fell sick of an intermittent, and Galen cured him. Sergius Paulus; Barbanus, the uncle of the emperor Lucius, Bœthius, Severno afterward emperor, estimated him. He made several dissections before them, and demonstrated especially the organs of respiration and of the voice. All this, in a sense, was in his favour; but who can stand before envy? Medical opposition to him became banded and strengthened. The three medical sects formed a strong popular party against him. Galen was inexperienced, manifested vanity, became contemptuous, fretted, vexed, (likely dyspeptic,) and suddenly left Rome in a miff.

Again Galen is at Pergamos; there for four years he enjoys rest and study, and the retirement strengthened him. But Rome was to be the *pinnacle* for Galen. It was for him to form a *system of medicine* on the sophistry, that where experience failed, reason might suffice; a system which was to

spread beyond the limits of the Roman empire, and to reign for hundreds of years.

The little event which was to lead to these great results was as follows: Aurelius and Lucius Verus were at Aquilina when the plague appeared. Aurelius sent for Galen, and having placed his two sons, Commodus and Sextus, under his care, hastened to Rome with orders to follow as soon as practicable. The sons were stricken with the plague, and under Galen's treatment they recovered. There were other physicians in attendance, his old opponents from Rome; but the prognosis of Galen, contrary to theirs, proved to be correct. The Roman princes recovered, and with them Galen sets off for Rome.

Galen is again at Rome, about forty-five years of age, the prime of manhood. His stature! expression! his manners, what were they? A few years back, Galen, more ambitious, entered Rome in obscurity, but now with the Cæsars, and to dwell in the palace of the Cæsars, there to study, practise and teach medicine, there to crush his opponents with Roman power and all their dogmas; and he did it. After all, gentlemen, you see that it was with Galen as it is, has and ever will be with all other truly eminent physicians, the corner-stone of his medical reputation was *curing the sick*.

But, gentlemen, in regard to Galen, these are eventful matters we have now got into. Let us consider them. Galen again at Rome at the zenith of manhood, well trained, learned, a precocious genius, gifted with a strong imaginative mind and sound judgment, a traveller, an alumni of Alexandria, and now in the palace of the Cæsars under the wing of a Roman emperor. Is it then a surprise that the Galenic system of medicine should have extended so far and lasted so long? Again, Galen was a student of the works of Hippocrates, and of the pseudo Hippocratic system more than of nature, and a student of Aristotle; and reasoned where facts failed,—reasoned without facts. Is it then a surprise, that Galen should have been the father of medical errors?

How different the pathway of Galen and Hippocrates, and how different their destiny! the one is lofty, the other lowly. The latter a pure spirit healing the sick, recording events, and reasoning thereon until principles are induced as truthful and eternal as himself. The former inquisitive, learned, ambitious, spending the prime of life in the midst of the debaucheries and falsehoods of an imperial court, reasoning without experience to please the mere amateurs of science, and thence forming a system of medicine which is *not* founded on Rational Experience, and which after enslaving longer and more mightily than the Roman power itself which gave it soil, now at last, like the palace of the empire, lies in ruin, never, never to be re-built.

For above five hundred years this magnificent system of medicine was sustained by its five classic commentators, Oribasius, Alexander, Ætius Paulus and Diocles, then for about the same period it became, under the Mahometan power, the basis of Arabian Medicine, and was taught at the schools of Bagdad and Cordova, and as long under the papal power it became the principle of medicine at the school of Salerno. But at no time during its fifteen hundred years of existence did it furnish an antidote against the febrile principle. In other words, the Galenic system never was medical science. It was the

monstrous heresy in medicine which had its root in a Roman empire, and was ultimately destroyed by the Hippocratic Rational Experience. It was precisely this which, on an occasion, struck this giant system of sophistry in the frontlet, and, as Goliath, down fell Galen fatally, and now by a sort of transmigration, and by antithesis he timidly appears only in pigmy form, as the modern *Tribillianism*. See how an event brought all this about. A Peruvian Indian burning and athirst from an intermittent, drank of the waters which were impregnated with the bark of the then unknown cinchona, and was quickly cured of his fever—others likewise, and then also the countess of Cinchon. She returned home to Spain with her physician, bringing with them this newly discovered antidote to the great febrile principle. Intermittents are thereby cured rapidly and every where. But as the Sectaries at Rome opposed Galen, so the European Galenists opposed the use of Peruvian bark because it was not found in their pharmacy, and did not operate according to the principle of their time-enduring system. Their insidious opposition caused adulterations and reductions of the dose until bark became inefficient. Sydenham the Anglo-Hippocrates, exercising a Rational Experience, discovered that the period of administering the bark was the apyrexia, and that the quantity must be greatly augmented. From this, Tolbot took the hint, and made his successful secret medicine. So that professionally and unprofessionally, by philanthropy and cupidity, Peruvian bark became the known remedy for fever, and the Galenic system, aged fifteen hundred years, the opponent of this great antidote, became known as an inefficient mass of dogmas, and down it went.

Such gentlemen, is the history of medicine. It shows you an Acron, an Hippocrates and a Galen. The empiric, the reasoner on facts, and the reasoner without facts. The ant, the bee, and the spider of medicine.

The first, constitutes the community at large, who have any sympathy for the sick, together with those who would improve these nostrums and panaceas. The last constitutes the medical-book and system-makers, who have, as their end, a vain selfish fame.

Neither of them is medical science. If they were, my strong inducement, which I have laboured so hard to exhibit, would be vain. No!! Empiricism and Galenism are uncertain and transitory, but medicine, Hippocratic medicine is made of lasting materials. Galenism, it is true, seemed to be also made of such materials, but it has come to an end, and was never any thing else than a splendid error. Sic transit gloria Galenis! Not so that of Hippocrates and true medical science. It is true, gentlemen, that every thing worldly is changeful, tending to its pristine elements. The furniture of this world wears out; its fashion perishes; yet in the midst of all this evanescence there are a few fixtures. These fixtures are not its generations, its empires, nor its imperial roads and its cities, perhaps not even its pyramids. They are that common law which lifts oppression; that cheering gospel which demonstrates a resurrection and declares an endless life: and that Rational Experience, that empiralogy which is for the healing of the sick. Here, then, is the true position of our science; an associate of justice and mercy, the father of medicine is nitched in between Socrates and Plato. Her dwelling-places

have not been modern colleges and universities only, but also ancient temples. Kings and patriarchs, sages and prophets—the subject of prophecy himself and his apostles have been her practitioners. It is true, that successive errors, as we have shown, have encumbered it; that for ages a poisonous parasite has run across and spread over it, which, to please its worshippers, has been twined into various fantastic shapes; that for a time she has been buried under Mahomedan prejudices, and that subsequently it has been mantled with pseudo Christian superstition, yet broadly based it exists, still exists a time-honoured science !!

It is this science, this medical empiralogy, which we propose to teach. Our motto shall ever be a Rational Experience. We teach then a simple system. But, students of medicine, I would not be misunderstood. Our system, though simple, contains various departments, having each numerous items demanding a good-natured patient application. Each of the items of the departments of our system will call forth the full exercise of your perceptive and reasoning faculties; for each, as a centre, holds a vital relation to every other item, and to the whole of the system which we intend to teach. And we hope that when it shall be your privilege to practise medicine, we trust you will recognise in nature what has been portrayed within the walls of the medical department of Pennsylvania College.