

Marshall (N.B.)

INTRODUCTORY LECTURE

BEFORE THE

MEDICAL CLASS

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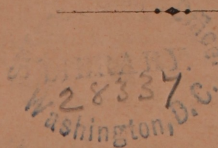
Kentucky School of Medicine,

ON

THE TRUTH OF MEDICINE AS EVINCED BY ITS ORIGIN, PROGRESS  
AND PRESENT CONDITION.

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## INTRODUCTORY LECTURE.

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Having to appear this evening before an audience composed of those who are, as well as those who are not, engaged in the prosecution of the medical science, it would be equally inappropriate in me to dwell upon a subject strictly professional, and which would therefore necessitate the employment of technical terms not generally understood, or on one bearing no direct relation to medicine, and I therefore propose to consider briefly the evidence of the truth of our science, as afforded by its origin, progress and present condition.

When we contemplate any of those things on the earth which men call and consider great, and are enabled to follow them back through all the different phases of their growth to their origin, we are, in many instances, astonished at the smallness of their beginning; nor can the most far-seeing form any adequate idea of the immensity of the superstructures which may arise on apparently the slightest foundations, or estimate the extent of the influences they may exert on man and the world. The most powerful kingdoms of the earth have passed through an infancy of weakness and dependence, which afforded scarcely the least foreshadowing of their future greatness and importance. Remus, in derision, stepped over the walls of a city destined to be the mistress of the world, while a region remote from thence, and, in the progress of her arms, fated to become merely one of her conquered provinces, has now attained the magnitude of one of the first powers of the earth; while, stranger still, a little island, yet more remote, and then altogether unheard of, now boasts herself, and with truth, the centre of an empire on whose bounds the sun does never set. Not less true is this in regard to the origin of the arts and sciences, and the most valuable inventions and discoveries, which have lent their aid to the progress of man. Galileo, after hearing that the Prince Maurice had been presented by a German with an optical instrument which made distant objects appear near, employed himself in ascertaining what that instrument was, and his first efforts produced only a leaden tube with a plano-convex spectacle glass in the distant and a plano-concave one in the near extremity. Who could have imagined that from such a beginning would grow the telescope of the present day, with magnifying powers so immense, that the astronomer is enabled to peer millions of miles into the realms of illimitable space and bring within the sphere of his observation stars and planets, whose distance from the earth is so great as to be, although easily expressed by figures, yet scarcely appreciated by the human mind? But if founded on the eternal principles of truth, although we may not be able to predict the extent and magnitude of the superstructure, we yet may be assured that it will stand the test of ages; and if, in addition to this, it have for its object the good and improvement of mankind, and, still more, if the inevitable tendency be to accomplish this object, we may be pretty sure, nay, almost certain, that the dimensions will attain magnificent proportions. Everything dependent on man as originator, inventor, or discoverer, is progressive, often accumulating in its progress much of error and wrong, before attaining its full measure of perfection. This may surely be predicated of all things not emanating directly from the Supreme Being, whose power alone is sufficient at once for origination and perfection. Thus may we be prepared, in glancing at the rise, progress, and present condition of medicine, to find at its commencement insignificance, in its progress error, and in its present con-

dition much of imperfection, without regarding these as evidences of falsity in the principles of our science; but, on the contrary, its existence at all at the present day, must be admitted as a high indication\* of its truth.

Now we are not to confound the principles of medicine with the different and often conflicting theories which have been entertained and abandoned at various periods of its history. The principles of medicine are those which have been deduced from facts that have been the subjects of observation and investigation for centuries upon centuries, and therefore have the authority and sanction of vast and extended experience. By the side of such experience, how contemptibly insignificant appears the boasted experience of the different isms and pathies which from time to time have reared their ephemeral heads against the truth of regular practice?

Medicine, or the administration of remedies for disease, arose as the natural consequence of the fall of man. Driven from the garden of Eden, he was compelled to till the ground for the sustenance of his body, and he soon found himself subject to aches and pains, against which it became as necessary to provide as against the pangs of hunger. For almost all of the sufferings and afflictions resulting from the fall, an all-wise and merciful God has seen fit to give us a remedy, and reason and analogy alone might have taught us, without the positive evidence afforded by what medicine has done and is still accomplishing, that with the bane disease there was also provided an antidote. Whether the first efforts towards the mitigation of the ravages of disease by the administration of medicines arose through direct information from the Supreme Being, or were the result of faith in His merciful provision for such sufferings, we cannot tell. To the former idea mythology, the creation of man's unaided reason and fancy points, attributing the primal ideas of physic to direct revelation from the gods, touched with pity at beholding the unchecked ravages of disease, let loose upon the earth through the ire of some of their own number. However this may be, we may well suppose that the first steps in this direction were simple and few; but from this beginning, small as it was, has resulted a science, which is acknowledged wherever civilization has extended, while even among the most rude and savage of the earth we find traces of the efforts of man in this direction. Now this in itself is strong presumptive evidence of the truth of regular medicine, for it is hardly probable, indeed it is utterly impossible to suppose, that anything devoid of truth (although we may readily admit that such a thing might find birth and even take powerful hold upon the feelings and opinions of men in rude states of society) should grow and increase through age after age, withstanding from time to time the most violent assaults of the learned and unlearned upon it, and now, in spite of time and attack in the nineteenth century, should, under the most scrutinizing investigation, stand forth as an admitted science, and claim among its votaries and supporters many of the noblest and brightest intellects of the world. Nor is it necessary for the weight of this evidence that the ideas and opinions entertained throughout this vast period of time should have always been identical and the same; for that would imply the perfection of a science at its commencement, full growth at the first dawn of infancy. It would be requiring what has not been true with regard to any discovery or science, and what is, moreover, totally at variance with a state of progress and improvement, the natural, necessary, and perpetual condition of man. The original idea was unquestionably to administer medicine for the relief of suffering, the cure of disease. Here evidently was a belief in the existence of two forces or powers antagonistic to each other, disease on one hand, remedies on the other; and it was the direct object and aim of the first, and indeed of all subsequent research and investigation, to discover such powers or influences in medicines and other remedial means as should overcome and eradicate the causes of disease, as well as disease itself. This is the idea which has been acted upon through all ages, from the first conception of it to the present time, which gave rise to, and is at the foundation of, regular medicine, and which I say could hardly, could not possibly have main-

tained its hold upon the opinions of men, and now convince enlightened reason, if it were destitute of truth.

