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SELF-DEVELOPMENT:

AN ADDRESS

TO STUDENTS.

By GEORGE ROSS.

Reprinted from the 'Medical Circular.'

LONDON:
HENRY RENSHAW, 356 STRAND.
1854.

THIS Address to Students is an incorporation of two which have appeared in successive years in the MEDICAL CIRCULAR. I have republished them conjointly, in order to meet the wishes of numerous kind Correspondents, and because last year the Editors of several periodicals did me the honour to quote various paragraphs from the first Address, and have thereby induced me to think that the lessons enforced may prove useful to other Students as well as those of Medicine, for whose benefit the Addresses were originally written.

GEORGE ROSS.

Farringdon street, London,
October 1st, 1854.

SELF-DEVELOPMENT :

AN ADDRESS TO THE STUDENTS OF MEDICINE.

SESSION 1854-5.

GENTLEMEN,—It is an established custom, held in honour, for those who fulfil public duties in relation to the instruction of the rising members of our profession, to address to them, at the opening of the Winter Session, a few remarks on the importance of the career they are commencing, and the onerousness of the obligations they are about to undertake. On these grave topics let me speak. Your Lecturers will, doubtless, address you with their accustomed earnestness; and to their introductory harangues I leave the rhetoric of exhortation. In the place of that, I give you my experience. A few sober and honest truths, couched in plain language, are all that I intend to offer for your counsel.

The hard, dry facts of life constitute the ordinary texture of our Leading Articles: for once in the year, then, let us cry "*jam satis*," and devote a few columns to reflections of a different nature. By thinking too much of external circumstance, we are apt to lose sight of the internal man; but the latter is, after all, the great consideration.

The three or four years which a youth spends in London, during the period of his studies, are the most momentous in his whole life, for he then not only acquires the necessary knowledge to enable him to practise his profession, but he forms his character—a result of more importance to the man individually, and of scarcely less consequence to his future patients, than the scientific instruction he has received. What avails knowledge without character? By character I do not exclusively mean the moral and religious virtues, however lovely, honourable, or necessary they be, but the cast of mind, the force of

will, habits of thought and feeling, which distinguish man from his fellows in the affairs of this life. I suppose a man, armed at all points with scientific lore, cast suddenly into the midst of difficulty, when action is imperative, delay fatal; he is alarmed, confused, paralysed; and with his fortitude his knowledge vanishes in the moment of his greatest need. To form the character, then, of the medical man should be one of our first objects.

The transition from the quiet and monotony of rural life to the whirl, the excitement, and the dissipation of the metropolis, is, to a youth of eighteen, the greatest trial to which he can be subjected. The new scene comes upon him like a revelation. He is exposed to temptations and feels impulses to which he was before a stranger. His nature undergoes a sudden development; ideas enter that create new desires; the passions awaken, and the soul walks abroad on a journey of observation, yearning to know more with each fresh acquisition.

We will imagine a youth bred in the retirement of a country village, seeing nothing grander or finer than the old church or the modern school-house; finding his excitement in the impounding of a stray horse or the discovery of a hen's nest, his liveliest joy in the return of the bright Spring-time, with its May-blossom and its exhilarating breezes, its gray mornings, when the fish bite readily, and its mellow evenings, favourable for golf or cricket, his heart returning at night to the sanctuary—the holiest and best beloved—home, and his day's life disturbed by no guilty recollections or unavailing remorse, rounded with serene and refreshing slumber; imagine him arrived in the metropolis, in the midst of long miles of squares, and streets, and alleys, magnificent parks, and filthy courts, "gorgeous palaces and solemn temples," beneath whose dark shadows lie the squalid dens of poverty, profligacy, and crime; its noble bridges, its river crowded with masts, its wharves with merchandise; its opulence dazzling the eye from every window; its thronged streets, its diversified pursuits, its uproar, its dreariness, its isolation, its contrasts of grandeur and meanness, wealth and penury, purity and vice; its trading companies, political societies, and charitable institutions; its countless churches and reeking brothels; its hells and its hospitals.

How would he regard this scene?—what new emotions would not spring up in his breast? "The world is all before him where to choose," but "which" to choose has been a problem on which many a youth has shipwrecked his destiny.

