KNOTT (J. Proctor)

Kentucky School of Medicine

Doctorate Address 1890,

Compliments of

By J. Proctor Knott.

Prove all things; hold fast that which is good.
—ST. PAUL.

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DOCTORATE ADDRESS

BY THE

HON. J. PROCTOR KNOTT.*

After a humorous exordium which at once put him completely *en rapport* with his audience, Governor Knott said:

Pardon me, however, if I call your attention at the very threshold to the duties and responsibilities of the profession to which you have consecrated your talents, your energies and your lives. No other calling known among men demands a more absolute self-abnegation than the one you have chosen. No other vocation—not even the sacred ministration of religion itself—requires a more constant exercise of the higher faculties of the human mind, or a more earnest devotion of the purer and nobler attributes of the human soul.

The physician who is thoroughly imbued with the true spirit of the Hippocratic oath not only dedicates his life to the service of his fellow-man, but abjures everything that can impair his usefulness, degrade his profession, or debase the dignity of his manhood. Wherever the plaintive voice of human suffering calls—whether from the palace or the hovel, the sumptuous abode of luxurious ease, or the infectious wards of the loathsome lazar-house—regardless of every consideration of his own security or comfort, unmindful of the tempest that may rage around him, or of the insidious virus of contagion that may steal into the citadel of his life with the very air he breathes, he must go. While the life or death of his stricken patient may hang upon his tenderness and skill, he is the anxious sufferer's lodestar of hope, the repository of his confidence, the custodian of his honor, his friend and adviser in his last dark hour, and the comforter of the loved ones who may gather in impotent anguish about his dying couch.

If there is one of your number who has failed to realize, in all their awful solemnity, the tremendous obligations inseparable from such duties and responsibilities, or who has not resolved that so far as God hath given him the capacity, he will emulate the virtues and rival the skill of the most accomplished of his compeers or the proudest of his predecessors, I would tell him now, in all sincerity and candor, that he has made a grave mistake in his calling—the noble profession of medicine is not for him.

I congratulate myself in the belief, however, that none of you are so ignoble in your aspirations as to be content with the mean promise of the old Spanish proverb: "that in a village where every one else is blind the one eyed man is king." On the contrary, I feel confident that I voice the unanimous sentiment of your class when I say that one who could be degraded enough to take advantage of the unsuspecting credulity of his fellow-man, and ignorantly tamper with his life or his health, with no higher motive than the gratification of a sordid, unholy lust for gain, trusting to

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the kind offices of the undertaker to hide the evidences of his murderous charlatanry out of sight, it would be the basest flattery to call a scoundrel. I am satisfied that there is not one of you who is not inspired by the noble ambition to become, not only the peer of the proudest of your chosen profession, but *princeps inter pares*.

You should remember, however, that such a position among the truly great does not "come by nature," as honest Dogberry supposed to be the case with reading and writing. If you would occupy it, you must win it for yourselves. If you would wear the laurel, you must bear the heat and dust of the arena. You can never scale the perilous pinnacle of professional distinction by standing idly at its base and gazing listlessly at the coveted diadem that glitters upon its summit. You must climb the dizzy height with slow and painful toil, and you had better realize that fact at once.

Let me conjure you, therefore, to set about it now. Eschew this hour and for life, whatever may tend to impair your faculties or impede your progress. Concentrate all the energies of your nature upon the achievement of that one grand object and enter upon it with an invincible confidence in yourselves. Do not mistake me, I pray you. I do not mean the ridiculous self-conceit of the contemptible coxcomb of the profession, who imagines, because he has his diploma, that his number six hat covers all the medical science that has been developed since the birth of Chiron the Centaur. When I counsel confidence in yourselves, I mean courage—a brave, manly unconquerable reliance upon your own exertions; an abiding consciousness that whatever man *has* done, man may do again; the cheerful conviction that Hercules helps those who help themselves. You may do this and still incur no risk of being dazzled by your admiration of your own intellectual endowments. Extraordinary as the natural abilities of some of the more brilliant of your profession may appear to you, the mental disparity between them and yourselves is by no means so great as you may possibly suppose. Axtell or Sunol may be able to go a mile, or ten miles, perhaps, much quicker than a common plug, but the plug will make it in his own time if he keeps on plugging.