If the treatment of disease were a matter with which mankind at large were but little if at all concerned, there would be some better ground for supposing that a stupendous fraud yet undiscovered might have been from time immemorial imposed upon man's credulity. But it is, on the contrary, a subject in which all, the highest and the lowest, the most learned and the most ignorant, alike are intimately and anxiously interested, and as the issue is life or death for all, the investigators themselves must at all times, equally with the community, have been anxious to ascertain as nearly as possible what was truth in regard to this subject.

The evidences of the existence of a Supreme Being and of the truth of religion are many and varied, and among these the fact that in all times and among all nations there has prevailed a belief in a being or beings superior to man, and to whom worship was accorded, however wild and far from the truth many of the ideas connected with the subject may have been, is considered to carry much weight, and with great propriety is urged as an important link in the argument. Now we have this evidence to its fullest extent, as to the truth of some system of practice, for as far back as we can find any record of a nation's history, so early do we find traces of medicine. We have, for instance, the most certain evidence that we can possibly have in regard to any transactions of so remote a date, that nearly if not quite two thousand years before the Christian era, remedies were applied for the relief of disease, or, in other words, that a practice of medicine existed in Egypt. As among all other nations in their primitive estate, even down to the present day, so among the ancient Egyptians, the priests were the first rude practitioners, from whose hands this business or profession gradually passed to regular physicians. Somewhat later we have record of some of the medicines they employed, and of these one at least is used at the present day, namely, squill or sea onion, a bulbous plant, which was even worshipped on account of its numerous virtues, and administered for the cure of a variety of diseases. The beginning of medicine, at least the first that we have any knowledge of among this people, destined in after years to take the lead of the world in this as well as the other sciences and arts, was slight and insignificant indeed as compared with the enlarged knowledge and experience of the present day, but there existed even then and there the germ of that great truth, the basis and foundation of our science of physic, namely, that there exists in medicines a power antagonistic to, and capable of counteracting and overcoming, the morbid influences and effects of disease. They knew and thought little no doubt of the *modus operandi* of medicines, being concerned with that which was the chief if not the only matter of real interest to them, the action itself of medicines, and the useful application of that action. All their investigations were directed toward this point, and their system of practice was derived from observation, experience being then as now the only proper test of theory. This same kind of testimony we have afforded by the history of all nations of whom we can learn anything with precision. Probably the most ancient reliable information in regard to the practice of medicine after that obtained from the history of the Egyptians, is derived from the tribes which afterward formed the nation of the Greeks, among whom, at a very early period, medicine attained a position of comparative importance. Among this people we have traces, although not entirely authentic and accurate, of medicine long prior to the Trojan war, and after that event, up to the Christian era, we have tolerably accurate and reliable data to sustain the belief that the art was practiced with some degree of success. At a later date, as we shall presently see, yet when the nations of the earth had conceived only the rudiments of other arts and sciences which have come down to us along with medicine, this latter science had attained to a condition of system and importance incompatible with absolute falsehood, although, it must be admitted, something of una-

voidable error was mixed up with the truth. The history of the Jews, derived from writers sacred and profane, may also be appealed to as affording conclusive evidence of the existence of, and a thorough belief in, medicine. All knowledge of this subject among them, as among all other nations, was at first confined to the priests, and we therefore find Moses in the place of high priest, issuing laws and directions in regard to leprosy, and other uncleanness or disease. The views among the Jews at this period were no doubt similar to those entertained by the Egyptians, as all knowledge on this subject, exclusive of that afforded by direct revelation after the departure from Egypt, was no doubt that which had been obtained in the land of Egypt, as we can hardly suppose that the teachings of the patriarchs in this matter, if they taught at all, could have survived, as distinct notions, the long and oppressive Egyptian bondage. At the death of the patriarch Jacob, his son Joseph employed Egyptians, as we find in sacred writ that "Joseph commanded his servants, the physicians, to embalm his father, and the physicians embalmed Israel." [Genesis, c. 1, ver: 2.] These servants were unquestionably Egyptians, who would not have been employed to perform this last office for the deceased patriarch, if among the Hebrews there had existed knowledge sufficient for this purpose. But later in the history of this latter people, as will be presently referred to, medicine, as among the Egyptians and Greeks, instead of dying out, as fancies and traditions unfounded in truth ordinarily do, had steadily advanced, and at a period when they were better able to discriminate between imposture and truth, commanded almost universal belief.

An examination of the earliest records of the Hindoos, Chinese, Arabians, and at a later day the Indians of North and South America, afford the same testimony; among all we find a belief in medicine, and a system of practice. Is it not beyond all reason to suppose that this idea in regard to the truth of medicine, found to exist as the spontaneous conviction of the human mind, should have thus universally prevailed, if there were not truth connected with it somewhere? Had it passed away, as superstitions and fallacies ordinarily do, with the advance of civilization, this question could not be before us to-night; but here it is—medicine is still practiced and believed in all over the world, and that too by the wisest of our race, the best informed and the most intellectual of mankind being the most decided adherents and supporters of regular medicine. I do not yet advert to the evidence afforded by what our profession is doing, and has already accomplished, for the good and happiness of the human race, that being an argument of no little weight as will be seen; but I have simply considered and applied one of the forms of evidence which is urged to prove the existence of a Supreme Being and the truth of religion.

I pass on to the consideration of the condition of medicine at a later period in the world's history, when civilization had extended its beneficent influences, when states were established on the basis of right, law, and order, when the records which have come down to us are fuller and more reliable, and when medicine had attained a position and system worthy of a science. The limits of a lecture permit me to refer only to facts and circumstances establishing the truth of medicine, without noticing the different attacks which have been met and defeated, and the heresies which at various periods in its history have assailed it, which are yet attempting its overthrow, and which will no doubt continue to afflict mankind, so long as there shall be found those who are ready to use charlatany and imposture to gratify insatiate lust for gold, and there exists in the human mind such passion for the marvellous and absurd, as must ever render man an easy victim to impudence and assurance. But this much at least may be remarked, that none of the different forms of quackery which either heretofore have attracted, or are at present gulling the people, possess the evidence of truth which I am now considering, and are therefore declared, so far as this evidence goes, to be utterly false.

