

Lecture, introductory to a course on the principles and practice of surgery in the Jefferson Medical College : delivered November 1st, 1847 / by Thomas D. Mütter.

Contributors

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Mütter (V. D.)

LECTURE,

INTRODUCTORY TO A COURSE

ON THE

PRINCIPLES AND PRACTICE OF SURGERY

IN THE

JEFFERSON MEDICAL COLLEGE,

DELIVERED NOVEMBER 1ST, 1847.

BY

THOMAS D. MÜTTER, M. D. ✓

Professor of Surgery, &c. &c.

PUBLISHED BY THE CLASS.

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1847.

CORRESPONDENCE.

PHILADELPHIA, NOVEMBER 12th, 1847.

PROF. MÜTTER.

Sir,—At a meeting of the Students of the Jefferson Medical College, we were appointed a committee to request for publication a copy of your eloquent and appropriate Introductory Address, delivered before the class.

Yours respectfully,

F. M. PRINCE, Ala., President.	T. B. VAUGHAN, Ala.
A. A. F. HILL, Geo., Secretary.	I. N. HARPER, Florida.
C. F. STANSBURY, D. C.	J. L. DOXEY, Miss.
W. F. JACKSON, Me.	J. J. GAUTHREAUX, La.
J. E. LOTHROP, N. H.	L. TAYLOR, Texas.
F. B. BREWER, M. D., Vt.	R. P. ZIMMERMAN, Mo.
E. H. PARKER, Mass.	R. R. HARDEN, Ark.
C. C. HALSEY, R. I.	W. H. THARP, Tenn.
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W. I. MOORE, N. J.	G. M. GAMBLE, Ind.
D. GRIER, Penn.	E. C. ELLET, Ill.
I. L. ATKINS, Del.	C. E. DAVIDSON, Mich.
A. HARDCASTLE, Md.	J. W. BROOKBANK, Iowa.
A. J. WILSON, Va.	A. JOHNSON, Wis.
W. H. MONTAGUE, S. C.	J. DAWSON, M. D., British Birmah.
W. B. MEARS, N. C.	D. BIRCH, Ireland.
G. R. RAMSAY, Geo.	E. ARNOLD, England.

Committee.

NOVEMBER 15, 1847.

Gentlemen,—I have just received your note in reference to the publication of my Introductory Lecture. Inasmuch as it always affords me pleasure to comply with the wishes of my class, whenever it is in my power so to do, the manuscript of the Lecture is placed at the disposal of your Committee.

Be pleased to present to the Class my thanks for the honor conferred, and believe me to be,

Very faithfully yours,

THOMAS D. MÜTTER.

TO MESSRS. FRANCIS M. PRINCE,
ALONZO A. F. HILL,
C. F. STANSEURY,
T. B. VAUGHAN,
I. L. ATKINS,
&c., &c.,

} Committee.

Faint, illegible text, possibly bleed-through from the reverse side of the page. The text is arranged in approximately 25 horizontal lines. There are several large, irregular brown stains in the center and lower-left quadrant of the page, which obscure some of the text.

INTRODUCTORY LECTURE.

GENTLEMEN :—

In accordance with the established custom, I appear before you this evening for the purpose of bidding you, in the name of the Faculty of this Institution, a hearty welcome to our Halls, and at the same time of addressing a few words of counsel and advice to those among you, who for the first time visit this great city. And although my theme may prove trite, there is yet no subject more fraught with interest and importance to you. Who are you, my young friends? The sons for the most part, of country gentlemen, now thrown for the first time into the vortex of a densely populated metropolis—are you aware of your position? Does the desolate feeling of the stranger induce you to think that you are truly *alone* in the world, with no one to counsel, no one to observe your course of conduct here? Does a feeling of sadness pass over your spirit, when you reflect that a father's warning voice can no longer be heard; that a dear mother's anxious prayer for her beloved son must be offered up in a spot made sorrowful by your absence; that a sister's fond embrace, and endearing look of love and sympathy, are no longer yours? Or do you, rather, rejoicing in what may seem a "manly freedom," rudely thrust aside all tender emotions, and rashly determine, in the vulgar phrase, to "enjoy life!" I trust there are but few among you weak and foolish enough to entertain this latter view of your position here. For let me assure you, that when you imagine no one heeds your steps, many anxious eyes are directed upon them. Yes, that venerable parent who hopes to behold in you the staff that shall support his feeble frame in the days when evening's lengthened shadows and nature's waning powers make manifest, that, for him at least, "a new city, and a new world," must soon be sought, watches over you with fear and trembling, and prays that his son may return to him all that a father's pride can desire; that mother, too, that mother who watched over you in your cradles, taught you to raise your little hands in prayer, followed you

in your infantile rambles, and reared you to manhood in the love and practice of virtue, now turns her anxious gaze towards you here, and with tearful eyes and throbbing heart beseeches Him who has promised to protect the children of those who seek his love, to shield you from all harm, and once more restore you to her arms a virtuous and distinguished son; that sister, too, who even now clings to you for protection, hopes, oh how earnestly, that the wreath of honor may decorate your brow, and gladdens her heart with the anticipated triumphs over idleness, folly and vice, achieved by her noble brother. But others, and possibly those who are to influence your future fortunes even more decidedly than the members of your own household—your teachers, your friends, your acquaintances—all now watch with eager gaze the career of your little bark of life, freighted as it is with so much of the happiness of others. Oh, then, let me beseech you, to take heed how you steer; tempest and storm, rock and quicksand, beset you from the very moment you loosen sail; but rest assured, that prudence, determination, watchfulness, and a firm reliance on Him “who rules and directs the whirlwind,” will enable you to shun them all, and must bring you at last to the haven of *honour, renown, and lasting peace.*