Remember, that he who is capable of thoroughly mastering the five fundamental rules of arithmetic may, in time, by patient and persistent effort, solve with facility and pleasure the most abstruse proposition in the highest range of mathematics and make himself as familiar with the sublime machinery of the siderial universe as with the simplest piece of mechanism fabricated by human hands. What he may lack in natural aptitude he may supply by well-directed energy and patient perseverance. Fix your eye steadily upon the bright goal of your ambition and constantly press toward it

> "——Like the Pontic Sea,
> Whose icy current and compulsive course
> Ne'er feels *retiring* ebb, but keeps due on
> To the Propontic and the Hellespont."

I am aware that when you look over the long catalogue of illustrious names that adorn the annals of your profession and consider the wonderful contributions they have made to the sciences of medicine and surgery, you are apt to think that your predecessors have left you nothing to do but to practice what they have taught or, at best, to glean a well-reaped field where there is no glory to be won and no garlands to be woven. Yet, there was never a graver mistake. Your profession, with all its marvelous development in learning and all its astonishing exhibitions of skill, has but barely approached the domain of scientific truth and anchored in some of its smaller inlets. The occasional adventurer who has gone ashore has only picked up a few trifling pebbles that lay scattered along the beach. The territory remaining to be explored is as illimitable as the universe itself.

The saying is trite, indeed, that, of all the great departments of human knowledge, medicine is that in which the accomplished results are most obviously tenta-

tive and imperfect; the one in which the range of unrealized possibilities is most varied and extensive, and the one from which the most astonishing and beneficent returns might be expected if the same patient and intelligent investigation were directed to it that has been employed during the current century in mechanical invention and material development. Let me exhort you, then, to learn, above all things, "to labor and to wait." The world was not finished in a day; the mountain range, whose snow-clad summit is kissed by the earliest gleam of the morning sun, was not the growth of an hour, but the slow product of myriads of ages. The history of human progress is crowded with illustrations of the fact that we are constantly in contact with principles and conditions which have remained unobserved since creation's dawn, waiting for some patient, inquisitive thinker to recognize and develop them—great germinal truths which may become the prolific sources of incalculable benefits to our race; and, for aught we know, the one who will be crowned, by the common acclaim of coming ages, as the greatest of all the discoverers in medical science the world has ever known, from the age of the Asclepiadæ to the present hour, may be sitting at this moment in your midst.

Have you ever traced the tremendous consequences which have frequently resulted from an accidental thought or the most trivial and aimless experiment? Over twenty-five hundred years ago, Thales of Miletus observed that, by rubbing a bit of amber, it was made to attract light objects with which it was brought in contact. Thousands gazed in stupid wonder upon the mysterious phenomenon. It was noticed, three hundred years afterward, by Theophrastus, and, four hundred years later, by Pliny; yet none of them ever dreamed that, in the subtle agency which they supposed barely capable of lifting a feather, there lurked the strength of a sleeping giant, more marvelous in the magnitude and versatility of its powers than all the fabled genii of the East. But a little less than a century ago, by the most trifling of all possible accidents, the attention of one of your own profession was directed to the same occult force under different and totally unsuspected conditions. His observations upon the accidental discovery he had made inaugurated a series of intelligent experiments, and, to-day, electricity is the ready servant of man in all his manifold necessities. Tractable as the homing dove, it carries his messages around the world with the speed of thought. It is the unerring instrument of the enlightened scientist in his most subtle investigations, the indispensable implement of the ingenious artisan in his most delicate handicraft, and one of the most effective agencies of the skillful physician in relieving the sufferings of his fellow-beings. It propels our machinery with the power of a thousand horses, and mocks the effulgence of the noonday sun with the dazzling splendor of its light. And yet how little we know of the real nature or the ultimate possibilities of that wonderful agency which would, perhaps, have remained dormant for ages yet to come but for the initial observations of Galvani!