It has been frequently remarked, and is unquestionably true, that the arts and sciences, though cradled in the east, have yet attained their magnitude and power in the west. The Egyptians, Phenicians and Chaldeans had been, before the Trojan war, at the head of existing civilization, surpassing all other nations, except the Jews, in the extent and value of their knowledge and discoveries. Medicine was much further advanced among these nations than among the Greeks, who subsequently took the lead and transmitted even to the present age a great deal that is valuable not only in this but other arts and sciences. Among the Jews arose one whose name is almost synonymous with wisdom, and who attained an amount of knowledge in regard to medicine, as well as other things, far exceeding the men of his time. Solomon, we are told, "spake of trees, from the cedar tree that is Lebanon even unto the hyssop that springeth out of the wall; he spake also of beasts and of fowl, and of creeping things and of fishes."\* That he was acquainted with the medicinal character of many of these trees and herbs, we cannot doubt, and indeed the most eminent historian of antiquity remarks that "the sagacity and wisdom which God had bestowed on Solomon was so great that he exceeded the ancients, insomuch that he was no way inferior to the Egyptians, who are said to have been beyond all men in understanding," and that "he spake a parable upon every sort of tree, from the hyssop to the cedar; and in like manner also about beasts, about all sorts of living creatures, whether upon the earth, or in the seas, or in the air; for he was not unacquainted with any of their natures, nor omitted inquiries about them, but described them all like a philosopher, and demonstrated his exquisite knowledge of their several properties;"† and he further adds that he availed himself of this knowledge to compound remedies, which were extremely useful for various purposes. Thus we see that at a time when the Jews had advanced in the knowledge of mathematics, architecture and decoration, sufficiently to build a temple unsurpassed in magnificence and taste by anything that the present age can exhibit, medicine having outlived the superstitions incidental to the infancy of a people, was acknowledged and practiced by the wisest prince that ever filled a throne. After this period, when the kingdom of Priam had been crushed, we must look to the Greeks, to ascertain the condition of medicine, and through them we are enabled to trace its progress with a great deal of certainty. For a period of about three hundred years after the fall of Troy, all knowledge of medicine, so far as it may then be considered a science, was confined to the priests of Esculapius, and the practice of it was exclusively in their hands. Dark as this period was for our science, it was unquestionably the best arrangement under existing circumstances, and the popular mind, yet sadly under the thralldom of superstition, was in the fittest state to tolerate the impositions of those priests, shrouded in mystery and clothed with the sanctity of religion. Temples were built in various places, but always the most salubrious localities were selected, where the sick might be surrounded by every circumstance most conducive to health. To these temples, sacred to the God of Medicine, flocked the people who were suffering with disease, invariably with offerings of some kind, and not unfrequently of great value, without which the god might not be consulted with any expectation of success. Admitted within the precincts of these sacred dispensaries, the sick found themselves surrounded by scenes of diversion, while carefully prescribed regimen, pure air, the strictest attention to cleanliness, and especially the strong hope of relief, and a high degree of faith, kept alive by the remarkable instances of cure which were constantly sounded in their ears, produced that happy influence on the mind and feelings which might naturally be expected, very efficiently to co-operate with the simple medicines which were administered. But the cure of diseases was by no means trusted to these assisting

\*1st Kings, chap. 4, ver. 33.

†Josephus, *Antiq. of the Jews*, lib. 8, chap. 2.

circumstances alone, for the Asclepiadæ employed vomits, purges, frictions with medicated substances, sea-bathing, and, according to very good authority, even blood letting also. As the constitutions of the patients were generally more vigorous than after the introduction of greater refinement and luxury, and the diseases therefore simpler and more amenable to such remedial means as were employed, the practice of the temples was far more successful than it would be at the present day. In the vicinity of some of these temples were found serpents, which, being easily tamed, and their bites innocuous, were employed by the priests in their miraculous manifestations, sometimes to personate the god himself, sometimes merely to impress the minds of their patients. These serpents, accustomed to the presence of man, glided naturally about amidst the wondering crowd, their movements being supposed to indicate in some way or other the inclination of the god, or, during the silence of the night, while the patients on their couches distributed throughout the chambers, had merely light sufficient to distinguish vaguely what was enacted around them, approached the altars loaded with offerings of edibles and other more valuable gifts, and devouring the former, removed the latter to the more secret recesses of the temple. But the remarkable gastronomic feats sometimes displayed on these occasions, afford good reason to suppose that these apparitions were frequently machines, resembling serpents, and containing within them one or more men, and not, as the faithful believed, real snakes. We may be inclined to wonder at the credulity of any age that could tolerate such absurdities, but, we may hardly boast of the intelligence and enlightenment of our own, when now, late in the nineteenth century, hundreds, yes, and thousands, repose implicit faith in mesmerism, and spiritualism, and infinitesimalism, and there are found in this city those claiming the first position in society and refinement, consulting oracles whose prescriptions are the blood of a live weazel for deafness, split cats and chickens for erysipelas, and whose diagnosis is based upon the description of a patient's complexion and physical contour, or even the examination of a lock of hair transmitted through a letter or otherwise.\*

But even through the period referred to medicine did not retrograde, nor yet stand still. The Asclepiadæ were far above the generality of their time, in education and intelligence, and could not avoid obtaining some medical information and acumen from the experience afforded by the vast number of patients who consulted them; and we find, therefore, that when public opinion forced a change in the system of secrecy, which was rigidly observed in regard to the mysteries pertaining to their religious worship and practice of physic, that the science had made considerable progress. In the then existing state of the world and society, the confinement of the practice of medicine to the temples was most propitious for the science, and greater progress was made there, and less of absurdity and error accumulated upon the truth, than if it had been open and common to the public.

