AN ADDRESS

TO

THE GRADUATES

OF THE

MEDICAL DEPARTMENT

OF THE

UNIVERSITY OF MICHIGAN,

ON THE

ROMANCE AND REALITY OF ANCIENT MEDICINE.

BY DR. M. A. PATTERSON, OF TECUMSEH, MICHIGAN,
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ANN ARBOR, April 22, 1852.

HON. M. A. PATTERSON, M. D.:

DEAR SIR:—At a meeting of the Graduates of the Medical Department of the University of Michigan, held yesterday, the undersigned were appointed a Committee to solicit from you a copy of your able and interesting Address, delivered at the commencement exercises of this institution. A compliance with the wishes of the Class will be deemed an especial favor.

With respect, we remain

Your obedient servants,

M. K. TAYLOR,
E. ANDREWS,
C. P. MARSH,
} Committee.

ANN ARBOR, April 23, 1852.

GENTLEMEN:—Accept of my thanks for your complimentary note received this morning. The Address, of which you, on behalf of the Graduates of the Medical Department of the University of Michigan, request a copy for publication, was written amid frequent professional interruptions, and no one can be more conscious of its imperfections than its author. As, however, it is associated with an event of deep importance to yourselves, I cheerfully place the manuscript in your hands, to dispose of as you think proper.

Your friend,

M. A. PATTERSON.

M. K. TAYLOR, M. D., E. ANDREWS, M. D., C. P. MARSH, M. D., Committee.

ADDRESS.

GENTLEMEN:—

THE first European University that obtained celebrity as a School of Medicine was established in the Neapolitan city of Salernum. In the eleventh century, when a student was prepared to receive the honors of this Institution, he passed through an imposing, and what at this time would be considered a romantic ceremony. At the close of his examination the physician's oath was administered to him, by which he solemnly pledged himself to be faithful in the performance of his important duties—to cherish a feeling of respect for the University—to refuse fees from the poor, and to have no share of profits with mere venders of drugs. A medical book was placed in his hand, a ring upon his finger, and he was crowned with laurel. The Principal of the University, after pointing to the four quarters of the earth as fields for his future labors, and affectionately imprinting a kiss upon his forehead, dismissed him with the impressive injunction, "BE YOU FAITHFUL."

Although our simple customs allow of no imposing ceremonies—although we may not, with the spirit of ancient romance, place the gilded volume in your hands, to remind you, when far from the scene of your present associations, that the true Physician must be a student through life—although we may not present you with the talismanic ring, designed to wed you to your profession and to protect you from future evil, as the bride of the olden time was wedded to her lover and protected by the precious amulet with which her finger was adorned—although we may not crown you with laurel, as an emblem of your present triumph, and dismiss you with the kiss of affection, as a parent would

part with a beloved son—we may, without fear of violating the cold formalities of society, which too frequently arrest upon the lips the warm emotions of the heart, congratulate you in this your hour of triumph, and rejoice with you in this your hour of joy. Your aim has been high and honorable, and you have faithfully earned the reward of years of patient study. In place of the fading laurel wreath, you are crowned with the approbation of your teachers and with the approving smiles of your friends—whose expectations you have answered, whose hopes you have fulfilled.

Hitherto your minds have been severely tasked with prolonged efforts to obtain a thorough knowledge of the facts and principles which constitute the foundation and superstructure of Medical Science. That you have diligently improved your time, and have profited by the instruction afforded in this admirable and humane department of our University is evident, from the recent close and scrutinizing examination of your attainments, sustained with credit to yourselves, and which has entitled you to the highest honors your Professors could bestow upon you—honors which, under the wise regulations of the University, can be awarded only to those who by long and diligent study have earned them. No favoritism can gain admission here—no exclusive privileges darken these halls. The people of our State have founded this Institution for the sole purpose of enabling our talented and energetic young men to acquire a superior medical education, that they may become efficient agents, under GOD, to spread the blessings of this education throughout the land. And, that there shall be no undue influence of station or of wealth springing up here—no aristocracy of feeling to cast its blighting shadows over this temple devoted to a purely benevolent object, they invite students to come here, as the ancient Prophet invited those who thirsted after spiritual knowledge, "without money and without price."

Our people have an abiding faith in the generous principle that literary and professional education should be placed within the reach of all their children; and

should the time ever come, which we trust is far distant, when the departments of the University cannot be sustained on this principle, they will close its doors, and wait for the further development of the resources of that fund which has ever been regarded, even amid the most trying financial embarrassments of the *speculative era*, as a sacred deposit for sacred purposes.

To Michigan belongs the honor of being the first State in the Union, perhaps in the world, to establish literary, scientific and professional education upon a purely republican model—a model which, while it lowers not in the slightest degree the highest standard of study approved by the oldest and proudest Universities of our land, is one step in advance of all of them in the march of human progress: as it practically teaches that so great a blessing as education, from the lowest up to the topmost rounds of its most elevated departments, shall be free. On this righteous principle—this noble conception of man's duty to his fellow man—our educational system will grow with our growth and strengthen with our strength, developing and polishing the gems of mind as they are gathered from our intellectual treasures, until our literary and professional men shall be as much admired for their learning and skill, as are the natural treasures, so liberally scattered by the hand of Providence over our Peninsulas, for their beauty and usefulness.

After the severe course of study which for a long period has taxed your mental powers, you are entitled to a season of repose, of relaxation of mind, before entering upon the still more arduous duties of your profession. We will not disturb this hour of rest, which you have earned by the toil of many days, with an ambitious effort to force upon your attention an elaborate essay; neither will we interrupt the happy current of your present thoughts, by assuming the privilege of a patriarch in medicine, and presenting you with the customary, and often formidable, budget of "good advice." Such things have become so common and cheap that you can purchase in the shops, for a shilling, more, we trust, than your necessities will ever require. We

believe that we are addressing gentlemen who know what is due to others as well as to themselves—who acknowledge the influence of christian principles upon their understandings and their hearts—who have been early instructed in the rules which experience has sanctioned for the government of society; and these few things embrace the substance of man's duty to his neighbor and to his God. If any are destitute of this knowledge, they will soon discover its importance in the bitter school of experience, where they will learn the value of the precept inscribed by the poet on the Temple of Apollo, "Know Thyself."