Emancipated from the restraints of parental authority, and finding himself surrounded by the fascinations and allurements of metropolitan life, the young man is apt to give the world a trial in the belief that he is so far master of himself as not to be overcome by temptation, and that a few acts of folly may be successfully concealed from the knowledge of those whose animadversions he dreads. Let him not yield to this delusion. All those men whose hopes have

been blasted and characters ruined, have been seduced by an overweening confidence in their own self-command, insensibly yielding to the flattering persuasion that they could trifle with vice, hold it at their fingers' ends, and take it up or lay it down as suited the inclination. In every Medical School there will be found, though fewer now than formerly, young men of idle habits and vicious propensities, who regale their wits with the vapid slang of the town, turn the Students' Room into a tap, spend their nights at the Cyder-cellars, affect a taste for rowing, or racing, or dog-fancying, make up their books for the Derby, get up sweepstakes, propose matches, lay wagers, wrestle, and box. These men are a burden to their friends and a nuisance to their studious and deserving fellow-pupils. Spending all their money in profligacy, and at last getting into debt, they degenerate into a species of vagabondage, which once brought odium on the character of the medical student; and at the end of the three years, rejected at their examinations—if they ever proceed so far—become the offscourings of society, and run into the common sink of humanity in the haunts of the Haymarket, or the "diggins" of Australia.

These men should be shunned like lepers; they taint every character they touch, and move about in an atmosphere of pestilence. They generally crave society; for vagabonds are always gregarious, and are the more dangerous because they are generally endowed with certain qualities of gaiety and carelessness, which are attractive to younger minds. Vice could not exist in a state of isolation; an only bad man would be such a monster, even in his own opinion, that his existence would be unendurable; hence he must find associates, and seek to palliate his own iniquity by the example of theirs.

I do not desire to dissuade the student from a proper indulgence in out-of-door sports, inasmuch as they contribute to the bodily health, and maintain the elasticity and spring of the mental faculties. A man can study harder and better in proportion to his bodily vigour; and, even if it were not so, still on its own account it is wise to preserve the health of the system by every legitimate and prudent means. Sport is not vice; it is the ill-use that is made of it that is vicious. If a young man abandon himself to any particular fancy of the day, so that he neglect the real business of life, he is then guilty of a crime and a folly, for which, if he be not ashamed now, he will not fail to be sorry hereafter. Exercise or pleasure should be always subordinate to duty, and be a preparation for it. In this sense it is itself a duty, and both desirable and commendable. In the long run, the man of pleasure will find that he has made a poor exchange, and has sadly misspent his time, for he will assuredly find that the man of business will surpass him in all the duties of life. Owen Feltham says that the men of business always govern the men of pleasure, and remarks, "Therefore that man is but of the lower part of the world that is not brought up to business and affairs. And though there be many that

think it a little too serious for the capering blood and sprightly vigour of youth, yet, upon experience, they shall find it a more contentive life than idleness or perpetual joviality."

The laughing philosopher, he of Abdera, made especial butts of those who exhibited unusual eagerness to be either honoured or rich. Though he is said to have laughed at everybody, I question if he ever laughed at those who were eager to improve their faculties and benefit humanity. He was no philosopher if he did. I agree with him that it is possible to be too eager in the pursuit of vain things, and that the most industrious man ought to find time to recreate his faculties. A rational man would rather gallop with Socrates on a walking-cane, or roll his tub with Diogenes, and remain poor, than become a Cræsus by the continual sacrifice of time, strength, mind, and conscience for that end. We cannot, however, be too earnest in seeking for knowledge and improvement; and the best way to make our earnestness profitable, is to refresh it with occasional recreation.

Though amusement may be lawful, it should never interfere with duty; and the student should be careful, above all things, to avoid *procrastination*. Let him remember the trite but irreversible truth, that "time lost can never be redeemed." It is true that yesterday's duty may be done to-day; but still it is the duty of yesterday, and a day has consequently been lost for ever. I declare to you, I feel the loss of nothing so much as of time, profoundly convinced that, with time on his side, a man of ordinary ability and industry may achieve the highest object of reasonable desires.