But the time arrived when philosophy began to dawn upon the benighted world—when there were intellects capable of appreciating the lights of truth and science, and when the popular mind, too, was beginning to be better prepared for the reception of instruction. Chance rules in nothing, and when the fitting time had fully come, men and circumstances were found ready for the work and developments appropriate to the age. A Pythagoras was born, and gifted with a mind capable of grappling, in a great measure successfully, with the highest questions of the day, he was instrumental, though not intentionally, in breaking the bans of secrecy which had hitherto veiled the practices of the temples. His studies and teachings were of a varied character, his life pure and even austere, and his disciples, following his directions and imitating his example, acquired an immense influence among the people, through their communities established in various locations throughout greater and lesser Greece.† Before being

\*These references are entirely true. †Renouard.



admitted fully to the companionship of this great master, these disciples were obliged to prove their constancy and devotion by a severe and trying novitiate of five or six years' duration, during which period they were required to abstain almost entirely from conversation with any one not connected with their community. When admitted to full discipleship, they were still compelled to lead a quiet and even secluded life; and thus, remarkable for their abstinence and avoidance of the dissolute manners of the day, as well as the real superiority of their knowledge, they acquired an influence and exercised a wholesome restraint over the morals of the people. But their success was itself the cause of their downfall. Emboldened by the deference and obedience accorded their wisdom and opinions, some of them, contrary to the express precepts and example of their illustrious teacher, began to entangle themselves with the political intrigues of the day, and thus lost the esteem and confidence of all parties. Opposed by the politicians, because of their interfering with and often thwarting their projects of aggrandizement, hated, as well as dreaded by the priests, because of their superiority to the superstitious prejudices of the multitude, and rejection of the tyrannical rule of the priesthood, they found friends on no side, and soon losing the admiration and support of a fickle populace, urged on by their more powerful and sagacious foes, they encountered a storm of hatred and persecution, which only ended with their utter dispersion. But their misfortunes and downfall, by a wise and determined ordering of events, proved only a stepping stone for the advancement of the arts and sciences, and more especially of medicine. Scattered in every direction, and no longer bound together by the ties which once had held them, of which strict secrecy was not the least influential, the Pythagoreans revealed their knowledge and doctrines and many of them became distinguished followers of the practice of medicine. To them is due the introduction of the plan of visiting patients at their own places of abode, instead of the original custom of the Asclepiadæ, of prescribing for them only in the temples. That we may form some idea of the medical acumen of the Pythagoreans, and discard utterly the erroneous impression that their practice was simply a system of jugglery and old wives' tales, as has been affirmed, I may mention instances of whole communities benefitted and thousands of lives saved by the medical acumen of one man. Agrigentum was visited annually by a pestilential fever—probably of a malignant bilious type—which swept off multitudes at each return. Empedocles observed that the visits of this scourge were simultaneous with the prevalence of a southeasterly wind—the sirocco—and, concluding that its breath was loaded with the causes of this plague, advised the construction of a high wall across a narrow gorge, which was its only channel of approach to his native city. His advice was followed, and that annual scourge ceased to be a terror to the inhabitants of Agrigentum.

Selinus was traversed by a stream whose waters were sluggish, and therefore exceedingly liable to become stagnant. Disease was the consequence, which, with the system and regularity of a destroying angel, decimated its inhabitants. Empedocles, by having turned into the course of this stream two neighboring creeks, imparted rapid motion to its current, prevented stagnation, and thus the formation of unwholesome vapors, and relieved an apparently doomed community from a hitherto dreaded and irresistible enemy. Such acts are more worthy of crowning bays than victories in a thousand fights; such are some of the monuments left behind them by the founders of our profession, and such the emanations from a science yet in its almost earliest infancy, which is still on its march of mercy and mitigation of the necessary sufferings of mankind, and which, from the lasting necessities of humanity, must continue its march of improvement, continually approximating a perfection which is never absolutely attained nor attainable by man. In view of such records as these on the pages of profane history, we may well be

prepared to see a short time afterward the ample testimony furnished by one of the books of the Bible to the great value of medicine, the truth of the art, and the great good and benefits it is capable, under the blessing of Providence, of affording our race. What can be more full, more direct, and I may add, without, I hope, being charged with overweening pride in my calling, more appropriate than these words?

1. "Honor a physician with the honor due unto him for the uses which ye may have of him, for the Lord hath created him.

2. For of the Most High cometh healing, and he shall receive honor of the king.

3. The skill of the physician shall lift up his head; and in the sight of great men he shall be in admiration.

4. The Lord hath created medicines out of the earth; and he that is wise will not abhor them.

5. Was not the water made sweet with wood, that the virtue thereof might be known?

6. And he hath given men skill, that he might be honored in his marvellous works.

7. With such doth he heal [men] and taketh away their pains.

8. Of such doth the apothecary make a confection; and of his works there is no end; and from him is peace over all the earth.

9. My son, in thy sickness be not negligent, but pray unto the Lord, and he will make thee whole

10. Leave off from sin, and order thine hands aright, and cleanse thy heart from all wickedness.

11. Give a sweet savour, and a memorial of fine flour; and make a fat offering, as not being.

12. Then give place to the physician, for the Lord hath created him; let him not go from thee, for thou hast need of him.

13. There is a time when in their hands there is good success.

14. For they shall also pray unto the Lord, that he would prosper that which they give for ease and remedy to prolong life.\*

Now this, as well as all that has been said, can only apply to medicine at that day, and from which regular medicine is descended. All that was believed then is not believed now, but many of the principles then laid down are not disputed to the present day, while we have been steadily advancing, adding improvement to improvement, and relinquishing error, according as the sagacity, research and observation of investigators could eliminate more and more of truth. If, then, these observations apply to medicine at that day—and who can deny it?—they cannot apply to any of the fancies with which crazed or designing brains have attempted to overthrow what is here so emphatically admitted, and by such silence in regard to them, as much as they could by direct abnegation, ignore them all. But it will surely be claimed that these innovations are improvements on the regular system, and, being derived from it, the above testimony does apply to them. It will apply certainly as much to one as to another of them, to Thompsonianism, Homeopathy and all that ilk. Are they all right? All claim to be so, and equally condemn each other and regular medicine. There is and can be no common ground between regular medicine and any of these absurdities; they are at utter variance and antagonism. There cannot be two truths asserting entirely opposite doctrines; either they, or some one of them is true, and medicine false, or "*vice versa*." They are opposed to what was then admitted to be true; they did not exist, nor the semblance of any one of them at that day, and as the testimony above adduced can only refer to what then existed, it cannot apply to any of the forms of modern quackery, but must point to regular medicine, and to that alone. They apply as much, and no more, to all of

\*Ecclesiasticus, chap. xxxviii, ver. 1 to 14 inclusive.

these different systems, as do the teachings of our Saviour in regard to his religion and his church, to the additions and mummeries of the dark ages, which, while usurping—as these have done in regard to medicine—the name and place of true religion, almost blotted it from the earth. Yet there were found believers enough for these as for every species of quackery and jugglery that was ever started from the origin of medicine to the days of Hahneman, or Thompson, or the Black Doctor of Paris.