We design to carry your minds back to the periods of remote antiquity, when our present science, with its brilliant departments of real and practical knowledge, supported by a proud array of learning, talent and skill, was, in the minds of the ancient Physicians of Greece, like the faith of the Christian, "The substance of things hoped for, the evidence of things not seen." And, in our transit from the present to the past, we will endeavor to catch a glimpse, a mere glimpse, of ancient medicine, with its Romance and Reality.

As we glance over the early records of medical history, we readily discover that in the infancy of human knowledge, a degree of superstition attached itself to medicine and retarded its improvement, even amid the brilliant eras of Grecian and Roman literature. This influence continued to operate prejudicially, until the art of Printing, the Reformation of Luther and others, and the development of the natural sciences, scattered the delusions of by-gone ages and removed the veil of mystery which a belief in the unnatural and the impossible had thrown around the medical art.

We also perceive that every age has embarrassed its progress by efforts to link it to ingenious scholastic dogmas, whose influence has been as fatal to its growth and development as popular superstition. The vanity of the school-founders to be considered theoretically learned, has led them to obscure the simplicity of nature with fictions of their own invention. It is true that many important medical facts were discovered by

the ancients—but the facts are scattered in their records, like jewels in a heap of rubbish, which has made it a laborious and difficult task for the moderns to separate the real from the ideal, the useful from the worthless. As we descend in the scale of time, the jewels have multiplied and displaced the rubbish, until we now find gems of inestimable value brightening every page of our standard medical literature, while the rubbish—whether emanating from ancient Greece or modern Europe, from the *exclusive* Humoral Pathology of Galen or the equally exclusive Solidism of Broussais, from Paracelsus or Hahnaman—is fast being swept into holes and corners.*

The past was far less practical than the present. The imagination of the ancients, with a few remarkable exceptions, obscured their judgment and tinged their facts with the coloring of fiction—hence, we have a vein of romance and a vein of reality ramifying throughout our early medical histories, which, when fairly opened, are rich in amusement and instruction also.

Amid the obscurity that surrounds the history of the earliest practitioners of medicine, where shall we look for a notice of the first Physician? Not to Bablyon—where it is said the sick were carried to the market places in order to receive advice from those who might have been similarly affected; neither to Egypt—as no trace remains of the sacred hieroglyphical books which contained a description of the magical rites with which the Priests of the Temples "amused the sick while nature cured the disease;" nor to Judea—although we are informed by Josephus, the veritable historian of the Jews, that the wise King of Israel "discovered a plant efficacious in the cure of epilepsy, and that he employed a charm or spell for the purpose of assisting its vir-

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*We hope this remark will not be misinterpreted. It is their dogmatical exclusiveness, or the positive assumption of things not clearly established by a sufficient number of facts, which constitutes the "rubbish" of these writers. While the originality of their conceptions should lead the earnest enquirer to carefully investigate their systems without prejudice or credulity, for the purpose of ascertaining whether any germs of truth are concealed amid the arrogance of their high-sounding pretensions—Broussais, for instance, illuminated the field of Pathological Medicine, but was a dogmatical theorist, nevertheless.

tues." The root of the herb was concealed in a ring, which was applied to the nostrils of the sufferer, and in after times the remedy obtained a marvelous reputation under the name of "Solomon's seal." But Solomon, with all his wisdom, is not regarded by the historian as a regular Physician.

It is to the records of Greece, the treasury of ancient knowledge, we must look for an answer to our inquiry, where we are gravely informed that Chiron, the Centaur, was the first "Medicine Man" who regularly prescribed for the ancients—and he is certainly the first who has had the honor of having his name transmitted to posterity, although medicine, in some form, undoubtedly existed before his day. And who was Dr. Chiron? No less a personage than a lineal descendant of the famous Centaurs, a race of beings "half man and half horse," who, according to Grecian testimony, inhabited a part of Thessaly, and waged constant war with the Lapithæ, a people, according to the same authority, who invented bits and bridles, and thus excited the equine ire of the Centaurs. Divested of the romance thrown around his person by the inventive genius of the Greeks, Chiron may be regarded as a real personage, probably *a country physician* in extensive practice, as from being almost constantly seen on horseback, riding very swiftly, his imaginative countrymen in the course of time, supposed there was an actual union of the man and the horse, and thus identified him with the fabulous race of Centaurs.

The second Physician who figures in ancient history, is the far-famed Esculapius. Represented as the son of Apollo and the pupil of Chiron, the Centaur, it is not surprising that the confidence of the Greeks in his medical skill was unbounded, especially as he is said to have raised the dead to life, and thus aroused the jealousy of Pluto, the lord of the infernal regions, who, fearing that the art of Esculapius would depopulate his kingdom, terminated the Doctor's earthly career by dispatching him with Jupiter's thunderbolt.

After his death, Esculapius was worshipped as the God of Medicine, and temples were erected to him in

various parts of Greece. At Epidauris, his native city, he was represented as an old man with a mantle and staff around which a serpent was entwined. But his fame was not confined to Greece. Ages after his deification, during the prevalence of an epidemic that raged with fatal violence throughout the territory of Rome, in obedience to the mandate of the Sibylline oracle, the Senate appointed a commission of grave and reverend citizens to transfer the worship of Esculapius, with due solemnity, to their city. It is said that these worthy gentlemen stole the god from his native place, under the form of a serpent, and carried him into Italy, where, amid the enthusiasm of the people, he was installed with great pomp and ceremony as the presiding Deity of Medicine. Gratified with his magnificent reception, and far from manifesting displeasure at the transfer from his native home to the proud City of the Seven Hills, it was declared, that, by virtue of his presence, the plague was immediately arrested. Such a powerful exhibition of divine authority could only be repaid by a deep feeling of gratitude and veneration, which elevated him at once to a distinguished rank in the mythology of the Romans.