But, gentlemen, are you aware of the true character of the profession you have selected as your occupation for life? Have you estimated the nature of its duties? Know you that to your hands will be entrusted “the frail skiff of human life, and that as its pilot you are expected to guide it in safety through the myriads of difficulties that beset, the perils that threaten it on every side”—that by the world you are regarded as the “seer who looks into, comprehends, pronounces upon, and regulates the laws and phenomena of vitality?” Have you thought, too, of the almost boundless extent of its studies; how it brings him who aims at a high position in its walks, in close connexion with almost every department of human knowledge? Have you reflected, too, upon the character of the age in which you live—an age of progress and improvement in all things? Never in the annals of this earth, with all its chronicled glory and its ancient renown, never has it witnessed a time so interesting, so remarkable as our own. “I know,”

remarks an eloquent writer, "we may confine our views, and discover, perhaps, in the histories of various nations, specific acts and achievements more wonderful and nearer perfection than any we can boast. Cheops and Cephrenes may have built monuments more huge than any around us—Praxiteles and Phidias may have carved finer statues than any that grace the pedestals of modern art, and Apelles may have wielded a magic and unrivalled pencil—Pericles may have gathered around him mightier intellects and cultivated a richer taste, and reared trophies more glorious than any that adorn a modern state—Demosthenes may have kindled a loftier eloquence, and Homer a deeper sublimity, than any who now speak in our assemblies, or recline upon Pindus—Cicero may have thundered in the forum, and Augustus swayed in the capitol, with a power and a majesty that succeeding times have never equalled; all this we grant. But to go further than this, and to say that the ages of antiquity placed humanity higher in the scale of mental and moral progress, than the present, I cannot,"—and this is true. "We must withdraw our attention from singular achievements and isolated acts, from limited and narrow sections, and look abroad upon the wide spread race of mankind, and the general aspect of human society. When, I ask, when were there ever such great principles of *truth, and love, and melioration* at work as at the present day; when has philosophy attained such enlarged and liberal views; when has the science of government, been so well understood and practised; when has religion moved among men in such purity, and upon such missions of salvation and mercy, as at this very time?" And shall our profession remain stationary, when all else is moving onward? Will *you* who are destined to be the pillars upon which the medical science of this country is to rest, submit to be pointed out hereafter as laggards in the race? Will you, by slothful indulgence, wasteful, sensual gratification, ignoble and puny contentedness, which readily *receives* but never *gives*, let pass the golden era? Will you not rather "gird up your loins" to the toil, and by your diligence, morality, and laudable ambition, wreath a new chaplet of glory for the land of liberty and equal rights? Show to the world, that if in politics, religious tolerance, and

social virtues, America stands among the foremost of nations, she may also boast of her medical science.

Are you prepared to enter upon such a profession as ours so full of responsibilities, so exacting in its demands of one who expects to be considered a bright star amid the glorious galaxy that now adorns our age? If so, listen to the few words of counsel and advice I shall now offer, and by learning more intimately what constitute the "requisites for success" in the medical student, strive diligently to acquire them, if not possessed, or to improve those with which Providence may have endowed you.

1. Among the requisites for the successful prosecution of our art, there is scarcely one of more importance than the possession of a *sound constitution*—at least in the outset of your career. It has been well observed by a distinguished veteran in our ranks, "that no axiom is more clearly established, or more generally admitted, than that which declares, that all that we practically are, and therefore all that we can accomplish in our present state, is, for the most part, the result of our organization. If well organized, and in health, we are in a condition to be comfortable, prosperous, and useful; but if our organization be defective or unsound, the reverse is true. To our organization we are as exclusively indebted for the character and amount of our intellectual and moral qualities, as our physical; as positively so for the strength and activity of our reason and virtue, as of our muscles and joints. However paradoxical this may appear to some, or perhaps heterodoxical to others, a thorough knowledge of the physical man testifies to its truth. The brain is as truly and as obviously the organ of feeling, sentiment, and thought, as the glands are of secretion, and the muscles of motion. A large, healthy, and well formed brain, (if in proportion to the rest of the body,) therefore, gives strength of intellect and soundness of virtue to the philosopher and statesman, as certainly and directly, as large, healthy and well formed muscles and nerves give force to the arm of the smith or the leg of the dancer! The wisdom of *Ulysses* was no less the result of organization, than the swiftness of *Achilles*; and the morality of *Seneca*, equally so with the strength of *Milo*. One person differs from another in his intel-

lect, not because his *spirit*, or his *principle of mind* is different, but because he differs in his organization! Nearly all that is requisite to be learnt, therefore, to insure the highest improvement of the human race, is how to bestow on individuals the best organization. Carry this improvement to the highest attainable pitch, and man is as perfect as he can be made, for he is now susceptible of the highest moral and intellectual cultivation." Were this point born in mind, by those who promulgate "systems of education," examples of puny intellect would become less common; and valuable time now devoted to the senseless and futile projects of teaching the mind without reference to the condition or degree of development of the organs with which it has to work, would be saved. But do not suppose that in what I have said, I desire to favour in the least the doctrine, that the phenomena of man's life are the result of his mechanism *alone*, and that this mechanism is the effect of chance,—far from it; such a theory is but the day dream of a driveller, transient as its author, baseless as a shadow. All that I wish to urge is simply this, that for the accomplishment of every great mental achievement, physical qualifications are of the highest importance. The old axiom, "mens sana in corpore sano," is full of wisdom, and if there is one among you so unfortunate as to possess a feeble constitution, let me counsel him as one who has dearly proven the misery of such a possession, to abandon the study of medicine at once, or at least until vigour and tone have been imparted to his frame. Without health, the professional life of a man is one long, dreary night of suffering and disappointment.