The march of medicine has been ever onward like the course of time, each succeeding generation taking up the work where their predecessors left it, to add their mite to the store, to be handed down to their successors. While generally so, this has not been universally and absolutely the case, for there have been several periods when adverse circumstances for a while impeded and stopped its march, if they did not actually force a retrograde movement. During a considerable time after the dispersion of the Pythagorians its advance was rapid. These, scattered over the civilized world, and forced, for self-preservation, to break the silence which, by their vows and teachings, had been imposed upon them, at last drove the Asclepiadæ themselves, through jealousy and dread of the influence which the public discussions and teachings and practice of the Pythagorians were gaining for them among the people, to discard their time-honored Egypto-Indian plan of secrecy, and bring to light the principles and rules of their practice. Thus encouraged, discussions everywhere increased, and soon evolving the idea of systematically teaching what could as yet only be obtained by fragmentary gleanings, they called into existence, at various places, schools of considerable celebrity. Among the most renowned of these were those of Cos and Cuidus. The former was adorned by that philosopher and physician whose fame can never die, whose name must occupy one of the proudest places in history, while any history of the past remains, and who indeed gave a name to medicine, since from his day it ceased to be called the art of Esculapius and became known as the science of Hippocrates. This was an age of giants, the names of Plato, Socrates, Cimon, Pericles, and, a little later, Aristotle, and others of like stamp, all flourishing about the same time, form a galaxy un eclipsed in any age or state, and throw an imperishable and unfading halo about that period. It was an age of philosophy, when all questions worthy of the consideration of such intellects, received a most searching investigation; and it was an age of honesty and integrity, when truth, rather than temporary eclat and popularity, was the aim and object of their efforts. Surely a most unpropitious age it was for falsehood and error and a proportionably happy and genial one for all that was good and true and whatever was really calculated to benefit the human race. How did medicine stand the test of such a time? While other falsely called arts and sciences and time-honored opinions paled before the bright light of truth and philosophy, then blazing upon them, medicine came forth as gold purified by the fire, and though as yet only the foundations for the future edifice were laid, and the plans for the huge structure to be raised, mapped out, yet through this period it advanced with unprecedented rapidity, while rubbish was removed, the mystic veil stripped off, and a condition attained for solid and permanent improvement. The questions which agitated the public mind, and engaged the attention of the learned, fully attest the minute observation and scrutinizing investigation of those ancient philosophers and physicians. To this period succeeded the age of the Macedonian conqueror. Engaged in the prosecution of such invasions and victories as the world had never before seen, Alexander yet found means and time to make some contributions to science, through his distinguished preceptor. But the lieutenants of this great captain went further still, and after the division among themselves of their master's dominions, two of them, one at Per-

gamos, the other at Alexandria in Egypt, set about the collection of those libraries, the wonder of every age, the glory of their own. These libraries exercised a great influence over the advancement of civilization by stimulating attention to the arts and sciences, among which medicine received no little share. Dissections soon became not only legalized, but were liberally encouraged; and thus a knowledge of anatomy was obtained, the want of which had hitherto been a serious impediment to the progress of the profession. Nor was the prosecution of these investigations confined to the savans alone, but princes of the royal blood were among the number of those who, with scalpel in hand, pushed forward their explorations into the fields of physiology and anatomy. The City of the Ptolemies shone forth as a beacon to the nations around, and, under the enlightened and liberal patronage of the Lagidæ, Alexandria became the seat of the most distinguished school of antiquity. But mutability marks all human things, and Alexandria could only play her single part in the drama of the world. Under the Roman dominion, her commercial prosperity and literary preeminence were for a long time undiminished, and she continued to afford the finest medical school in the world, until near the fifth century of the Christian era. The first great blow that was inflicted upon her literary prosperity was the burning of her immense library during the siege of Julius Cæsar, a blow lamentable for Alexandria and the world then, lamentable for literature and science through all time to come. Only slowly and partially was that shock recovered from through the subsequent efforts of the friends of learning, among whom not the least efficient was the frail, the beautiful, but noble, Cleopatra. Through her instrumentality the library of Pergamos was removed to Alexandria, and still this academy was thronged by the votaries of science, from every quarter of the civilized world, and still she sent forth the most distinguished philosophers, mathematicians, and physicians of the age, until that second conflagration, by Christian fanaticism, which at once and entirely swept off that great collection of books, the work of ages.\* Then perished the glory of this unfortunate city—then went out the light from this source, and left a darkness whose gloom extended through centuries afterwards. But medicine was not, could not be extinguished. I have said that we may be certain that whatever contains the elements of truth, and has for its object the benefit of mankind, and, moreover, an inevitable tendency to accomplish that object, however small and insignificant its beginning, and however great the obstacles it may encounter in its course, will be successful at last and attain magnificent proportions. Certainly, so far as I have traced medicine, this observation is verified. With an origin truly insignificant, with opposition as bitter as prejudice and superstition could raise, with the blind assistance of friends, whose zeal effected often as much of harm as good, and with a work to be accomplished as difficult as ever tasked the talents and ingenuity of man, the course of our science has been nevertheless ever onward, ever forward, until now, when civilization may be considered as almost at its acme—when intellect, morality and integrity, form the basis of the standard of excellence—when education is so universally disseminated among the masses—and when religion has shed its benign influence over so great a portion of the world, it holds the highest place in the estimation and also in the heart of the community. Where can we find stronger, where better, evidence than all this of the value and truth of any science? If it be not true, where shall we find such another instance of falsehood and error combatting successfully all opposition, rising to eminence, then almost overwhelmed, and again advancing in the face of the strictest scrutiny and investigation, the dispassionate examination of the learned, and

\*It is a disputed point whether the second burning of the library was as above stated or by the Arabs. I incline to the former opinion.

gaining the acknowledgment of the world? Mahomedanism can surely not be pointed to, for it has not passed so great a lapse of time, and pales before knowledge and education; astrology but shows the depth to which the untutored credulity of man may lead; while alchemy serves only to show the mingled avarice and ignorance of an age in which it could flourish.