If I have dwelt at undue length upon this familiar illustration, selected at random from a multitude that might be adduced, I have done so to impress upon your minds, not only the pregnant truth that the wide field of useful labor you have selected teems with rich rewards for your intelligent toil, but the paramount importance of constantly cultivating correct habits of observation and thought. Aristotle was right when he said that "incredulity is the source of all wisdom." You should think for yourselves – closely, carefully, patiently and independently upon everything that may come under your notice, that may be at all cognate to your profession, and never be satisfied that you know enough about anything as long as anything about it remains unknown. Take nothing for granted that may seem inconsistent with correct reason or established facts, simply because some one of acknowledged authority may have said it; and reject nothing as unworthy of your investigation on account of its apparent insignificance, or because it does not seem to square precisely with the preconceived theories of the faculty.

Had Jenner been less observant, or less inquisitive, or too bigoted, or too indolent for investigation, he would probably have been content to prescribe some simple salve for the pustule on the milkmaid's hand, and thousands would be dying to-day of smallpox who enjoy an absolute immunity from that dangerous and disgusting disease. Whether the old Jesuit fathers taught the doctrine that "the proof of the pudding is in chewing the bag" I do not know; but if the doctor who accompanied one of their early missions to Peru had not adopted the custom prevalent among the Aborigines of chewing the bark in order to ascertain the nature of the tree, it is probable that quinine, the *sine qua non* of his more modern professional brethren, would have been postponed for centuries.

In the first year of the present century, Sir Humphrey Davie suggested the employment of nitrous oxide as an anæsthetic in surgery; but as the suggestion came from a layman it was passed unheeded, if not with silent disdain, by the great lights of your profession. Eighteen years later, Michael Faraday called attention to the anæsthetic effects of sulphuric ether, but it was regarded merely as a matter for curious experiment in the lecture-room, but of no practical consequence. Nearly forty years ago, an obscure but inquisitive countryman happened to be present when one of his neighbors was bitten by a rattlesnake. He not only observed the almost instantaneous effect of the poison, but examined the fang, and finding it to be a finely-pointed tube through which the virus had been injected into the circulation of the victim, it occurred to him at once that the effects of an anodyne administered in a similar manner would be equally prompt. He carried the murderous tooth to an intelligent physician, explained its operation, and begged him to have an instrument made by which morphine and other medicines might be similarly applied for the relief of human suffering. The doctor smiled at his rustic simplicity, but now he would consider himself everlastingly disgraced if he should be caught without a hypodermic syringe and a little vial of morphine and atropia in his vest pocket.

I mention these facts not only to illustrate the importance of your paying attention to little things, but to warn you not to reject an apparently reasonable suggestion without proper investigation, no matter from what source it may come. The leading principles taught by "the great father of medicine" himself were those of rational empiricism. He neither attempted nor pretended to form his theories from *a priori* reasoning, but made a careful study of the phenomena of nature, and from them deduced such conclusions as those phenomena seemed to justify.

The celebrated Cornelius Celsus, the cotemporary, if not an associate, of Horace and Ovid, although a follower of Hippocrates and Asclepiades, was not a blind adherent of any sect. He did not hesitate to dissent from the views of his illustrious prototypes where he thought they were in error, and accepted with equal impartiality whatever he found to commend, whether in the teachings of the Empirics, the Dogmatics, the Methodics or the Eclectics; and the immortal Claudius Galenus himself, the most distinguished and the most esteemed of all the ancient apostles of medical science, while strenuously maintaining the superiority of theory over mere empiricism, blended in his own school the empirical knowledge he had derived from the teachings of Satyrus, Stratonicus and Eschrion. In short, the man who makes himself truly great in any calling is the one who has sense enough to know a good thing when he sees it, and decision of character enough to make it useful whenever he may find it.