Begin well, and the future course is easy and safe. A man rarely makes up in after life for the loss sustained by a false start in the beginning. Every year and every day has its own work, and he who is toiling at the duties of the past instead of those of the present, is paying off an old debt at the sacrifice of future good. He is a bad economist who mortgages future industry in order that he may enjoy present leisure. He is playing a losing game with life: the odds are heavily against him, and he has no right to hope for success.

"Now," should be every wise man's motto. What is all time—past, present, or to come—but an everlasting "Now?" It is experience, action, and hope, concentrated in one focus. A man who does not act "now," forfeits the benefits of the past, and defeats his hopes of the future. It is present action alone that can realise either experience or desire. "Now" is man's only possession; it is his sole capital for the exercise of his talent and industry: it is at the same time a great living fact, and the solution of a wondrous spiritual mystery: it is the marriage-knot that binds together the actual and the speculative, and is the highest exponent of universal wisdom.

On commencing his studies, the pupil should be impressed with the conviction that there are few more difficult than those in which he is about to engage. He must not suppose that the practice of medicine is a mere empirical art, or

a slight matter of routine, like the trade of a watchmaker. He is commencing a pursuit in which talent will find the amplest scope for its development, over which the spirit of change and progress sits brooding, and wherein original research will meet with a rich recompense.

In no other practical art is the exercise of independent judgment more required. Every case is a problem, presenting some obscure point for solution. It either embodies anew an old difficulty, or offers some fresh point of its own, which must be answered. How? and Why? are everlasting questions in medical practice. I do not envy the man who can be content with asking himself a question—letting a glimpse of light into his mind, and straightway shutting it out as a troublesome intruder. Such a man allows his intellect to be converted into a black hole, hung round with moss and cobwebs, where Truth perishes for want of exercise and airing. Open the windows, let in the light, let the palace be gloriously furnished, and every unclean thing be swept from its dark corners.

The wiser men of the profession, knowing its difficulties, and duly appreciating its solemn responsibilities, have largely extended the course of study. Botany, chemistry, comparative anatomy, moral philosophy, and various other branches of science, have been added to anatomy, medicine, and surgery; and at this moment there is not, perhaps, a more varied or difficult curriculum anywhere established than is required in this country from the candidates for the medical profession. As a mere effort of memory, the acquisition of the thousands of independent facts in anatomy alone would be marvellous, if it were not so common. That these facts are acquired proves the extent to which the mental powers may be developed by practice, and should be an encouragement to a yet higher and nobler exertion of the faculties.

I do not, however, desire now to expatiate on the propriety of diligence in the acquirement of special knowledge. Experience will probably teach the student this necessity. There is another branch of study on which I wish particularly to enlarge, because, while the student is attending the classes at the schools and hospitals, it is apt to be neglected, and there is hardly another that is more useful or attractive; I mean what is commonly called a good "preliminary education"—literature.

There is a thoughtless cant against literature, which I have even seen enunciated in some of our medical papers, which, nevertheless, affect to be the advocates of a "good preliminary education"—forgetting that the two are one thing. Science, they say, is our business, literature has no part in the practice of medicine. This idle sophism, which prevails somewhat extensively among us, is the cause of so large a number of our members being unable to express their sentiments in writing with propriety. I am no false witness, nor do I speak without knowledge. It would be curious

to ascertain how many of the large number of young men who pass their examinations at the Royal College of Surgeons are able to compose an essay according to the rules of grammar. The want of literature is the great defect in the education of the youths who enter our profession, and until it be remedied ours can never rise to the level of the other professions in social estimation. We are respected for our services, beloved for our zeal and sympathy with suffering, but we are not honoured as members of a learned body.

The iron influence of this utilitarian age has entered more deeply into our studies than befits our vocation. We have carried further, perhaps, than almost any other similar class, the study of the physical sciences, omitting none that can possibly extend the resources of our art, and increase its usefulness. It is right to have this knowledge, but it is also right to have what is better—mental culture, which alone can make our knowledge available. Knowledge alone will not cure disease; it is quickness of perception—combination—judgment. This mental culture must, for the great majority of mankind, be commenced early in life, and its foundations are therefore laid in a good preliminary education. How few young men are there who, after they have passed their twentieth year, devote themselves to intellectual improvement, if before this time it should happen to have been neglected? Habits are very good or very fearful things. The seed that has been sown in the mind will blossom in it, and if it be vile, will by-and-bye choke every other thing of wholesome growth. We read of some men who have tried to learn various novelties at an advanced age, but these are they to whom intellectual exertion has been a habit and delight, and who were only turning their energies into new channels. The older a man becomes, the more difficult it is for him to begin to be studious. Every man's life is like a race on a rail—if he be placed on the right line, he will run safely to his goal; but if on a wrong one, his way points to destruction.