For three centuries and more after the first burning of the Alexandrian library, little was done to advance the profession in any respect, and in anatomy absolutely nothing. Dissection was not only neglected, but positively interdicted, and the teachers in the institute were satisfied to follow, blindly, the footprints of Herophilus and Erisistratus, who had been chiefly instrumental in establishing the celebrity of the Alexandrian school. The theories and teachings of these great masters were carried to the east and to the west; in the former throughout China, existing in a mangled state to the present day, and in the latter, after passing the alembic of Galen's genius, they were transmitted through many generations. During all the time between the first conflagration and the age of Galen there were but three or four individuals who really pursued anatomy; but still the reputation of the Alexandrian school remained, and still its name stood foremost in the world. Transferred to the west, the science of medicine experienced a great impulse, through the genius and labor of Galen, styled the second, as Hippocrates has been called the first, father of medicine. Through him mainly is it that we are enabled to judge of the character of those antique volumes, which had been so ruthlessly destroyed, while he himself has transmitted to posterity voluminous evidence of his own sagacity and industry. From this time we trace the progress of medicine through the regular channels of history, and can delineate with accuracy the different phases through which it has passed to the present day, and, so tracing, we find that it still affords the same evidence of its truth, and the same evidence that truth, essential to the comfort and happiness of mankind, cannot be obliterated. If time allowed, it would be easy to show that the science of medicine experienced as many and varied attacks during the period just considered as it has at any time in its history, or does at the present day; and it requires no great depth of reasoning to prove that the incapacity of any and all of these to arrest its onward march, but affords additional evidence of its truth. My reference to the history of medicine from the Christian era to the present times must necessarily be brief.

At a casual glance, everything would appear most propitious for the advance of medicine, immediately upon and after the advent of our Saviour. But a closer examination will satisfactorily explain the condition which we find to have gradually prevailed and endured till the revival of letters. The Roman Empire had swallowed up all minor states; the Barbarians, who had been constantly hovering upon, and frequently passing, in hostile array, the insufficiently guarded frontiers of the republic and empire, were either reduced to subjection or elevated to a participation in the state; and universal peace had ushered in a condition of affairs that the world had never before witnessed. Surely it would seem that here was precisely the state of things, beyond all others, most propitious for the advancement of a science so eminently calculated to benefit mankind. Why was it otherwise? There are two principal reasons, besides other circumstances not essential to be mentioned. First, it was natural, as extremes are apt to follow each other, that, upon the introduction of true religion, the minds of the converts from paganism and idolatry should be imbued with a violent abhorrence of all things having any connection or relation with their old system of worship. Thus were they led, in the first enthusiasm of their conversion, to undervalue medicine, which had been taught in heathen temples by heathen philosophers, while, with a misguided faith and trust, they depended upon the direct assistance of the Deity in all things, without availing themselves of the aid of his appointed agencies. Moreover, theological dis-

cussions and controversies engaged so large a share of public attention as for a time to silence all other investigation, causing neglect of medicine and other sciences, and, at a later day, leading to those errors and abuses in religion which gradually overwhelmed the church and introduced an idolatry scarcely better than the ancient worship of the heathen gods.

Secondly, the high position which medicine had already attained, and therefore the lucrative inducements it thus held out, had attracted, as it has in our own day, swarms of traders in the profession, whose only object, first, last and always, was money.

These vampires, as we see around us now, threw discredit on a profession which, above all others, demands self-denial, honest effort, and true philanthropy. But the very evil which was thus created, becoming in time entirely insufferable, worked to some extent its own cure. At an early period of the Christian era, certain wholesome restrictions were imposed upon the practice of medicine, and Antoninus Pius originated a system of protection for the community, which might most advantageously be imitated at the present day. Under this rescript no one was allowed to practice who had not, by examination and otherwise, exhibited capability and good character. How such requisites would now curtail the number of doctors and how the community would be blessed! But although during the early part of the Christian era there was no rapid extension of medical knowledge and discovery, there was nevertheless a step toward the establishment of a broader and surer foundation for its future growth and prosperity, while its passage through, and revival of, the period extending to the fourteenth or fifteenth century, and termed very properly its "period of transition,"\* go far with all candid and reflecting minds to establish the value and truth of the science. But if medicine suffered through the abnormal application and influence of Christianity in one direction, in another, and through its natural, healthy and legitimate tendency, it experienced a valid and lasting aid, which gave and gives assistance to its advance by the sure and reliable light of clinical observation. To the proper appreciation and application of that rarest and most Christian of all virtues, charity, is due the establishment of hospitals, by which was gained a systematic observation and treatment of disease, and an opportunity of testing theories which, instead of preceding, should always follow, facts, only to explain what experience has already established; and to the effort of woman, ever more ready than the other sex to sympathize with, and alleviate, the sufferings of humanity, is attributable the origination of that happy idea, the establishment of hospitals. A noble Roman lady, led by devotion to religion to take up her abode at Jerusalem, was touched with pity at witnessing the sufferings from untreated disease among the crowds who visited that city for the purpose of beholding the spot and scenes hallowed by the bodily presence and death of their crucified Lord, and, to relieve them as far as possible, she united with a few others, under the direction of St. Jerome, in the erection and maintenance of a hospital for the sick, and another receptacle for the convalescent. This system was further enlarged and acted upon at a subsequent date by Emperors and Kings, and thus that which was the conception of the purest charity and benevolence resulted in great and lasting benefit to the science of medicine.

Among the writers of the period extending from the third to the fourteenth century there is but little mark of originality, most of them being content with blindly following in the footsteps of their predecessors, and especially Galen, the last of the Latin authors who made contributions of any extent to our science. For several centuries after the time of Galen there were only three or four authors in the western empire whose works have been deemed worthy of preservation.† Serenus Sammonicus, Theodore Priscian, Marcellus Empiricus and Vegetius are the last writers of note before the second burning of the Alexandrian libraries, and their con-

\*Renouard.

†Watson's discourse.

tributions are in no way comparable to those of Galen. The first of these, Serenus Sammonicus, was indeed almost a cotemporary of Galen, being in the zenith of his success and reputation during the reign of the infamous Caracalla.