Whatever you may accomplish, however, in your professional career, you should make up your minds not to be surprised to find yourselves deprived of much of the credit that may be justly due you. In your profession, as in all others—

> "Full many a flower is born to blush unseen,
> And waste its sweetness on the desert air;"

While, on the other hand, full many a name shines upon the envied page of history

with a borrowed light to which it is not entitled, and which its owner himself would not pretend to claim.

Both of these ideas are illustrated, to some extent, in the present fame of the celebrated William Harvey. If that illustrious man could return to the earth to-night, he would probably be astounded to find himself regarded by millions of people, including a large majority of even the more intelligent classes, as the first discoverer of the mere movement of the blood in the human body, a fact familiar to thousands from the earliest antiquity. He was not even the first to suggest the idea of its circulation, which, it is said, was, at least remotely, conjectured by the immortal Stagirite himself, and still more distinctly by Mondino, Berenger and others of more modern times. Whether it was observed by the great Vesalius or not, we have no means of knowing, but it is certain that the leading outlines, not only of the pulmonary but the larger circulation, were taught by his friend and successor, the ill-fated Michael Servetus, more than fifty years before Harvey was born; and still more clearly by others, especially by Harvey's preceptor in anatomy—Fabricius—who pointed out to his pupil the valves in the veins of the extremities, and set his inquisitive mind to investigating their office. If he could stand where I stand and speak to you as I do to-night, he would tell you that he only did what some of you may yet do with respect to some other important but unsettled question in your profession. That he was not willing to sit down, content with what others had ascertained, but that he gathered up all the facts already known, improved upon the knowledge of his predecessors, and, by a series of patient, intelligent and carefully-conducted experiments, elaborated an already existing theory, and demonstrated its truth to the exclusion of a doubt.

I have alluded to the example of this famous physician, however, more especially to emphasize the important truth that, without a certain degree of dissatisfaction with the existing condition of professional learning, coupled with a passionate disposition for honest, earnest, independent and intelligent inquiry, anything like progress in medical science is an impossibility. It is universally admitted that among all the brilliant names that illustrate the earlier annals, if not the entire history of your profession, that of Galen stands pre-eminent. Yet, it would have been far better for the human family, perhaps, if Galen had never been born.

The blind, abject, almost idolatrous deference of his successors to his teachings, with all their crudities and absurdities, postponed everything like genuine progress in scientific medicine for centuries. They regarded his writings as the ultimate authority from which there could be no appeal, and rejected with disdainful scorn whatever appeared to be inconsistent with his *dicta*. In their vain attempts to reconcile the theories of their master with the phenomena of nature, they had but little time to interrogate nature herself, and still less inclination to pursue the study of medical science in those fields in which it can be followed with any assurance of success. Eschewing everything like originality of thought or independence of inquiry, they went on for more than five hundred years, stifling intelligent investigation and killing their patients according to the most approved methods of Galenian science.

I would warn you, however, that if it should be your fortunate lot to make any great discovery or improvement in the practice of your chosen art, or any very remarkable contribution to medical science, you should be prepared for a general howl of dissent from the less profound and more pretentious of your professional brethren until it shall have received the approbation of their acknowledged leaders. I am not fully prepared to believe that the man who first suggested the practicability of carrying corn in both ends of the bag when going to mill, instead of the old practice of putting a rock in one end to balance the corn in the other, was actually mobbed by his indignant neighbors as a dangerous revolutionist; but I suppose it is

really true that Galileo barely escaped a sound roasting for expressing the opinion that the earth moved around the sun, and not the sun around the earth. It is a fact, at any rate, that the disturber of ancient prejudices, or long-accepted opinions, generally raises a storm about his head, and nowhere has that truth been more frequently or more strikingly illustrated than in the history of the medical profession.