Those young men who are entering the profession should lose no time in mastering a sufficient amount of general literature to enable them to study the chief medical authors in their own tongues, for every day that elapses increases the difficulty of the acquisition. Although it is true that through the medium of translations we are provided with most of the leading facts that have been discovered by the industry of foreign physicians and physiologists, yet there is a large amount of ingenious and productive thought contained in foreign publications which never appears in the pages of English literature. Professional eminence depends, to a great extent, on a familiarity with the labours of foreign men of science; and we may be assured that a man whose imperfect education incapacitates him from learning what is going on in foreign countries, is shut out from the hope of distinction in his own.

Science is cosmopolitan; she is the guest of every civilised people, and knows no schools or parties. An English school, a French School, a German school, is an anachronism. Wherever there is a school there is error—error professed and formularised. So it was with the Greeks, with the old schoolmen, and with the first physiologists; with Zeno, Aristippus, Epicurus, and Plato; with Abelard, Duns Scotus, and Thomas Aquinas; with Sylvius, Brown, Stahl, Van Helmont, Willis, and the tribe of theorists of their day. Science is truth, and truth is universal. Hence it becomes necessary that an accomplished physician should be able to seek for truth wherever it can be found; and the more extensive his inquiries the more likely will he be to avoid falling into error.

A good literary education may be urged, however, on humbler grounds. It is the distinguishing embellishment of a gentleman; it is more—it is the indispensable qualification of a man of sense. The first and main constituent of a good education is an accurate knowledge of a man's own language. As a rule, there are few men who know less of the English tongue than Englishmen themselves.

Correct language is necessary to sound thinking. It may be laid down as an axiom, that a loose, incoherent, and obscure style, is the dress of superficial and undecided thought. Language is, however, not merely the vesture of thought, it is its very body and substance. Without language, thought would be undeveloped; it would die in its birth. It is the atmosphere which makes the heat burn and the light radiate—the magnet which, though only the medium of the electric current, is so thoroughly endued with the power as to be almost regarded as its special generator. If thought begets language, this, on the other hand, stimulates, amplifies, and invigorates thought. Each acts and reacts upon the other, and they are as necessary to mutual sustainment as soul and body. A magnificent style is glorified thought—the descending angel robed in light.

If language be so necessary to thought that its vitality and power depend upon it, how incumbent is it that every thinking man should cultivate its use! Is not the general neglect of elementary literature the reason why there are so few sound and accurate thinkers? In a profession like ours, where thinking is an hourly duty, we ought to learn to think correctly, and how can we do this unless we are masters of its necessary medium?

I therefore urge upon young men the importance of a good preliminary education. It will be found to be not more brilliant than useful, and will surely gain for its possessor a higher position in society than without it he would be able to attain. The student should also remember that he has now not merely his own character to guard, he must sustain likewise the honour of his order. He has become a member of a noble profession, representing the glorious memories of some of the greatest benefactors of mankind; of Sydenham, Harvey, Hunter,

Jenner—men second to none of those whose names are inscribed on the golden tablets of history. Their's is the grandeur of goodness, of modest and useful labours directed to the assuagement of the ills of humanity. Their glory caught no illumination from the flame of the forked tongue, or the fiery-edged sword: it shines, like the torch of Truth, with a serene, unclouded lustre. We must not be unworthy of those who have gone before us, but learn to qualify ourselves, like them, for the important duties of our calling.