In conformity with the customs of the times, the temples of Esculapius in Greece were under the immediate superintendence of his descendants, as the arts were considered hereditary, and members of his family, under the name of Asclepiades, were the physicians of Greece during several centuries.

At a time when diseases were regarded as special inflictions of Divine wrath, it may be supposed that the practice of the Physicians corresponded with this view of the cause of disease, and that offerings of propitiation to their offended Deities, and the application of remedies which powerfully affected the imagination, as charms and incantations, were the principal resources of the art. When we are told that in a celebrated Esculapian temple, the patients were laid upon the skins of sacrificed animals, in order that celestial visions might descend and calm their slumbers, and that when overpowered with sleep "a priest, clothed in the dress

of Esculapius, imitating his manners, and accompanied by the daughters of the god, the priestesses of the temple, entered and delivered a medical opinion,"—when it is said that poetry and music were regarded as efficient agents to relieve disease—that " fevers were cured by appropriate songs, and rheumatism by a tune upon the trumpet," we have a practice as pleasant as the modern system of infinitesimal doses, derived from Germany, the land of science and of pure idealism.

But that the ancients, even in very early times, had a knowledge of some material and less miraculous remedies, in addition to their imaginary means of cure, cannot be questioned; for it is recorded that " Malampus of Argos cured one of the Argonauts with rust of iron in wine, and relieved a daughter of King Prætus of melancholy by the use of hellebore—that Helen treated the guests of Menelaus with the juice of the poppy in order to calm their spirits and to dissipate their cares—that after the death of Adonis, Venus threw herself on a bed of lettuces to lull her grief—that the practice of incision and scarification were employed by the Greeks during the Trojan war, when the experienced Nestor applied a strongly medicated poultice to the wounds of Machaon—that Podilarius, the son of Esculapius, cured the daughter of Damethus, who had fallen from a height, by bleeding her in both arms, and that the Cumæan Sibyl never sat on the portending tripod, without first swallowing a few drops of the expressed juice of the cherry laurel," to aid her inspiration.

We also read that a narrative of cases treated in the Esculapian temples, with the means of cure, were preserved on tablets of marble. But, although it has been stated that some discoveries were made in comparative anatomy by Pythagoras, and that at the end of the sixth century before the advent of our Saviour, a spirit of philosophical inquiry pervaded the department of medicine—that Acron suggested some correct principles, and Herodicus introduced his system of gymnastic medicine as a means of restoring or promoting the health of his patients, still, it must be con-

fessed that until the fourth century before the Christian era the practice of medicine was a crude system of guess-work, tinged with the craft and superstition of the priests of the Esculapian temples, whose interests promoted darkness rather than light; and that the philosophy of Pythagoras respecting the influence of the heavenly bodies, the hypothesis of Democritus relative to atoms and a vacuum, and the attempt of Heraclitus to explain the cause and effects of disease by his theory of ethers and elements, placed the medical art in the condition of religion before the coming of Christ—dragged down on one hand to the lowest depths of superstition and credulity by a dishonest and crafty priesthood, and mystified on the other, apparently beyond extrication, by the dreamy speculations of a false philosophy.

It must not be supposed that this degraded condition of the healing art was owing to exemption from severe diseases, or that health was so generally prevalent that no motive existed to stimulate the human mind to seek for correct means of alleviation and cure. So far from this being the case, diseases of a painful and destructive character are known to have attended the progress of the human family from the earliest periods of recorded history, blighting the prospects of individuals, and spreading desolation and ruin throughout communities. The deadly pestilence that attended the footsteps of the ancient Israelites and visited the neighboring heathen nations with terrible severity—the annual plagues which darkened the land of the Pharaohs and at times nearly depopulated the Valley of the Nile, until the ever-present death's head at the feast of the Egyptians, became an emblem of the mortality of their climate—the violent diseases which ravaged a part of Greece during the half century preceding the Trojan war, affectingly described by Ovid, who represents the earth as covered with clouds, darkness and suffocating heat, when death came almost without warning, and the streets were loaded with putrifying bodies—the bilious plague that spread over Ethiopia, Lybia, Persia, and invaded Greece in the second year of the Peloponn-

nesian war, which destroyed the flower of the youth and the strength of Athens, and the fearful pestilence that visited the infant colony of Rome at an early period after its foundation, which, in the expressive language of the historian, "killed with but little notice and raged without cessation, until all nature lay one desolate and abandoned waste," afford ample testimony that diseases of a violent and destructive character were even more prevalent in ancient than in modern times. But with such powerful inducements constantly before them to investigate the true cause of those fearful inflictions, by an attentive study of the laws of nature, it is a humiliating fact, that man, with his boasted intellect, inhabited the earth and suffered the horrors of disease in its most appalling forms for nearly four thousand years, before medicine attained, in practical certainty, to the level of the humblest of the mechanical arts. It is difficult to account for this strange infatuation, unless we agree with Armstrong, that "the ancient world was composed of two principal parties, knaves and fools—and the knaves contrived to keep all the power in their own possession, by making philosophy a mystery, and by keeping the people in a state of profound ignorance."

The time at length arrived when a new impulse was to be given to medicine—when a genius was to arise who should collect the scattered and disjointed facts belonging to the art, combine those facts with discoveries of his own, and give to medicine the form of a distinct science—imperfect, it is true, and tinctured with the prevailing crudities of the age, but still an embryo science, containing the spirit of true induction as an element of vitality and strength. This genius was Hippocrates, the Physician of Cos, who was the first to separate religion from medicine, and to establish the doctrine that diseases are produced by the influence of the ever-changing external elements, and by the war of passions within the body; and that, to the experienced observer of natural causes, under the guidance of a sound and discriminating judgment, is delegated the power of restoring health, by the use of natural

remedies, which, if not seasonably applied, the sufferer might in vain look for relief to the ministers of the Gods. His favorite aphorism was, that "a Physician must be the minister and interpreter of nature." It has been said, that the spirit of the inductive philosophy is as plainly discernible in the writings of Hippocrates as in those of Bacon; and that if the latter perfected the system, the former discovered its utility in the investigation of diseases. It is an interesting fact, that the common sense of both these great men was occasionally clouded by the delusions of the respective ages in which they lived. Hippocrates had faith in the influence of the stars, and Bacon believed in the virtue of amulets and charms.