2d. Celsus long since urged the possession of certain physical qualities as essential to the surgeon. He must be *young*, *adroit*, *ambi-dextrous*,—and he adds a moral attribute, which I trust few of you possess—*without pity*. So far as the mere mechanical portion of our art, "quod in therapeia mechanicum," is concerned, the views of Celsus may be considered as partially correct, but fortunately the absence of his "requisites," by no means forbids the acquisition of great surgical skill, as a mere operator. Youth, adroitness, having the equal and free use of both hands, are all very convenient, but many an old surgeon is still a good operator, many a

clumsy one both *safe* and *sure*, and as to being ambidextrous, few can boast of this; and often, many who can, as Riverol well observes, have in fact *only two left hands*. If then in the commencement of your career, and the physical requisites of Celsus are not in your possession, there is no ground for despair: for at best, they are *useful*, rather than *essential*. His declaration, that a surgeon should be “without *pity*,” is most fallacious; for surely there is no profession, in the performance of the duties of which such frequent and urgent appeals are made to our sympathy, and he must be more than man, or worse than brute, who can contemplate unmoved, the agony and torture to which his patients are so often subjected. No, gentlemen, I would say to you, *cultivate your sympathy*, but learn to *control* it. Never exhibit *nervousness*, nor allow yourselves to be betrayed before your patient into expressions of horror at the approaching operation. Such conduct is no indication of sympathy or pity, and is often highly detrimental. A calm, determined, yet gentle demeanor, is that which you should endeavour to acquire, and beneath it, the deepest and purest sympathy,—a sympathy that forces you to spare nothing, from which good to your patient may be deduced, is readily concealed.

3d. But these *physical* attributes are relatively much less important to the student of surgery than the possession of a sound and liberal preliminary education. I fear much, that some among us are becoming less and less mindful of this requisite in those who are to figure as the representatives of our science.—“The polite learning, the intellectual refinement and erudition which of old was commended as that which “*emolliet mores, ne sinit esse feros*,” and was considered essential to qualify one for the manly, graceful, and satisfactory discharge of medical duties,” is now, I repeat, but too seldom thought of, and some even go so far as to assert that the more ignorant a physician is, the better is he qualified for success in some parts of our land! This subject of *preliminary* education, is a most interesting and important one, but the limit of an hour admonishes us to be brief in what we have to say on this head. Now what is meant by a good “*preliminary* education?” This question may, and has been answered in a

dozen different forms, and we must agree with the celebrated Dr. Dick, "that no term in our language is more frequently abused and misapplied than that of *education!*" "By the great majority it is considered as consisting merely in the acquisition of pronunciation, spelling, and grammar; of writing, casting accounts, and the knowledge of languages, and these acquisitions are considered of value, chiefly as they prepare the individual for engaging in certain secular employments, and are instrumental in procuring his subsistence." By others it has been confined to the communication of the elements of thought and the improvement of the intellect; and by a comparatively small number it has been regarded chiefly as the formation of character and the cultivation of moral habits. The committee of our recent Medical Convention considers "a good English education, a knowledge of natural philosophy, and the elementary mathematical sciences, and such an acquaintance with the Latin and Greek languages as shall enable the student to appreciate the technical language of medicine and read and write prescriptions," as a good preliminary education. But surely this is a most meagre requisition. To ask a student of medicine to understand as much Latin and Greek as shall enable him to write correctly a prescription, is to exact a degree of knowledge that belongs to every apothecary's boy in the land, and I regret most deeply that the standard should have thus been fixed, by those who were so competent to do justice to the cause of education.

For my own part, gentlemen, I go for the highest attainable cultivation of the young man who is about to study the honorable profession of medicine; and by this I mean not only instruction in the ordinary elements of a popular education, so called, but also in "every means and mode of intellectual improvement by which intelligent beings may be trained to knowledge and virtue, qualified for acting an honorable and respectable part on the theatre of this world, and prepared for that immortal existence to which they are destined." Such is the definition of a good preliminary education given by Dick, and such is the one I adopt. I am aware that this is a high standard, and that many may smile and call it Utopian, and that some will even contend that the human intellect is

already too much hampered and trammelled by our existing systems; the spontaneous growth of the mind being, according to their theory, something like that soil of the golden age, when, according to the poet,

“Immunis, rastroque intacta, nec ullis
Saucia vomeribus, per se dabat omnia Tellus.”

We are also told that young men prepared only so far as the recommendation of our Convention goes, “cannot be found!” And is it so? Alas, I am afraid that the assertion carries with it but too much truth. But shall we on this account sit still and fold our arms, and lament over the degraded condition of our youth, and make no effort to stimulate them to exertion? No, gentlemen, no. I grant that as yet the education of our students is defective, and that many reach the *Doctorate* who are better qualified for the *plough*; but shall it always remain thus? Heaven forbid! But how is the evil to be remedied; does it rest with the *schools* to accomplish this mighty task? I would that I had an answer ready for the first portion of my query! It appears to me, however, that the first step in the great reform must be taken by the *country practitioners, and those who receive pupils into their offices*. If when a young gentlemen presents himself for admission, the intended preceptor would take the trouble to examine him as to his literary and scientific acquirements, and if found wanting, to assume the responsibility, and say to him, my young friend, go back for a year or two to some good literary institution, and prepare yourself for the abstruse and noble study of medicine, then come back to me and I will receive you with pleasure, much might be accomplished; for there is scarcely a youth in a thousand who would refuse the excellent advice, and by such a course the eyes of the community at large, would be opened to the difference between an educated, scientific physician, and the graduated ignoramus.