If language be an instrument of thought, and as necessary to its development as legs to run with, or wings to fly, there are other attributes which are subservient to the same end, and equally command cultivation. I allude to the sensuous faculties. Let us not be afraid of digging deep into the nature of man; we shall find rich ore in the lower strata. Do not let us discard good qualities because they have been abused with bad names. Authors write much about moral and mental culture; but exorcise everything sensuous as if it were an evil spirit. This is a devil, like other ghosts, of their own raising. All really great men have been endowed with a rich sensuous organisation. The nervous and vascular systems have been in them ample and active. History is full of examples, from the divine Shakspeare, whose remarkably sensuous organisation has been a puzzle to timid dreamers, the beautiful Milton, the erring Burns, the impassioned Byron, the sensitive Newton, the energetic Locke, the irritable Hunter, the intrepid Luther, the enthusiastic Loyola, the affectionate Wesley, to—shall we say—Coleridge, the last of the philosophers and poets. Great conquerors—such as Alexander, Cæsar, Cromwell, Napoleon, Nelson, and Wellington, have exhibited this nature in vigorous development. I do not, however, desire to seek for illustrations among the order of chartered man-slayers—men of action by pre-eminence: the poets, the philosophers, and teachers are enough for me. A complete man must be perfect in his physical as well as his moral nature, and wherein he falls short of this magnificent harmony, his greatness is diminished. Fortunate is that man who is endowed with a vigorous sensuous nature: thrice fortunate is he who knows how to marry it to his spiritual, and to keep the union with fidelity!

Though in the abstract the sensuous nature may appear to contribute to intellectual vigour, the application of the doctrine may not seem so easy. How develop the sensuous nature? By exercise. The perfection of of the sensuous nature consists in good bodily health. I need not now point out how this is to be maintained, though, indeed, I should like to write a chapter upon it. Good health seems to be a plain thing, and a very trite reason for a philosophical proposition, but the commonplaces of life contain, in fact, the essence of all philosophy. Like Socrates, I would bring Philosophy down from heaven to take a morning walk, and show her off in a cotton gown, with a bunch of primroses in her hand.

Keep the health sound, and the sensuous nature can be easily maintained

in delightful harmony with all the spiritual attributes : when the liver gets torpid, the mucous membranes congested, the brain irritable, the sensuous organisation obscures and overlays the moral and intellectual faculties. The lion bursts his cage. Indulge the wants of the physical system, and you break the law, which is not liberty, but restraint. The intellectual, the moral, and the sensuous are the three orders in man's human estate,—king, lords, and commons,—each must yield something to satisfy the claims of the other two. Neither is absolute nor first, but all co-ordinate. Cultivate the intellectual exclusively, and you have a monster; the moral, a maniac; the sensuous, a savage : train the three together, and you have the perfect man. C

But let us come, young man, a little nearer to our purpose. We have spoken of the sensuous organisation : let us now say a word about the senses. Our science consists in the perception and comparison of facts. We must observe for ourselves, and each having the whole responsibility of forming a judgment, it becomes his duty to put himself in possession of the means of honestly fulfilling his obligations. What are those means? The senses. There is a qualification in the surgical art, called the "tactus eruditus," the learned touch, an excessive delicacy of tactile perception, the fingers of the surgeon seeming to have acquired almost a fresh instinct, like those of blind men who have learned to read by their use. This "touch" is learned by practice, and is merely the education of an ordinary sense. So it is with the eye in marking the shades of complexion and expression, the nose odours ;—each organ should be, therefore, trained to observe accurately, that the intelligence it conveys to the mind may be sound and true. Cultivate the senses. We are endowed with them, and must either abuse them or use them ; the last is the duty of every man, and the act of a wise one ; the first is the practice of fools. Now, no man can train his senses unless he have constantly the objects before him upon which they are to be exercised. No matter how distinctly and forcibly an object be delineated, a view of the reality always strikes us with a difference. The exclamation of surprise confesses the imperfection of the previous description. The medical student's field for observation and practice is, where every other man's is, in his work. The dead-house, the dissecting-room, and the hospital are the places where he must cultivate his perceptive faculties, and prepare himself for his future duties.

Things are the primary object of the pupil's study. His knowledge of his science, like all real knowledge of physical nature, must come by observation ; the colour, density, form, structure, and relations of objects are thus impressed definitely and clearly upon the mind. Books are helps, guides, teachers ; but they are not the thing itself, and cannot even give us a correct representation of the thing. Suppose we are *told* that pus is a "thick, opaque, somewhat oily substance." So is cream. How, then, could a person who had never seen "pus," know it by this description? That which is not

seen and felt is only half known; and that which is only half known is the other half error.