Considering that human anatomy had never been explored, and that the simplest principles of a correct pathology were unknown, it was only by unwearied labor that Hippocrates could have obtained the accurate knowledge of symptomology which he is known to have possessed. His statements of the phenomena of diseases, and his generalization of symptoms, are so faithful and true to nature, that he may well be regarded as the Father of Medicine—especially, when it is known that "there are no less than three hundred morbid affections which he has distinctly described, and to which he has assigned specific names."

His treatment of disease was cautious. Like one exploring an unknown labyrinth full of intricacy and peril, he carefully examined every step of his way, and seldom interfered with the efforts of nature to relieve herself, except to quiet those efforts when in excess, and to arouse them when deficient.

His example might be followed with profit by some modern Doctors who prescribe enormous doses of lobelia and capsicum, as though disease was to be driven out of the human system like an enemy out of a fortress. Under such treatment, the enemy, at times, may evacuate in season to save the citadel, but too frequently the citadel and the enemy are destroyed together.

While Hippocrates was worshipped for his medical

skill, he was revered for his integrity and humanity, of which no better evidence can be given than the oath he subscribed, which we have copied from the somewhat rare work of Dr. Hutchinson, published in London, in 1779:—

"THE OATH OF HIPPOCRATES.

"I swear by Apollo the Physician, by Esculapius, by his daughters Hygeia and Panacea, and by all the Gods and Goddesses, that, to the best of my power and judgment, I will faithfully observe this oath and obligation. The master that has instructed me in the art, I will esteem as my parents, and supply as occasion may require with the comforts and necessaries of life. His children I will regard as my own brothers, and if they desire to learn, I will instruct them in the same art without any reward or obligation. The precepts, the explanations, or whatever else belongs to the art, I will communicate to my own children, to the children of my master, and to such other pupils as have subscribed to the Physician's oath, and to no other persons. My patients shall be treated by me to the best of my power and judgment, in the most salutary manner, without any injury or violence. I will neither be prevailed upon by any other to administer pernicious medicines, or be the author of such advice myself. To whatever house I am sent for, I will always make the patient's good my principal aim, avoiding as much as possible all voluntary injury and corruption, whether among men or women, bond and free. And whatever I hear or see in the course of a cure, or otherwise, relating to the affairs of life, nobody shall ever know it, if it ought to remain a secret. May I be prospered in life and business, and forever honored and esteemed by all men, as I observe this solemn oath; and may the reverse of all this be my portion, if I violate and forswear myself."

After Soranus, the historian of Hippocrates, had completed a voluminous account of his discoveries and improvements in the healing art, he remarked, that "medicine was invented by Apollo, improved by Escu-

lapius, and brought to perfection by the Physician of Cos."

The art of Hippocrates was practiced by his pupils and descendants, but his genius perished with him. He established the foundation and erected the framework of scientific medicine; but for many years after his death, no one was capable of adding an important addition to the superstructure.

After the establishment of the Museum and Library at Alexandria, Egypt became the prominent seat of learning, and her Medical School, under the liberal patronage of the Ptolemies, obtained a world-wide reputation, and for many years was resorted to by students from all of the civilized nations.

Although to Greece belongs the honor of originating the FIRST Physician, it is to Egypt we must look for the FIRST HUMAN ANATOMIST. When reading of the *Torcular Herophili*, or the fourth cerebral sinus of the ancients, perhaps it has occurred to you to trace the origin of the name; if not, we have the pleasure of informing you that it was named in honor of the first human Anatomist. In our medical histories, Herophilus and Erasistratus are regarded as the most celebrated professors of the Alexandrian School, and it has been thought that they are entitled to equal honor for their discoveries and improvements. But we are informed by Fallopius, a learned writer and distinguished Anatomist of the fifteenth century, that "Herophilus was a greater Anatomist, understood the structure of the human body better, and made more discoveries therein than Erasistratus, his cotemporary;" and Galen, who rarely praised any one but himself, calls him "a consummate Physician, and a very great Anatomist." He is said to have given names to various parts of the body, which they retain to this day, and to have been the first Physician who described the morbid changes of the pulse with any degree of accuracy. If we can rely on these statements, his name should be inscribed on tablets of gold, and suspended from the walls of every medical edifice in the world.

In order to appreciate the labors of Herophilus, we

must remember that he lived in an age when a horror of human dissection was so universal, that man instinctively shrank from the task; and investigations of this nature, pursued amid the prejudices of an ignorant and grossly superstitious population, must have been extremely perilous. Under such circumstances, we can imagine the feelings with which the first human Anatomist approached the investigation of his subject. What motive could have induced him to undertake a task full of peril and difficulty, but the consciousness that the secret of the mysterious nature of disease, and the equally mysterious operations of remedial agents could never be fully comprehended until the sources of vital action were explored and faithfully studied. Prompted by a laudable ambition, and a love of truth that elevated him far above the prejudices of his age, it must still have required a struggle to shake off the withering influence of those fearful associations which the impress of preceding centuries had stamped upon the relics of the dead—an influence that had permitted thirty-eight centuries to pass away without an effort to acquire a knowledge of the internal organization of man, by actual inspection of man himself. For want of this knowledge, Pythagoras, Plato, Aristotle, and even Hippocrates, blundered in their philosophy the moment they passed the threshold of the human temple, and reasoned concerning the springs of action within; and their lights in physiological medicine were like the lamps in sepulchres, which gleam over the dead, but give no certain lustre to the living.