But how can the colleges aid the reform? By increasing the facilities for medical instruction; by stimulating in every possible manner, the zeal of their students; and by exacting rigidly the requisites of a highly educated physician in the examination; and gentlemen your own school is willing and

ready whenever a fitting opportunity offers to lead the way. I am sure I speak for every colleague as well as for myself, when I say that although differing with some of our friends as to the precise mode of bringing about "*reform*," so called, we are yet willing and anxious to do everything in our power to elevate the standard of our profession. Yes, gentlemen, *Excelsior, Excelsior*, higher, still higher, is our motto, and beneath this noble influence we promise you a firm, united, continuous effort, in our future career.

But the question, "*cui bono*," may, and often is propounded in reference to the acquirement of literary and classical information. "In the world no one talks Greek or Latin, and at the bed-side of our patients we shall not be expected to demonstrate the propositions of Euclid, or explain the phenomena of hydrostatics and optics." The motives of human action are better learned in that great practical school, the world, than by pouring over the theories of metaphysics; and all the rules of Quintillian, Rollin, or Blair, will never aid us in our practice! Why then shall we consume our nights and days in the acquisition of that which is to be of no practical utility hereafter, and which brings with it no practical advantage? Beware, gentlemen, beware of the tempter. These are the suggestions of sloth, the most insidious, persuasive, and dangerous of deceivers.

"Vitanda est improba Syren desidia."

If you cannot close your ears against her insinuations, strengthen your understandings to triumph over her sophisms, and nerve your courage to resist her wiles. Be sure, if you submit to her benumbing influence, the time will come when with bitter, but perhaps unavailing anguish, you shall bemoan your folly.

But many of you who have already commenced the study, and been occupied in it some time, and now feel the force of my remarks in reference to a want of proper education, may say, what am I to do? Shall I abandon the profession at once and seek some other employment? To those thus situated, I answer *no*. Have you not heard of the *self-educated men*? Of these intellectual giants who struggling in the onset, under difficulties the most formidable, have by industry and care ulti-

mately hurled them from their shoulders, and come forth to charm, enlighten, and dazzle the world! In every department of science, and art, and literature, illustrious examples of what may be accomplished, by a fixed and determined effort to overcome the clogs of neglect of early mental culture, abound.

Demosthenes was the son and apprentice of a blacksmith; *Virgil*, of a baker; *Tamerlane*, of a shepherd; *Moliere*, of an upholsterer; *Massilon*, of a turner; *Rousseau*, of a shoemaker; *J. J. Rousseau*, of a watchmaker; *Rembrandt*, of a miller; *Shakespeare*, of a butcher; *Romilly*, of a goldsmith; *Sir Edward Sugden*, of a hair-cutter; and rare *Ben Johnson*, of a mason. *Collins* the poet, was brought up a hatter; *Gray*, a scrivener; *Beattie*, a farmer; *Bloomfield*, a tailor; *Tom Moore*, carried sugar and tea in parcels for a grocer; *Aken-side*, and *H. K. White*, were brought up by butchers; *Thompson* was educated by charity; and *Burns* composed songs, any one of which is immortality, between the stilts of a plough.

Ariosto, and *Tasso*, and *Dante*, and *Petrarch*, were peasant boys, and studied while they toiled in the fields. *Galileo*, and *Kepler* were poor lads. *Watt*, and *Fergusson*, and *Arkwright*, simple mechanics by birth and profession, accomplished by industry and perseverance "revolutions in science surpassing all the revolutions in politics that ever thundered through the annals of time!" And who were *Franklin*, (he who tamed even the lightning's flash,) and *Fulton*, and *Fitch*, around whose names a steady and gorgeous halo of glory must for ever shine?—humble mechanics, toiling for their daily bread, and snatching a moment here and there for the cultivation of science and literature. Who was *Sir H. Davy*; who was *Michael Faraday*?—the poorest of the poor. Have not many of the most enlightened statesmen of Europe and this country sprung from the most humble origin? Who was *Thiers*, the greatest statesman and historian of modern times? A poor, ragged, little Frenchman, without friends or fortune, but with the industry of an ant, and the genius of a giant! Many of England's noblest sons of later times, have been poor and humble lads; and when one of her greatest and most distinguished law lords, was asked for the secret of success at the

Bar, what did he say? Did he cite, *high birth*, or *family influence*, or *wealth*? No, but declared that the great cause of success was the possession of "*poverty and parts!*" And who was *Andrew Jackson*, that man of *iron nerve* and *inflexible resolution*?—the son of a poor Irish peasant. Who was *Daniel Webster*, the orator, the statesman, the leviathan in intellect?—the son of a small farmer. And who was *Henry Clay*, that glorious man, whose name shall be no transient meteor, that for a moment illumined our sphere, and then passed away for ever, but rather a calm, serene, abiding star! Who was this gifted, this virtuous man?—The "Mill-boy of the slashes of Virginia!"