When Galen, at the solicitation of many of the most distinguished philosophers and men of rank, commenced a course of lectures in the imperial city upon the anatomy of the human system, the novelty of his teachings and the bold contempt with which he assailed the long-accepted fallacies of his predecessors raised such a tempest of indignant criticism among his professional rivals, that he was not only compelled to abandon the rostrum, but to get out of Rome. And when Vesalius, in the sixteenth century, defied the authority of Galen which was still considered supreme, and destroyed by actual demonstration the credit of nearly all the learning to which the earlier masters had pretended; when he swept away the long-venerated rubbish of ancient error and laid the immutable foundation upon which the splendid fabric of modern medical science has been reared, he brought upon himself a perfect deluge of virulent reproach from even the most distinguished of his professional cotemporaries. And you will perhaps be surprised to learn that among the foremost of his detractors was the celebrated Fallopius, concerning whom, I have no doubt, you have heard a good deal from your diffident but distinguished dean, unless his lectures have been too much abridged by his characteristic taciturnity.

When Harvey first published to the world his beautiful demonstration of the true theory of the circulation of the blood, it is said that there was not a single physician over forty years of age, either in Great Britain or on the continent, who coincided with his views. On the contrary his practice fell away from him, and he was for years the object of the extremest obloquy and abuse. Nor was it until after his experiments had been repeated, and his observations endorsed by many of the most eminent anatomists and physiologists of the period, that his theory was accepted by the far more numerous class of his brethren who were profound in nothing but their ignorance of scientific truth, and their conceit of their own professional culture and ability.

And so when Dr. Ephraim McDowell published his modest account of his first ovariotomy, some eight years after it was performed, it was denounced as a falsehood, and its author held up by the leading medical and surgical writers of the day as a liar and an impostor; and it was not until ten years after that the learned editor of London *Medico-Chirurgical Review*, who had been one of his most malignant satirists, had the grace to thank God that he had lived to ask pardon of the great pioneer surgeon of Kentucky for the injustice he had done him.

It is an ill wind, however, that blows nobody any good; and it is probable that the world is indebted to the intolerance of the medical profession during the fifteenth and sixteenth centuries toward any improvement or innovation in their own peculiar department of learning for the initial step in the wonderful development of astronomical science which has taken place since that period. About the year 1500, a German physician, becoming disgusted with the bigoted deference to the doctrines of the earlier masters, which seemed to render any advancement in the philosophy or practice of his profession an impossibility, abandoned it and devoted himself to the study of mathematics. He soon detected the absurdities of the Ptolemaic hypothesis concerning our system of planets, and revived the theory of Pythagoras, that the sun was the center of a series of spheres, including our earth, which revolved around it, and also upon their respective axes. For thirty years he labored on the demonstration of that sublime truth, and, to-night, the name of Nicholas Copernicus, the great prototype of Kepler, Galileo, Newton, Herschel and Leverrier, remains written upon the star-decked vault of heaven in characters of ineffable glory, to be

hymned by the spheres as long as they shall continue in their wondrous pathway through the skies.

I hope I have made myself clearly understood in urging upon you the importance of thinking and investigating for yourselves. Mark me: I would, by no means, advise you to tamper with the health or trifle with the lives of your patients by reckless or questionable experiments; far from it, indeed. You had infinitely better confine yourselves to catnip, cumfrey and elecampane for the sake of your own consciences as well as for their safety. I simply mean that, while you should act prudently, you should act independently; that you should not regard everything you see in the text-books as absolutely infallible, nor reject anything because it may not be backed by the *ipse dixit* of some recognized authority in the profession.

John of Salisbury, one of the most celebrated scholars and among the wittiest writers of the twelfth century, has left us a sketch, in his Polycraticon, of the average medical graduate of his period, which I beg leave to read to you, in order that you may see the immense difference between them and some of the newly-fledged physicians of the present enlightened day. He says:

"They return from college full of flimsy theories to practice what they have "learned. Galen and Hippocrates are continually in their mouths. They speak "aphorisms on every subject, and make their hearers stare at their long, unknown "and high-sounding words. The good people believe that they can do anything "because they pretend to all things. They have but two maxims, which they never "violate—never mind the poor; never refuse money from the rich."