The man and the hour at last arrived when the spell of ages was to be broken. In the secret chamber of his study, the lifeless form of a human being lay before him. As he surveyed the pallid features, and touched the cold inanimate body which the veneration of thousands of years had regarded as sacred, and the superstition of the world had peopled with invisible spirits, and fearful imaginings of some supernatural influence, which, even in modern times the silent watchers with the dead seldom fail to experience upon their hearts, is it strange that upon his spirit was im-

pressed a feeling of awe—that he hesitated—that he bowed his knee in humble humility before the man in ruins who lay before him, deprecating the wrath of the unseen beings of the spirit world, and invoking a blessing upon his labors from the presiding deities of his native land?

Ah! if our Creator has permitted the seeds of disease and death to germinate in "this cunningest pattern of excelling nature," in order to remind us that we are frail and dependent beings, He has erected no barrier against the exercise of our mental powers. The mind is left free to explore the hidden springs of nature, to investigate the laws of life and health, and to bring to our relief such discoveries as will soften the pangs of disease, and aid us in subduing the enemy, that stealthily creeps into the domestic circle, like the serpent in the garden of Eden, and fills the sanctuary of home with sorrow and tears. It is not God the Creator, but man the creature, with his prejudice and superstition, who, in every age of the world, has barred the progress of those investigations, which are as necessary to an accurate knowledge of the nature, prevention and cure of diseases, as the light of the morning is necessary to dispel the darkness of night.

While we sacredly regard the feelings of friends and relatives, and would indignantly frown upon all illegal attempts to disturb the depositories of the dead, we have a right to ask of community, in the name of suffering humanity, to regard with friendly feelings the researches of the Anatomist—for the sake of the living, in all cases of obscurity to afford him an opportunity of discovering the cause of death, and to encourage in every laudable way the labors of those whose work, emphatically, is "a labor of love."

The Physicians of the Alexandrian school of medicine generally pursued the system of Hippocrates in the investigation of diseases, until a few years after the death of Herophilus, when the war of the Theorists commenced, and the pride of opinion was substituted for the revelations of nature. The medical world, in place of uniting against the pressure of error from with-

out, was divided by the influence of error from within, and, amid the disputes of contending factions, truth was obscured by hypothesis and reason stultified by the vanity of human pride.

At this period the field of medicine was divided by the two sects of Empirics and Dogmatists—"the former, rejecting the reasoning and deriding the practice of their predecessors, affected to disregard all authority but that of experience; the other, retaining their faith in the scholastic philosophy of the times and their convictions of the utility of physiological knowledge, in detecting the cause and regulating the treatment of disease." In this contest, as in most others of a similar nature, the medium, unquestionably, was the true ground; but the men of that age had already forgotten the aphorism of their master, that "theory is the guide of practice, and practice the life of theory." We are not aware that medical science was materially benefitted by the quarrels of these sects, and amid their bitter contentions for supremacy, the celebrated Asclepiades introduced the Epicurean philosophy into the school of medicine. He declared that the body "consists of a system of atoms and pores, and that disease is produced by the obstruction of the pores or the irregular distribution of the atoms." We owe to him the division of diseases into acute and chronic, which is considered correct and true to nature; but he mystified the idea by asserting that the first class "depended upon a constriction of the pores, or an obstruction of them by too large a proportion of the atoms, and the other upon a relaxed state of the pores, or a deficiency of atoms."

The next school-founder was Themison, the pupil of Asclepiades, who discarded the notion of atoms and pores, and originated what was called the Methodic sect. He contended that "there are two morbid conditions of the body which are contrary to each other—a state of constriction and a state of relaxation. To these he added a third, compounded of the two former—the mixed state, and to the three he referred all diseases, and likewise the operation of all remedies, which he conceived acted as astringents or relaxents."

The simplicity of this theory, compared with the cumbrous doctrines of the Dogmatists, led to its favorable reception, which probably induced Thessalus about half a century later to simplify medicine still farther. No modern empiric—not even Brandeth with his pills, or old Dr. Townsend with his Sarsaparilla—can exceed this man in the art of puffing; true, he had not the press to herald his fame and carry his delusions to the remote hamlets of the Roman Empire, but he had what in those days was equally important for his purposes—the patronage of Nero, whose word was law, and whose mandate was life or death. Arrogating the title of "The Conqueror of Physicians," he addressed a letter to the Emperor, containing the following language: "I have founded a new sect, which is the only true one. I have been forced to this, because none of the Physicians who have preceded me have discovered any thing useful, either for the preservation of health or for the cure of diseases, and because Hippocrates himself has put forth many dangerous notions." After this pompous declaration, it might be supposed that he had made an important discovery; but his new doctrine simply proposed, "that nature in each case pointed out to the patient what was most fit for him, and that hence he should be diligently supplied with every thing that he fancied"—a doctrine admirably adapted to the sensual feelings of his patron and master.

After Thessalus—notwithstanding the efforts of certain other sects, who were styled Eclectics and Pneumatics, to introduce new absurdities—the empire of medicine was governed by the rival schools of Dogmatists, Empirics and Methodics, the latter generally being in the ascendant, until the second century of the Christian era.

During all this time, a sort of medical by-play was carried on by the priests of the temples, who, like some modern pretenders, never failed to restore those who were "given up by the regular doctors." We learn something of their practice from a record found among the ruins of an Esculapian temple on an island in the Tiber, which, from the name of Antonius being men-

tioned, was probably recorded in the first century of the Christian era. As it belongs to the romance of our subject, we here present you with a translation of this precious document:

"In these days a certain Caius being blind, the Oracle directed that he should approach the holy altar from the right to the left, and bend the knee, and placing five fingers upon the altar, should then raise his hand and place it upon his own eyes, and he saw clearly; the people being present and rejoicing that such a great miracle was performed under our Emperor Antonius.