But let me hold up to your view a few of those in our own profession, who, though poor in this world's goods, have yet found time and opportunity for the cultivation of not only our own science, but also to distinguish themselves in almost every department of literature and art. Who was *John Hunter*?—a cabinet maker. Who was *Charles Bell*?—a watch-maker. Who was *Dupuytren*?—an apothecary's assistant in the army. Who was *Velpeau*?—a working blacksmith. And among us, one of the purest, and best of men, while at the same time, one of the best surgeons,—the late *Dr. Parrish*,—was a hatter.

Let it never be said that the emergencies of a professional life, will leave no time for literary pursuits, or the attainment of literary excellence. To whom, for example, is practical philosophy indebted for the first great work explanatory of the influence of the external physical agents, called *climate*, upon the bodily structure, dispositions and intellectual aptitude of mankind? The *Sage of Cos*; and his work, to use the language of another, "remains to this day a fit reference for the statesman and legislator, who never can discharge with ability their high trusts, if ignorant of the problem which he so instructively solves!" Who follows next on the list of those to whom philosophy is so deeply indebted?—*Aristotle*, the physician, the naturalist, the dialectician, the profound critic, the successful opponent of the "vague and wild imaginings" of the schools of *Athens* and of *Alexandria*. Ages passed away, and the philosophy of this great physician was that of nearly the whole world, when behold another luminary, equal if not surpassing in brilliancy

the Grecian sage, improves upon his propositions, and establishes the basis of that system which all acknowledge to be as near the truth as is possible. It was the knowledge of medicine, that enabled *Locke* to establish his philosophy, and *Reid*, *Bacon*, and others—also physicians,—to confirm it by subsequent observations. So ably was this done, that *Descartes* proclaimed, “if we are to have a correct philosophy of the human mind, it must come from physicians!”

Who have been the most successful naturalists of their days? Medical men,—many of whom were most laborious practitioners; and it is certainly not claiming too much, when we declare, that to their efforts is mainly due the present state of perfection to which this department of knowledge has arrived. The names of *Aristotle*, *Gessner*, *Daubenton*, *Vallesneri*, *Haller*, *Blumenbach*, *Cowper*, *Vic D'Ayzer*, *Bonnet*, *Jurine*, *Dumeril*, *Broussonet*, *Lamarck*, *Jenner*, *Hunter*, *Home*, *Bell*, *Morton*, *Holbrook*, *Beck*, *Gray*, *Torrey*, *Pickering*, and others almost as celebrated, will ever remain as brilliant illustrations of the compatability of the two sciences, and the support afforded by each to the other. What, for example, raised *Jenner* to the high position he occupied as a benefactor of the human race? His love for natural history, which, leading him to frequent and close observation of the diseases, as well as the habits of animals, enabled him to make a discovery that has conferred the most lasting benefits upon mankind, and established for its author a never-dying fame.

To whom are we indebted for most of the great principles in surgery, which govern even us in our day?—To *John Hunter*, the *physician* and *naturalist*, whose name shall endure as long as time itself.

To medical men too, is *Botany* greatly indebted. That wondrous giant in intellect, whose name stands at the head of the list of those who first brought “order out of chaos,” in the science of Botany, was, at the time he published his most valuable works on Botany, professor of medicine at Upsal. The name of *Linneus* is familiar to you all, for who that has entered the threshold of medicine has failed to encounter it at every turn? *Malpighi*, the anatomist, *Dutrochet*, *Jusseiu*, *Gmelin*, *Willdenow*, *Hasselquist*, *Pereira*, *Wood*, *Griffith*,

and *Carson*, physicians, have nobly striven in this department, and a host of others might be cited, as able collaborators in the same field.

In the more fixed and certain sciences, too, physicians have been pre-eminently distinguished. The most wonderful truths, proven to be such in the science of *astronomy*, were first promulgated by a physician, the *magnificent Copernicus*. The inventor of the analytical and differential calculus, was the kind physician *Bernouilli*. In *chemistry* physicians have been the chief labourers. "Behold," observes an eloquent writer, "that group of children gathered together around the fermenting vat of a brewery, upon one of the populous streets of Glasgow, amusing themselves by lighting their temporary tapers of shavings and straws, and shouting with delight on observing how, as by magic, those lights are extinguished the instant they are projected beyond the edge of the vat. Thousands are the passers by, each stopping for a moment to regard them, for who that is toiling, care-worn, along the path of life, will not stop a moment to catch the exhilaration of the merriment of childhood, and pass on. But here comes the philosopher, the man who has been disciplined in the school of the natural sciences; his open ear catches their shouts; he joins himself to the group, and enters into their sports. The observation of that fact, sets his powerful mind at work, and on the spot he draws a conclusion pregnant with the richest benefits to science, viz., that the air arising from the fermenting materials is different from common atmospheric air. A new direction is given to his studies, and shortly he appears before the world, the discoverer of *carbonic acid gas*. And who was this philosopher?—*Dr. Black, the physician!*

The works of *Stahl*, of *Foucroy*, of *Bartholett*, of *Marcet*, of *Wollaston*, of *Thomson*, of *Rogers*, and of our own *Dr. Bache*, proclaim in trumpet tones, the indebtedness of chemistry to the practising physician.