Books are secondary media of instruction; in them knowledge is indicated and methodised, formularised and defined; but it is not exhibited. They do not give realities, but their symbols. We may be told that a substance is broad or long; but what is breadth and length we must see with our own eyes, and discover by our own touch. In ordinary things, the knowledge that comes by books is immediately translated into our experience; but it is not so in matters relating to a new science, and medicine, to a student, is a new science.

It is difficult to retain that kind of knowledge which comes from books: hence a course of reading is very tedious and unsatisfactory. The image which they are intended to convey is with difficulty seized, and the impression made is transitory. It resembles the reflection of a man in the water, vague, shifting, undulatory, sometimes tall like a church steeple, sometimes squat like a holly-bush, rarely proportioned like the man himself. Now, it is above all things necessary that in the acquisition of knowledge we should have exact ideas of things; and this can be attained only by reading the book of Nature. There would not be a tithe of the theories that are promulgated in our profession if men would only carefully observe the living facts that surround them in their daily walk of duty. As it now is, one man looks at the reflected image in books and periodicals and calls it a church-steeple, and straightway projects a theory to account for the phenomenon; another deems it a holly-bush, and has an hypothesis pat for his purpose; a third may possibly think it a man, but as he can give no clearer evidence of his belief than his rivals he rarely succeeds in getting a larger number of supporters. If all parties turned their backs upon the brook and their faces to the actual object, they would perchance come to an agreement. What we want is a closer conversation with Nature, a more active exercise of the senses, a more careful, regular, and impartial training of the entire man.

When John Hunter was informed that he had been charged by Jesse Foote with being ignorant of the dead languages, he remarked, "I could teach him that on the dead body, which he never knew in any language, dead or living." This was a proud vindication of the value of the natural sciences; a sublime conviction that he had added by original observation to the sum of human knowledge. John Hunter is the type of our class, as he is of every class of men investigating physical truth. He called witnesses from Nature and took their evidence, fresh and undistorted, he traced its links through all their complex involutions, shaped stammering utterances and fragmentary depositions into fair round speech by comparison with known truth, closed his ears against the wrangle out of court, and applied his honest mind, without bias, to adjudicate on the original testimony. To such a man everything is

new, and nature inexhaustible. The most trivial atom has a meaning and evidences a law: it is an essential part of a great whole, and mirrors truth as clearly as if it were a universe. A single beam teaches the qualities of light as well as an entire sun.

Books, however, must not be despised: they have their good uses. They correct private judgment, fill up the gaps in our personal acquisitions, and indicate new courses of observation. If they are suffered to aid, and do not warp the judgment, they are of immense utility. A man, through them, takes his predecessors into counsel: he sits on equal terms with Hunter and Harvey, and Newton and Galen and Plato, and argues the matter without restraint. He does not veil his eyes in shame before the great philosopher; but reading hard and critically, seems to say, "Soul for soul, mine is as good as thine, what hast thou to say about this that I cannot understand?" The modest man becomes defiant in his closet, and in silence vindicates the equal divinity of his nature. "Go to, I will wrestle with thee," is the thought working within him. Books are the granaries of wisdom, into which each man throws his sheaf of thoughts; in due season the seed is winnowed and re-sown to produce a fresh crop, which is being eternally garnered and renewed. But this storehouse is common property, and every man is welcome to as much as he can carry away.

Now, a young man reads a book, either to learn facts or principles. The young medical student must be content to read for the first two or three years simply to acquire *facts*: his memory is the faculty he will be chiefly required to exercise. This may be a dry, revolting duty; but it is a good regimen. He must, however, also investigate principles to qualify himself in a respectable manner for his vocation. In the latter case the course of study should always originate in his own thought; the question should be suggested within; he may then go out for an answer. Thus the reader preserves and strengthens the freshness of his intellect.

The student should always have some question to solve while he is reading; for to read without an aim is mere frivolity and loss of time. What is read makes little impression, and is soon forgotten. A man who lounges through his studies may possibly pluck a pretty flower, and catch a fine view now and then of the glorious world he moves in; but beyond that he acquires nothing either permanent or profitable. It is a very pleasant way of passing time, fit for spinsters and fine gentlemen, but derogatory to the true student.