"Lucius being affected with a pain in his side, and having been despaired of by all men, the God returned the Oracle that he should come, and taking ashes from the altar, should mingle them with wine and place it upon his side; and he recovered, and returned thanks to the God, and the people congratulated him.

"Julian vomiting blood, having been despaired of by all men, the God responded from the Oracle that he should approach and take from the altar the fruit of the pine, and eat it with honey for three days; and he recovered, and returning gave thanks publicly in the presence of the people.

"Valerius Aprus, a soldier, being blind, the God returned the Oracle that he should come and mingle the blood of a white cock with honey, and use it as an eye-salve for three days—and he saw, and came back and returned thanks publicly to the God."

We have now reached a period when the declining literature of the ancient world foreshadowed the night of ages to come; and it was at the time when learning had passed its meridian, that a man appeared who was destined to exercise an influence in medicine only equaled by that of Aristotle in philosophy. That man was Galen of Pergamus. Endowed by nature with an acute and active mind, that had been highly cultivated by study and travel—possessing a lively imagination, and no small share of vanity, which gave him a high opinion of his own abilities, and an equal degree of contempt for the opinions and feelings of others—he battled the prevailing sects with an arrogance that scarcely admitted of honorable disputation, and fortified his doctrines with an array of ingenious argument that soon elevated him to the highest rank in the medical profession.

Galen is considered a decided Dogmatist; but his ambition prompted him to originate theories, rather than to adhere closely to those of others.

Although his cotemporaries doubted his infallibility,

they were incapable of contending successfully with a man who was their superior in education, and more than their equal in the art of scholastic disputation. With such acquirements, it is not surprising that the opinions of Galen were regarded as oracles in after times, when the fading light of knowledge gradually expired amid the fiery struggles for dominion which followed the downfall of the Roman Empire. Galen may be considered the greatest and the last of the ancient medical school-founders, and his reign was the longest and the least disputed of any of his predecessors. For thirteen hundred years no one was found capable of unraveling the web of philosophical fiction which he had thrown around the theory and practice of medicine; and even after the revival of letters, a prolonged controversy was required to reduce his influence to its proper level, and to separate the facts which adorn his writings from the fictions which disfigure his pages and blemish his reputation.

Galen was intimately acquainted with the writings of his predecessors, and his knowledge of anatomy was remarkable, considering that human dissection was not practiced in his age. It is also admitted that he made some important discoveries and improvements in medicine and surgery. But, while he professed to restore the practice and philosophy of Hippocrates, he obscured the former, and mystified the latter with subtleties of his own invention. You are, undoubtedly, aware that Hippocrates started the idea of the existence of four distinct humors in the system, from the excess or deficiency of which, the varieties of constitution, complexion and form of diseases were supposed to originate, and that these humors were called blood, phlegm, yellow bile, and black bile. This idea was peculiarly adapted to the imaginative mind of Galen, who made it the leading feature of a system that swayed the medical world for many ages under the familiar name of the Humoral Pathology.*

* As a result of the scientific experiments of the organic chemists, this ancient, and by no means entirely fictitious, doctrine will be modernized and partially revived, as we acquire a more perfect knowledge of the ultimate elements composing the healthy fluids of the body, and the chemical changes produced in them by disease.

Galen likewise asserted the existence of three distinct kinds of spirits—"the *natural*, the *vital* and the *animal:* the first of which he supposed to be a subtle vapor arising from the blood, this conveyed to the heart becomes, when conjoined to the air received into the lungs, the *vital spirits*, which are changed into the *animal kind* in the brain. These three species of spirits, he imagined, served as instruments to distinct faculties—the *natural* faculty, which he supposed was in the liver, presiding over the nutrition, growth and generation of the animal body; the *vital* faculty, which he lodged in the heart, and imagined that through the intervention of the arteries it communicated warmth and preserved life; while the *animal*, in his opinion, has its seat in the brain, is the cause of motion and sensation and presides over all the other faculties." The primary or moving principle in these respective faculties he calls *nature*—that mysterious principle which Hippocrates supposed resided in the human system, attracting to the body what is beneficial and repelling what is injurious.

Galen also declares that "the properties of all medicines are derived from their elementary or cardinal qualities—heat, cold, moisture and dryness. Each of these qualities are again subdivided into four degrees, and a plant or medicine is cold or hot in the first, second, third or fourth gradation; if the disease be hot or cold, in any of these four stages, a medicine possessed of a contrary quality, and in the same proportionate degree of elementary heat or cold, must be prescribed." It certainly required genius to invent and sustain these theories, and a higher authority than mere genius was required to subvert them.

After the death of Galen, our medical histories are barren of interest until we approach the period when the Saracens, whose ancestors had been instrumental in the overthrow of every variety of knowledge unconnected with the tenets of the Koran, exerted themselves to revive the literature their fathers had trampled under foot as worthless.

The illustrious Haroun al Raschid encouraged a taste for learning, and under his patronage the lights of lit-

erature and science dispersed, for a time, the profound intellectual darkness of the middle ages. The Arabian schools of medicine obtained a high degree of celebrity during the brilliant reign of this Caliph and his successor. If we may credit the statement of Paris, "Our materia medica is more indebted to the zeal and industry of the Arabians than to the learning of the Greeks or the refinement of the Romans."

We certainly owe to them the introduction of some important medicinal remedies, both vegetable and mineral; the latter having been compounded by the Alchemists while attempting the transmutation of base metals into gold, and the concoction of the imaginary Elixir of Life. But their medical principles were derived from Galen and his predecessors, and notwithstanding the fame of Rhazes and Avicenna, their most distinguished professors, but little new light was thrown upon this branch of our science, as we learn from a ridiculous controversy that divided the followers of the original Saracenic schools of medicine, at the time when they controlled the Arabic Universities of Spain.