In every department of literature, too, we find the physician nobly striving for the mastery. Who more successfully wooed the muses than *Haller*, the first physiologist of his day; whose invocations to genius and liberty, and all else that is noble, are more spirit-stirring than those of *Akenside*, the author of the pleasures of the imagina-

tion, and physician in chief to his Queen? The instructive pen of *Armstrong*, too, often distils the "balm of poesy;" and the names of *Percival*, of *Holmes*, of *J. K. Mitchell*, and of *Godman*, among us, will be handed down to posterity as brilliant illustrations of the fact, that greatness in medicine is often closely allied to the enthusiasm of the Poet.

Who but the physician could have portrayed the peculiar characteristics of mankind so touchingly, and so truly exhibited in the "Deserted Village," and the "Vicar of Wakefield!"

Who but the physician could have depicted in colours so vivid that the sketch fairly startles, the working of passion, the energies of despairing nature, and the terror of physical suffering set forth by *Smollet*, in his numerous writings? Who but the man intimately acquainted with the workings of both mind and body, could have penned the biting sarcasm, the withering reproaches of *Rabelais* and *Guy Patin*?

Time will not permit me to extend this list much further, nor to enumerate those physicians, who have been active and distinguished members of almost every associate science. I could tell you of *Good*, the learned translator of *Lucretius*; of *Sir Thos. Brown*, the author of the "*Religio Medici*" and many other works; of *Camper* and *Masgagni* distinguished for their abilities in the fine arts, as well as in medicine; of *Cato*, and *Celsus*, and *Pliny*, versed in agriculture, natural history, and medicine; and of *Cabanis*, the legislator, the councillor of state, and the able physician. In our own land, I might tell you of *Rush*, of *Wistar*, of *Hosack*, of *Warren*, of *James*, and of *Godman*, all distinguished for their pre-eminence in literature as well as medical science, and who have gone to receive the "rewards for the deeds done in the body," and I could point you to others with whom it will be your privilege this winter to associate, from whose efforts, science, the arts, literature and medicine, have received rich and invaluable contributions.

And are you, my young friends, less gifted than your predecessors? Let no one sit down in despair and say, "I have not the abilities of my neighbours, and it is needless for me to exert myself in competition with them!" Had *Velpeau*, when a poor blacksmith, thus thought, think you that he could

have reared for himself a reputation, "*more lasting than brass, more brilliant than silver?*" If you would know what your powers are, you must try them. Industry is necessary to their development; and the faculties of the mind like those of the body, go on improving by cultivation. It is impossible for you to form a right estimate of yourselves early in life, nor can you be rightly estimated by others. From this time forth, then, determine to devote an hour or two each day to the acquirement of knowledge apart from your mere professional studies. This diversity of occupation serves to keep all your mental faculties in wholesome exercise, and prevents narrow mindedness and prejudice by enlisting your sympathies in those around you. Be not afraid, as has been urged, of becoming too learned and refined for those with whom you will hereafter associate. Rest assured, that the more learned and refined, the more elevated and distinguished will be your position in every land, even in the midst of the wilderness or the rudest resort of mankind. Well has it been said, "that literature and science, far from injuring society, are the great instruments of ultimate refinement and exaltation, and should be universally cultivated. They lift the mind above ordinary life, give it respite from depressing cares, and awaken the consciousness of its efficacy with what is pure and noble. In their legitimate and highest efforts, they have the same tendency and aim with Christianity; that is, to *spiritualize* our nature. They carry the mind beyond and above the beaten, dusty, weary walks of ordinary life; they lift it into a purer element, and breathe into it a more profound and generous emotion. They reveal to us the loveliness of nature, bring back the freshness of early feelings, revive the relish of simple pleasures, keep unquenched the enthusiasm which warmed the spring time of our being, refine youthful love, strengthen our interest in human nature, expand our sympathies over all classes of society, knit us by new ties with universal being, and through the brightness of their prophetic visions, help faith to lay hold on the future life." But in thus urging you to the pursuit of science, it becomes my duty also to caution you as to the character of the works first taken up for investigation. No one can be

ignorant of the fact that when once the thoughts of a man are committed to the world, through the medium of the press, no matter how pernicious or how destitute of morality they may be, they are utterly beyond his control; as well might he attempt to stay the whirlwind or arrest the unpoised avalanche. How great then is the responsibility of the author.

“ Words, indeed, are things,—a small drop of ink
 Falling like dew upon a thought—producing
 That which makes *thousands*, perhaps *millions*, think :
 ’Tis strange, the shortest letter which man uses,
 Instead of speech, may form a lasting link
 Of ages. To what straits old Time reduces
 Frail man, when paper, e’en a rag like this
 Survives himself, his tomb, and all that’s his !”

Often is the destiny of an individual determined by the first book placed in his hands. Impetus is thus given to genius which obstacles cannot resist, or adversity impede. It is said that the poetic genius of Byron was first aroused by one of the amorous ditties of an inferior poet. Yes, a single line, a single thought, gave impetus and direction to that giant spirit! And oh, who can say, had but some other, some happier influence been received, Byron had been a different character, and that wing which soared so high, had shaken forth some other influence than that of pestilence and death. Never, perhaps, did an individual display a more consummate knowledge of the tremendous power which an author can exert, than did Voltaire, when, with the malignity of a *fiend*, he boldly avowed his determination to “crush the wretch,” and by his single arm to destroy the fair fabric of Christianity, erected, as he sneeringly said, by the “twelve poor fishermen of Galilee.” By means of books and pamphlets he sent the poison of his sentiments through the length and breadth of the land; and in a few short years, his country wrote over her burial places: “death an eternal sleep.” *The sunlight of the Gospel was shut out, and the “Goddess of Reason,” usurped the place of Jehovah!*

Who can contemplate without shuddering, the influence exerted upon our race by those *giants* in intellect, but *pigmies* in wisdom,—Paine, Volney, Hume, and La Place. The latter, when asked by Napoleon why he had not mentioned God in his system of the universe, replied, “because I could dispense

with that hypothesis." Well may we exclaim: "Poor learning, poor philosophy, that would destroy belief in an intelligent Providence, who directs, rules, and provides for the universe. It may conceal its withering influences under tenets evoked from the misty depths of speculation, or clothed by poetry in hues of summer light, but it is after all a noxious principle. It shatters at once the basis of true religion, quenches the fires of living faith, interrupts the soul's communion with its God, and leaves it desolate, and tossed from doubt to doubt."