Although the Christian era had already dawned and was shedding its heavenly light more and more brightly over the world, still idolatry and superstition were far from having lost their hold upon mankind, and the most enlightened physicians, however skilled in medicine, yet resorted to the fancied assistance of charms and amulets. Sammonicus is said to have been the author of that celebrated collection of letters, *Abracadabra*, which was arranged in the form of a triangle, and suspended around the necks of fever patients, which has outlived all the changes and improvements of after years, and is now familiar to thousands to whom the names of Sammonicus and Caracalla are utterly unknown. Such continued to be pretty much the condition of medicine during the first three or four centuries of the Christian era, while the irreconcilable contest between paganism and Christianity was being waged, and which waned not until the reign of Constantine, when the latter became formally the religion of the State. During this same period the Greek schools were gradually elevating themselves, and a few celebrated names from among them have come down to us, as Oribasius, Ætius, Alexander of Tralles, a city of Lydia, and Paul of the isle of Ægina. Under the Christian Emperors, medicine experienced a healthy stimulus, and the heathen temples were finally closed, the buildings converted into hospitals, and their possessions devoted to their support. The nobles, both gentlemen and ladies, lent assistance to the work, and while charity was thus extended to the suffering, these institutions served as admirable schools for the rearing of teachers for the great number of students who were devoting themselves to this science. The greatest emulation sprung up between the different teachers and their pupils, leading to the most extravagant electioneering exertions, and presenting a picture which will be readily appreciated by those who have the opportunity and misfortune of witnessing the excellent imitation of the present day.

Amid the wreck of empires which soon followed medicine still existed and slowly grew. The empire of the west gradually succumbed to the hordes of barbarians which ceaselessly poured upon it from the forests of Germany, and from its ruins arose the separate and independent kingdoms of the Franks, the Visigoths, and the Lombards. The empire of the east still struggled for existence, and, though displaying remarkable heroism and vigor, saw her strongholds falling, and her frontiers gradually contracting around her. The Turks, in one direction, were pressing her sorely, and her old enemy, the Persians, in another, kept up their incessant annoyance and encroachment, when a more remote, more terrible, and most unexpected foe from the deserts of Arabia precipitated his bands with resistless impetuosity, first upon the more distant, then, emboldened by success, upon the nearer provinces, and finally wrested from her hold the fairest possessions of the empire. Egypt, Syria and India, at an early day, fell under the dominion of Mahomet and his successors, while but a century or so more sufficed for the extension of their arms into the European provinces and the establishment of their sway from the Indus to and over the Spanish peninsular.

While we are accustomed to look up this prophet conqueror as an ambitious fanatic and rapacious adventurer, we at the same time should remember that he and his successors gave great encouragement to the arts and sciences, inviting the learned of all countries to take up their abode among them, and bestowing such solid favors as attracted many men of merit and learning to their dominions. The cause, therefore, of the downfall of literature in the west was the occasion of its transference to and reestablishment in the east, where also the science of medicine was prosecuted with a good deal of success, and where soon appeared

physicians and writers who have transmitted valuable information even to our own times. The Arabs made many useful discoveries in the materia medica and chemistry, which seemed to possess especial attraction for them, and in literature and the arts advanced far beyond all surrounding nations.

It is impossible to conceive that a science which was not essentially true could thus have continued to progress under almost every turn of fortune, and have commanded the belief of the ablest and brightest intellects of every age, and true as opposed to all the different forms of quackery which either now, or heretofore, have imposed on human credulity.

Of all the names of antiquity, among all nations, none occupy a higher place than those who have given their lives, labor and faith to medicine. Among the Arabians, Rasis, Haly Abas, and, above all others, the noble and gifted Avicenna, Albucasis, and many others, have transmitted to posterity the evidences of their ability, and afforded us a clear insight into the condition of the medical science. The Arabian princes established hospitals and schools at an early date in the east, and in Europe, when masters there, whatever havoc in other respects they committed, in regard to the arts and sciences, they pursued an enlightened policy of protection. But when the Turks succeeded in wresting from them their hard-earned power, they struck, as they have ever done, a fatal blow at all that tended to elevate humanity. During all this period, among the Greeks and Latins, the science of medicine, if it did not actually retrograde, at least made no perceptible improvement, and as thus both in the east and west the supports of knowledge and science were failing and fading away, a new agent became necessary to stir the stagnant pool of human intelligence.

That agent already existed and was ready for the task. As the primitive church lost more and more of her original purity, she made more eager clutches at the acquisition of control over the property, conscience and education of the people, and as good not unfrequently grows out of evil, the means adopted for her own aggrandizement proved most effectual for the promotion of the sciences and liberal professions. About the cathedrals colleges were established, where medicine, to some extent, with what was known of other sciences, was taught, and gradually the knowledge and even the practice of medicine fell almost entirely into the hands of the clergy. After the ninth century, they met with successful rivals in the Jews, who then, as now, being much given to commerce and traveling, were thrown, by the nature of their pursuits, among the Saracens, who still stood foremost in civilization, and from whom they acquired more valuable knowledge, and a better system of practice, than yet prevailed in the west. But the information of the wisest and best of these practitioners was exceedingly limited, and their success indifferent, while their remuneration was so far disproportionate to their services, that numbers of quacks, ignorant even of the little that was then known, were attracted to the profession simply and entirely for its gains. The evil became intolerable, and, as a remedy, Theodoric, king of the Visigoths, established laws for the protection of the people, which remained in force for several centuries. These laws are curious, and some of them would be productive of good were they enacted now. One of them provided that, if any of these irregular practitioners should injure a gentleman, he should forfeit a heavy fine; and if, by medicine or a surgical operation, he should cause death, he was to be handed over to the tender mercies of the relatives of the deceased, who might deal with him as they thought proper. In regard to the relation of the church to education and science, whatever may have been the object of the clergy, it cannot be denied that they were largely instrumental in preparing the mind of Europe for the intellectual movement which followed the



fourteenth century. Prior to this time, as has been observed, the Saracens were at the head of civilization, and had established, not only in the east, but also in the west, colleges and schools of medicine, some of which attained extended celebrity, and long outlived the downfall of the Saracen sway. Among these none stood higher than the school of Salerno, established, as is believed, by refugees from Alexandria after the final destruction of the great libraries. Patients from all parts of Europe flocked to Salerno, to avail themselves of the skill of the faculty there, and even so late as near the beginning of the twelfth century this school still stood so preeminent that many of the wounded crusaders of distinction stopped there to be treated, among whom was Robert, Duke of Normandy, son of William the Conqueror. Thus, amid all vicissitudes, against all foes within and without, amid the rise and fall of empires, through an age of darkness, when almost everything not essential for man was obliterated, not only had medicine maintained an existence, but it had established a conviction of its truth in the minds of all the most intelligent and enlightened of Europe, Asia and Africa.