Hippocrates, being ignorant of Harvey's discovery of the circulation, had, very naturally, directed that "blood should be drawn from the arm of that side which might be principally affected. Some of the Arabians contended that it should be drawn from the side opposite; and the matter was deemed of so much importance that a decree was issued from the Spanish University of Salamanca forbidding any one to pursue the practice of Hippocrates. The learned members of this renowned University even endeavored to procure an edict from the Emperor Charles V. to confirm their authority, alleging that the doctrine they opposed was no less pernicious to medicine than Luther's heresy had been to religion."

With the exception of the additions we have named, the Arabians left medicine where they found it, and no effort was made to disturb the authority of Galen until the period immediately preceding the revival of letters.*

* In the city of Damascus, "the works of Hippocrates, Aristotle, Galen, &c., form the hand-books of the Physicians of the present time."—*See an interesting article from Dr. Spaulding, of the A. Mis. S., in the March numbers of the M. and S. Jour.*

It was in the first quarter of the sixteenth century that the famous Paracelsus, or, as he modestly styled himself, Aureolus Phillipus Theophrastus Paracelsus Bombast de Hoenheim, aroused the sleepy Physicians of the "dark ages" with the startling announcement, "that the very down on his bald pate had more knowledge than all their writers, the buckles of his shoes more learning than Galen and Avicenna, and his beard more experience than all their Universities." The avowed object of Paracelsus, was the overthrow of the Galenic system, and the establishment of the chemical notions of the Alchemists with some fanciful views of his own: and in this he partially succeeded, as from this period we date the celebrated contest between the Galenical and Chemical sects, which led to the introduction of chemistry as a department of medicine, and established the reputation of our most important mineral remedies.

If we can credit his statements, he studied medicine in the Universities of Germany, Italy, France and Spain, and traveled extensively in search of medical information, "applying to Physicians, barbers, old women, conjurers and alchemists, both good and bad, from whom he gladly received any thing that was useful. Designing to travel into Russia, he was taken prisoner by the Tartars, and carried before the Khan, and was soon after sent with a son of that prince on an embassy to Constantinople, where he states that he was let into the secret of the philosopher's stone."

Through the influence of the celebrated reformer, Erasmus, he was elected Professor of Chemistry at Basil, the first professorship of the kind that was established in Europe. Here, in a solemn manner, seated in his chair, he publicly burned the writings of Galen and Avicenna as worthless trash, declaring to his astonished audience that if God would not assist him in his researches, he considered it perfectly justifiable to consult the devil.

In the course of his travels he had acquired a knowledge of some of our most active chemical remedies,*

* Antimony, mercury, &c.

which he used with an unsparing hand, and frequently with such success that his reputation as a bold and skillful practitioner was speedily established. But he soon forfeited the respect of his supporters by his profanity, intemperance and arrogance, which led to his ignominious expulsion from Basil. After this he wandered over Europe, professing to have discovered the marvellous elixir—the hope of the ancients—which was to preserve health and beauty, and prolong life to infinity. Unfortunately for the credit of his catholicon, he died at an early age, with a bottle of the famous elixir in his pocket.

The system of Paracelsus is so extravagant and amusing, that we cannot resist the inclination to present you with an outline of his notions, extracted from Hutchinson, the author already alluded to in this address. "His first principle is the analogy he supposes between the great world and the little world, or the body of man. In man, for instance, he discovers the notions of the stars, the nature of the earth, water and air—all vegetables and minerals—all the constellations, and the four winds. He asserts that a physician ought to know what in man is called the dragon's tail, the ram, the polar axis, the meridian, the rising and setting of the sun; and if he be ignorant of these things, says our author, he is good for nothing. From the same author and his followers, springs the opinion of a pretended and an imaginary agreement between the principal parts of a man's body with the seven planets—as the heart with the Sun, the brain with the Moon, of the spleen with Saturn, of the lungs with Mercury, etc.—as there are also seven metals or minerals which agree with these seven planets. Paracelsus also assures us that in our limbus, that is, the human body, are the heavens, the earth, and the properties of all animals; and he also asserts that a true Physician must be able to say, 'this is a sapphire in the body of man, this mercury, this a cypress and this a wall-flower.' He established a relation between diseases and plants, and he maintained a *prima materia*, or first matter, whence spring, among other things, the seeds

of vegetables, animals and minerals, and that generation is only the exit of each seed from darkness to light, in which they lay in the first matter. Beside the four ordinary elements, fire, air, earth and water, and three principles, salt, sulphur and mercury, he thought there was in all natural bodies something of a celestial nature, which he calls *quintessence*, and which he describes thus: "The quintessence is a substance which is corporeally drawn from all bodies that increase, and from every thing that has life; and this substance is disengaged from all impurity and mortality; it is of the highest subtility and separated from all the elements." He calls it, also, the philosophical tincture and æthereal spirit, and declares that "this is an invisible fire which devours all diseases." However, as this quintessence was, he acknowledges, very rare, he found himself under a necessity of seeking for particular remedies. In order to discover which one of the means is to notice the *signature of things*. Thus, for instance, he maintained that Euphrasia bore a mark that indicated its virtues for disorders of the eyes, and this mark is a small black figure within the flower, which he said represented the eye-ball," other specific remedies having signs of resemblance corresponding with the parts diseased.

In this *Doctrine of Signatures*, "which is no less than a belief that every natural substance which possesses any medicinal virtue indicates, by an obvious and well marked external character, the disease for which it is a remedy," we probably have the source from whence was derived the modern doctrine, that "like cures like,"—"Similia similibus curantur."

Turn to the pages of Paris, and you will find some curious views of the practical application of this doctrine. "Thus, the lungs of a fox must be a specific for asthma, because that animal is remarkable for its strong powers of respiration. Turmeric has a brilliant yellow color, which indicates that it has the power of curing jaundice; by the same rule, poppies must relieve diseases of the head, and some remote analogy of this kind probably influenced John of Gladdesden, in

the fourteenth century, when he ordered the son of Edward the First, who was dangerously ill with the small-pox, to be wrapped in scarlet cloth, and so completely did it answer, say the credulous historians of that day, that the Prince was cured without having so much as a single mark left upon him." Truly, this doctrine, "Similia similibus curantur," is an admirable thing, and has led to wondrous cures in its day.