How marked is the contrast between these authors, and those who, like the sacred scribes of old, were deeply imbued with the spirit of him, "who touched Isaiah's hallowed lips with fire," and like him consecrate every place of their sojourn. To such will ever be erected,—

" Shrines,
Such as time's keen tooth may never touch ;
Cenotaphs,
Which have no dread of the fierce flame,
That wreck the solid world."

In your literary studies, then, keep a steady course in the pathway of morality and virtue.

I need not dwell upon the character of the studies strictly professional, to which your future time and attention will be chiefly directed here,—these will, on the proper occasion, be fully elucidated by those to whom the task has been allotted, and I shall therefore pass on to the consideration of some other requisites of the student of medicine.

While a good physical conformation, and a fair preliminary education, are essential to every one who aims at the attainment of a high position in our science ; there are other agents of great consequence, and often even more efficient in securing professional success.

4th. *A love for the profession itself, an ardent passion for its objects, a keen relish for its studies, and a high estimation of its elevated character,* should be cultivated by all its votaries. It has been well observed by Edmund Burke, in his celebrated "Reflections upon the revolution in France," that "the degree of estimation in which any profession is held,

becomes the standard of the estimation in which the professors hold themselves. As a natural consequence of this the individual prescribes to himself a course of conduct, and a general demeanour to answer the expectations which he is aware are entertained by others with regard to him." Now in no profession does the principle apply with more force than in ours. Esteem it yourselves, love it for its own sake, and you will so act as inevitably to secure, not only competency and renown for yourself, but as shall also add lustre and dignity to your vocation.

5th. Again, *habits of industry and labour* are essential requisites for one who looks forward to professional success. "Every day is indeed a little life; and our whole life but as a day repeated!" how important then does each moment of time become, how essential to success its cultivation. Many of us are too prone, like the camel, to lie down under our burthen—to rest satisfied with the bare accomplishment of our duty, to trifle away our moments of existence, and become

"Dull as the fat weed
Which rots itself at ease on Lethé's shore!"

But, my young friends, if we desire distinction, we should recollect that this world is no place of *rest*. It is not the place of rest, I repeat, but for effort, steady, continuous, undeviating effort. Our work is never *done*, and it is the day dream of ignorance to look forward to that as a happy time when we shall have nothing more to wish for, and nothing more to accomplish. Your first effort then should be to acquire a habit of study and occupation, and the task which in the beginning, was irksome and insipid, soon becomes a "*second nature!*" The impulsiveness and impatience belonging to your time of life, naturally make the degree of exertion and industry requisite to your proper advancement any thing but a "labour of love." *Indolence* presents herself to us all in a thousand seducing forms; *Industry*, on the other hand, is of a harsh and crabbed aspect. "The one seems to point to a smooth and flowery path, the other to a rugged and painful ascent; but around that seducing path lurks all the ill of life, and that toilsome ascent, at every step, opens

wider and wider a broad and beautiful prospect, and leads eventually to those elevations to which the noble spirit aspires!" "Place no dependance on your own *genius*, even if you possess it. If you have great talents, industry will improve them; if you have but moderate abilities, industry will supply their deficiency—nothing is denied to well directed labour; nothing is to be obtained without it." Let me then urge upon you the cultivation of a deep and ardent zeal in the prosecution of our noble profession. Its fount is ample; its stream abundant; its waters living! Come then, one and all, and drink deeply. No timid votary who stands trembling on its brink, and fears to put forth his cup—no sluggish drone, with energies so feeble, that even the sparkling element, as it leaps in joy on its onward course, fails to arouse his interest, need expect to slake the thirst for knowledge, which burns even in such as they. But oh, how refreshing, how glorious the gratification to him, who with bold heart, and bounding step, leaps at once into its midst. Energy is strengthened, zeal increased, healthful ambition excited, and success the most dazzling, speedily obtained! Again I say, drink deeply.

6th. *Steadiness of purpose*, is also a most invaluable attribute in the surgical pupil. There is scarcely a quality which so much dignifies human nature as consistency of purpose. And how rarely is it met with. Most persons are naturally endowed with a want of resolution to complete any task undertaken, an instability of purpose, an inherent desire for change, long since denounced by the wisest and best of teachers. "Unstable as water, thou shalt not excel," is a maxim, that should be engraven on the heart of each one of you; and rest assured that without a fixed determination to succeed, the goal of your hopes and your desires can never be attained. Difficulties will undoubtedly beset your path, obstacles apparently insurmountable will oppose your progress,—faint and weary, you may be ready to exclaim, "I must yield," but oh, let me beseech you,—let me beseech you, to pause ere you submit. Recollect, that in the attainment of all that we can consider worthy our efforts, such is invariably the case. *Resolve* then to adhere to your original purpose; be not faint-hearted, or fickle; difficulties, like the visible horizon, will fade as you advance; courage will take the place of despondency, and

strength that of weakness, until at length crowned with success, enjoying the praises of the good, and the admiration of the great, your lamp of life having burnt steadily and brilliantly for the welfare of others, will at last be extinguished amid the blessings of the world.