My time does not allow me to dwell minutely upon its history, to speak at large of the temporary and changing circumstances which exercised an influence over its progress and condition at different periods, to explain the causes which led to a separation of medicine and surgery, or even to mention the character of the latter, which indeed would be more amusing than instructive; nor is all this essential to my purpose. I proceed to a brief consideration of the subject after the commencement of that intellectual dawn, appearing about the fourteenth century, waxing brighter and brighter through age after age, and in our time shedding its noonday blaze over the world. The crusades were past which had given so vast an impulse to civilization, and the fruits of them were seen in the establishment of new and enlargement of the existing universities and schools. In Germany, in France, in Spain, and in England, universities were established which exist to the present day, and which will no doubt continue through all time to come. The telescope, the microscope, the compass, and, above all else, the art of printing had been invented, and, what more directly concerned the study of medicine, the superstitious dread of interfering with the dead human body, which had been an impassable barrier to the prosecution of anatomy, had been dissipated, and dissection was soon licensed, or at least permitted, by the removal of the interdict of the Church of Rome. Poetry again revived, and a Dante, a Petrarch, a Boccaccio, and a Chaucer were born to rekindle a taste which had been smouldering for ages. Let me, at this point of the world's history, again ask, what would have been the natural influence of this intellectual revolution upon the progress of medicine if it were not a science of truth? Old superstitions were abandoned, old theories reviewed and remodeled, and old ideas, which could not stand the test of scientific investigation, quietly sunk into oblivion, while medicine did and does live, because it can stand this test. As we follow the course of medicine for the last four or five hundred years we find the same kind of record that characterizes the history of all other sciences, namely, gradual correction of error and improvement in the practice. We find men of the highest order of talents devoting those talents to honest investigation in our science, and giving to the world the benefits of their discoveries and experience; we find at the same time barriers to the advance of the profession, similar in kind, if not equal in degree, to those that clog its progress now; we find, in short, at all times quacks and mountebanks ever ready to avail themselves of the credulity of the people. It is true that as the world advances there must be new methods of humbuggery invented; for the public taste, becoming more and more morbid in this aspect, requires more stimulating frauds, and the new species of quackery that are constantly springing

up, for any hope of success, must each in its turn outstrip its predecessor in audacity and absurdity.

Humboggery, to succeed at the present day, must be monstrous indeed; the public taste demands it, and there are always ready those to furnish it. But the same kind of thing, though not equal in degree, has always existed; and is this the ground on which is rested the question of the truth of regular medicine? Are these the witnesses to be appealed to or to be opposed as rivals to the science of medicine? The evil will no doubt continue to increase in magnitude, until it becomes intolerable; but when this point is reached the people must find out for themselves. In the meantime the members of the medical profession can only prosecute honestly and honorably their calling, for any effort on their part to arrest these evils will at once be met with the cry of persecution and self-interest. The good, however, which has been and is being accomplished stands forth as incontestible evidence of the value and truth of medicine.

In the cause of humanity, we may point to the examples of physicians as in the highest degree noble and glorious. To go no further back than our own times, and in our own country, instances, and those not a few, of the most admirable heroism have been exhibited—heroism not excited by desire or expectation of human applause, but prompted by the highest benevolence and philanthropy. In New Orleans,\* in Philadelphia,\* in Norfolk,\* in our near neighbor, Cincinnati,† and in Sandusky,‡ when all others were flying before the march of death, in the hour of gloom and despair, in the face of danger, before “the terror by night, the arrow that flieth by day, the pestilence that walketh in darkness, and the destruction that wasteth at noonday,” have these devoted members of our profession stood to oppose all their energy and power to the progress of the destroying angel, to soothe the sufferings of the sick, to moderate the agony of the dying, and alas! too often to sacrifice their own lives in the defence of others.‡ The attention of the profession has also been directed to the prevention as well as the cure of disease; and their success in this respect fully attests the value of their services. The plague has disappeared, small pox has been disarmed of its virulence and terror, while the mortality in large cities and in hospitals has relatively diminished, as is proven by the statistics of Europe and America, and longevity has increased. The field of battle, too, has participated in the benign influence of the medical science; wounds, formerly mortal, are cured, and the dangers of a campaign, both from engagements and the sickness incidental to camp life, are greatly diminished. Boards of health have been established, and, under their direction, sanitary regulations have been adopted, which have abated the frequency and fatality of pestilences. All this, and vastly more, has been the work of medicine—of regular medicine—of a science which arose from the necessity of man, which continues because that necessity continues, and which must continue until that necessity ceases to exist; which has been handed down from the remotest periods of antiquity, relinquishing error as error is proven, advancing as light is added to light, and which is opposed to charlatanry and quackery of every sort and description. The good—the great good that it has accomplished, and is accomplishing, is undenied and undeniable; while in its pursuit are engaged vast numbers of the most intelligent, the most scientific, as well as the most honest of men, all of whom are either deceived and wrong, while the followers of the different scisms, the growth of yesterday, or of some one of them, are right; or these same men, intelligent in every other respect, are duped in this; or, honest in all else, are here practicing a fraud upon their fellow-men, if medicine be not a science true, and worthy of belief.

It is very much the fashion of the present day to underrate the great value to our profession of the experience of ages; and well may the en-

\*Yellow fever.

†Cholera.

‡Many physicians died at Norfolk.

emies of that profession foster and encourage such a fashion; but certainly any intelligent mind that will reflect upon the subject must see, and every honest one admit, the necessity of this experience in our calling far more than in any other business or profession. In any and almost every other science, experiments of the same kind exactly, and under precisely similar circumstances, may be indefinitely repeated for the establishment of certain and constant laws, but in medicine it is far otherwise. Our agents, subjects and circumstances are continually varying, so that the lapse of generation after generation is requisite for the repetition of experiment and observation, under circumstances sufficiently identical, to elucidate and establish a single therapeutic rule. Thus, as has been aptly remarked, the past is a giant upon whose shoulders each succeeding generation may mount and gain a view which, without such aid, would be impossible; and thus is it evident how preposterous and presumptuous are the pretensions of him who would undertake in medicine, by the experience of one or even a hundred individuals, to establish a system of practice in opposition to the experience of the past. But that this has been repeatedly attempted the history of the past informs us; at which we surely should not be surprised, since even the religion ordained and revealed by the Creator himself has not escaped the innovating touch of the creature.