In continuation of our subject, we would gladly allude to the eccentric Van Helmont, the successor of Paracelsus, in the department of chemistry, and to the indefatigable labors of Vesalius, who may be styled the *Restorer of Anatomy*, and whose genius effectually undermined the confidence of the medical world in the perfection of Galen's anatomical knowledge.

But we have now reached comparatively modern times, "when the Creator again said, 'Let there be light, and there was light'"—when the human mind awoke from the sleep of ages, and asserted the dignity of its nature by shaking off the fetters of a delusive form of religion, and the trammels of an equally delusive philosophy—when Luther battled the corruptions of the church and Bacon exposed the fictions of Aristotle—when the art of printing disseminated the doctrines of the reformers of divinity, philosophy and medicine, and the bold cheered on the good work, whilst the timid trembled, as they beheld one after another of the strongholds of credulity and superstition tottering under the sturdy blows of the men of the new era, until the human mind was set free; and man, in the redeemed places of his earthly heritage, was permitted to doubt the infallibility of priest-craft, philosopher-craft, and doctor-craft.

If, under the ministrations of Luther, man was born again spiritually, under the teachings of Bacon he was born again intellectually. And thus the age of knowledge was renewed with increased splendor and usefulness—not by the mere revival of ancient literature, with its web of Romance and Reality, but by the influence of Luther's Bible on the conscience, and of Bacon's Organon on the understanding.

It was during this struggle for the overthrow of the reign of error that the medical world discovered in the writings of the "Father of Medicine" the germ of that admirable system of induction which was perfected by Bacon, and has become the talisman to open the portals of science, and to scatter the subtleties of scholastic fictions.

Our medical fathers proved themselves worthy of the New Era, for the light of their minds illuminated every department of medicine. In their hands the crude art of the Middle Ages was elevated, and assumed the form and dignity of a real science; and in the hands of their successors it has been still further improved, until, when compared with other departments of human knowledge, it has become a reliable science—the hope of the diseased, and the admiration of the intelligent in every part of the world.

We do not pretend that our science is perfect—far from it. The causes of some of the most important operations of nature, as displayed in the workings of the human system, are still unknown. The secret of those *principles* lies in the great future, where it must be sought for with humble hearts and willing hands, as our Creator evidently designs that we shall reach the highest perfection in medicine—not through the subtleties of the Dreamers, but by the labors of the Workers.

In the ranks of the latter class we hope ever to find you, "proving all things, and holding fast that which is good." We now commit this work to your hands—not only to practice your profession by the revelations of the past and the present, but to strive to discover new truths, that you may have the honor of contributing your mite to the treasury of medicine, which your brethren, all over the world, are supplying with important facts, and laboring, as men never before labored in any vocation, to unveil the secret of those undiscovered mysteries which still influence health and govern disease.

The credit of our State, which is now connected with the advancement of medical science, induced the

Regents to establish in this department of the University, the elevated standard of study recommended by the National Medical Association. You have cheerfully submitted yourselves to this searching ordeal, and have literally complied with its requirements; and you now stand *on a level* with the graduates of those institutions which have adopted this standard, and *above those* whose standard is lower than this.

If such elevated attainments are considered necessary to qualify students of our University to practice their profession, we would ask of those having authority in our Legislative Councils whether the time has not arrived for the application of the same rule to physicians from abroad, who may hereafter desire to establish themselves within our borders as practitioners of medicine.

When the settlements of Michigan were in their infancy, and the labors of the few physicians who were scattered over the Territory were infinitely greater, and far less remunerative than the labors of the physicians of the present time; no one was allowed to practice medicine in the Territory unless his testimonials of respectable qualifications were approved by the established Board of Medical Censors. Population was scarce at that period, and the health and life of every human being was a matter of public concern. When Michigan became a State and population more abundant, the annual destruction of individual health, and the loss of a few lives by mal-practice, may have been considered of minor importance, if thought of at all, compared with the establishment of the great principle of *free competition.* But there is a just limit to competition, and that limit regards the traffic in life and health. Those who engage in trade without capital or knowledge of the business are almost certain to fail: their failure merely results in mortified vanity and the loss of property. The latter may be regained by industry, and the former removed by common sense. But when a physician fails from ignorance of his duties, his failure involves the loss of health, and frequently of life. The former may be restored by skill-

ful treatment, after weeks or years of suffering; but we have no Promethean fire with which to enkindle the light of life thus rudely extinguished.

The deep feeling of humanity that governs public opinion in Michigan is displayed in the act abolishing the penalty of capital punishment, by which it was declared that Michigan would not take from a human being, even for crime, the life which she could not restore. Let this humane feeling be exerted to guard the practice of medicine, and, as far as human wisdom can foresee, the innocent, as well as the guilty, will be protected from the tortures of the ignorant, and the infliction of premature death by the hands of the presumptuous.

Not only humanity, but a sense of justice would seem to demand, that while our profession is, very properly, open to competition from abroad, before those who come here for the purpose of entering upon this field of competition are permitted to experiment upon the health and lives of our people, they should be compelled to exhibit evidence that they have been subjected to as high a degree of culture and discipline as the students of our own Medical College.

And now, gentlemen, as you are about to leave this institution, where you have been faithfully instructed in the various branches of medical science, and in your duty to those who will be intrusted to your care, the Professors, who have watched over your studies with constant anxiety for your welfare and future distinction in the profession of your choice—whose reputation as faithful instructors is now identified with your own, and who, when you pass beyond the limits of this city, will, perhaps, have looked upon some of you for the last time, in the language of the ancient Professor of Salernum, affectionately admonish you to "Be faithful," that the fruit of their instruction, like "bread cast upon the waters," may return to them with honor, "after many days."