7th. *Good manners.* Though much of the healing art depends upon the administration of drugs, and the precepts of Hygiene, something more is wanting to make a perfect, or even a tolerable practitioner. This something, is a *good deportment*, without which the most shining abilities will often be the source of little satisfaction to their possessor. It might seem a work of supererogation to state, that a surgeon should have a decent manner, did we not see this essential point so frequently, and so grossly overlooked by those who are aspirants to our profession. Coarseness of manner and violence of language, are not to be considered as trifling failings, nor as slight hindrances to professional success. How many a pang is shorn of its terrors by the kind expression, or cheerful smile of the physician; how many a sorrow is soothed, how many fountains of grief dried up; how many disturbed spirits quelled and subdued by the gentleness of manner, the unfeigned interest, the expressed sympathy of the gentle and humane physician. Besides, most of the examples of successful boorishness are deceptive, for generally, the obnoxious manner has been concealed or mitigated until reputation was established, and was then brought out in higher relief by the intoxication of prosperity. In many instances no doubt the mistaken student wishes us to suppose that the rough *arillus* is superinduced over the natural amenity of his manner, and that in reality he is a very gentlemanly man, but alas, a censorious world will too often cry out with Martial,

“Pauper videri cinna vult, et est pauper.”

8th. *Good temper.* We are often charged, gentlemen, as a profession, with the “sin of wrangling!” And I regret that some foundation exists for the allegation. The disagreement of Doctors, has indeed become proverbial, and the stigma can only be removed by each one endeavouring to show to the world that he at least belongs not to the guilty. It is difficult perhaps to trace the cause of our differences

of opinion, but it is usually referred to the circumstance that our interests are continually clashing. Be this as it may, you may rest satisfied of the fact, that if successful, your peace of mind will often be sorely tried. It would be well for the profession, if each one would wear in his heart and govern his actions by the rule of the celebrated *Bernard*, who declared on his dying bed that "he had never willingly slandered another; and if at any time one had fallen, he had hidden it as much as possible!" How much hatred, malice, and strife, would be prevented if each of us determined to "do likewise!" But this we cannot expect, and envy, jealousy, disappointed ambition, personal hostility, and slanderous detraction you must encounter. But even here, struggle to maintain your good temper, and let your disdain of detraction be such, that instead of suffering it to blight and embitter your tranquillity, only teach it to become a spur to virtue.

But especially should you, my young friends, strive to observe the Christian rule of *Bernard* in reference to our *sister Institutions*. Bear in mind, the beautiful sentence,

" facies non omnibus una
Nec diversa tamen ; qualem decet esse sororum."

which has been thus happily rendered by the distinguished Bishop Doane, in reference to our literary establishments,

They seem not one,
And, yet not two,
But look alike
As sisters do.

Let then our "sister colleges" receive from us that kindness and courtesy which a sister should bestow. All, I trust, are engaged in the same great work of imparting true knowledge, and all I hope are actuated by the highest and most honorable motives. My excellent friend Prof. Horner, when speaking of the relation existing between this very institution and that to which he is attached, uses the following language: "Though on the field of competition, they are no doubt, justly and liberally so, and remote may be the period when any sentiment or language may emanate from either side, which may offend the feelings of professional sensibility, set a pernicious example to younger members, or detract from the high dignity which medicine has attained in this city. Neither school, I

believe, is prepared to do, or rather attempt to accomplish, by vilification and reproach, what it despairs of doing by hard work." This is the true spirit, the spirit of a man, of a gentleman, and of a Christian, and we respond to it from the bottom of our heart.

"facies non omnibus una
Nec diversa tamen; qualem decet esse sororum."

9th. *Finally*, let your course be guided by *strict morality and virtue*. I do not cite these qualities as the direct causes of success, except in the sense that Providence usually blesses the work of his faithful servants. The hypocritical assumption of such attributes may blind the world for a time, but sooner or later the mask is removed and the hideousness of the true character is exposed to the gaze of all. But I cite them as comforters both to yourselves and patients. "The cultivation of the mind may unfold to you the mysteries of the natural world, and secure to you a niche in the temple of fame, but the cultivation of the heart can alone prepare you for that destiny that awaits us all. Morality and virtue cheer us in every condition of life. In the dark hour of adversity, when friends and fortune forsake us, when the cares of the world oppress and overpower us, and the mind partakes of the gloom that hangs over our external condition, they offer us the only solace, and present to our minds a happier and more peaceful future. On the other hand, when elevated with prosperity, and blessed with all that worldly things can bestow, how miserable would be our condition if we were not permitted to look forward to a continued state of enjoyment." Guided by these attributes, "You will walk under the smile of His favour and the light of His acceptance; and His blessing will rest upon your work. Your life will be a path of spiritual usefulness, as well as bodily relief to your fellow-men; your character a guide and example to surrounding households; your death a day of peace and joy and blessedness to yourselves; your eternity a home with an accepting Redeemer, encompassed in light and glory by the many whom you have comforted and guided in truth; your memory on earth fragrant in generations to come, among multitudes who will rise up to call you blessed."—(*Dr. Tyng.*)

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