We find an occasional survivor of this species even in our own age, and if there is one of you who has made up his mind to prostitute his sublime profession solely to the sordid purpose of accumulating lucre, he will be certain to take his place among them, and you will soon find him resorting to all the artifices of the knavish quack in order to magnify his own importance and to multiply his chances for "gathering gainful pillage."

On a county court day, when the streets are full of country folk, he will rush out of his office, fling his pill-bags across his saddle, mount his horse and gallop off on a supposititious call, as though life or death depended on his speed; and, after an hour or two, he will come galloping back again, run into his office, rush out again and scurry away in the opposite direction. He will be a prompt attendant of the most popular church in town, where he will sit "as demure as a harlot at a christening" until some impecunious emissary, whom he has hired for a trifling consideration to do so, hurries in with a most anxious expression on his countenance and calls him out just as the service has reached its most solemn point.

If he should happen to perform some trifling operation in minor surgery, he will have it paraded in the local newspaper as one of the most astonishing feats of the scalpel since the days of Antyllus or Heliodorus; but if he should venture beyond his depth, and cut off the wrong leg, or have his victim die under the knife, he will contrive to have as little said about it as possible, and satisfy the community that the patient's death was only a question of time anyway.

While constantly parading exaggerated accounts of his own superior learning and skill, he will lose no opportunity to injure his absent rival by insidiously depreciating his merits or openly misrepresenting him behind his back. If he should be called to a patient in the absence of the family physician, he will not fail to pronounce the medicine which the doctor has left a deadly poison, and then prescribe the same thing under another name. If a consulting physician should say, in the presence of the patient, that he might safely rely upon the "*vis medicatrix naturæ*," he will whisper to some officious friend of the sick person standing by: "That will kill him quicker than strychnine." In speaking with one of the unlettered multitude about his practice, he will never use a term his hearer will be likely to under-

stand, if he can think of a technical synonym of "learned length and thundering sound." He will never prescribe such a thing as a common poultice, but will recommend a cataplasm of certain ingredients. He will not even suggest a wash of ordinary salt and water; it must be a saturated solution of sodium chloride. As I have already said, however, I am happy in the conviction that none of the gifted and aspiring young men whom I have the honor to address to-night will ever condescend to the low artifices or be content with the degraded level of the vulgar sham, the mere knavish pretender.

Mr. Sergeant Balentyne, the celebrated English barrister, on being asked what was the highest qualification for a Lord Chief-Justice, replied that "a Lord Chief-Justice should, in the first place, be a gentleman, and then, if he should know a little law, it would be so much the better." And so I would say, while it may be necessary in the practice of your profession that you should know something about medical science, it is absolutely indispensable that you should be gentlemen! By this I do not mean that you should simply cultivate the graces and practice the ordinary amenities of courteous intercourse common to polite society, but that you should at all times, and under all circumstances, illustrate the heaven-inspired virtues of honest, earnest, noble Christian men. That you should spurn with indignant scorn the low, mean vices of envy, malice and evil speaking, and never suffer yourselves to be betrayed into anything that can degrade your manhood or cast the slightest stain upon the bright escutcheon of your honorable profession. Above all things let your demeanor toward your professional brethren be candid, manly and just, and your deportment to your patients kind, considerate and conscientious.

I feel that I owe you an apology for having detained you so long, but while I bid you the heartiest God speed in your chosen career, I trust you will permit me to hope, that if you shall at some time in the great unexplored future that lies before you recall a single word I have spoken, by which you have been comforted or encouraged in the attainment of the success to which you aspire, you will not regret the courteous attention you have given me, and for which I tender you my profoundest thanks.