Never be afraid of a difficulty; and never read except to grapple with one. Do you want to grow strong? Then you must measure yourself with the men of renown, and wrestle with all your might. A throw upon your back will do you good. Your pulse should beat high, as if you were in a battle, and you had the sound of the trumpet in your ear. If a man simply raise

his arm he can exert but little strength, but let him grasp hard, and see how the muscles swell and quiver.

A youth commencing his studies is frightened at their extent and multiplicity. He turns over the leaves of his several volumes; he sickens over the uncouth nomenclature; he distrusts his powers; desponds; defers the period of study; and loses precious time that he never can recover. His folly now is often avenged on him at the Examining Board. Let him know that a week's resolute study will cause his apprehensions, though they were mountains, to crumble like dust. He will feel his proud heart spring with the bound of a conqueror. This will be, perhaps, his first victory, but it is a victory that may be a lasting inspiration, and influence his entire life. It will be a discovery of innate strength, and will teach him a lesson of self-confidence that will make easy all future undertakings.

To acquire confidence the student should remember that tens of thousands have already compassed the same studies as those in which he is engaged, and what they have done must be within the reach of an ordinary understanding. Difficulties vanish as we approach them. Our fears augment their apparent size, but the knowledge acquired by a nearer view soon dwarfs them down to their real magnitude. In order to overcome these difficulties, the student should begin upon a *method* of study—no matter what, if he devise it by his own reflection, for he will find that thus his work is half done. Let the first year's student take copious notes of his lectures, because nothing is grasped by the mind so tenaciously as that which has been written. In the evening let him read over the subjects by the additional assistance of some standard work; let him mark the differences, if there be any, and fix the leading facts on his mind. Note-taking is the only way to study profitably. It is a tedious and laborious course, but it is sure and fruitful. Every prizeman is a note-taker.

A more advanced student, desirous of acquiring a thorough knowledge of the various branches of study, should study one subject at a time, and persevere until he has mastered it. Those who desire you to take care of your health and to vary your studies, give bad counsel. No man that we know has ever studied himself into madness or a consumption.

In pursuing his studies the pupil should never imagine that he knows enough, or that this or that branch of study may be neglected, as it can never be useful to him; or that he may neglect a lecture or reading to-day, and compensate for his lost time by doubled exertion to-morrow. No man ever yet had enough knowledge for his vocation; cases will occur when, unless a man be an idiot or a knave, he will heartily wish that he knew more than he has been able to acquire; he, therefore, who thinks he already knows enough, knows so little as to be insensible to his real wants. It is also a delusion to suppose that certain branches of study can never be useful. It is

true that if they are not known they cannot be useful to the individual; but it is equally true that their usefulness will accompany this knowledge, and be a source of frequent delight and profit. Botany, for example, is merely an incidental branch of study, not absolutely essential to the practitioner; yet circumstances may occur, both at home and abroad, when he may find great advantages accrue to him from a knowledge of this science. Nothing is so little as to be despised.

Many young men deceive themselves with the notion that they can win success with a dash—a *coup de main*; that nothing is wanted but intrepidity to carry out the boldest designs. The hot blood and eager hopes of youth delight in such conceptions; but such is not the lesson that either personal or general experience teaches him who as a watchman stands aloft on a tower surveying the attempts and struggles of the hosts of fighting men in the plains beneath. The bold sally may occasionally have a certain limited success; it is brilliant, captivating, inspiring; but it rarely, very rarely, wins a battle. Vigilance, patience, perseverance, these are the master-qualities that command success. True heroes are made of this fibre.

In civil life there is much less "chance" than the young commonly suppose; and the closer our examination of causes, the more convinced shall we become that in every man's life the greatest results, how rapid and startling soever they may appear, have followed from prudence in conduct and perseverance in pursuit—from, in short, a wise and watchful use of time. Let me apply these observations to the student.

There are some young men who are endowed with quick perceptions and a power of rapid acquisition: eager, lively, volatile, capable of learning much in a short time, but indisposed to steady application, never settling to one subject and mastering it, but making a discursive flight over the various regions of science, like drones, gathering sweets but making no honey. Such persons generally acquire the character of being brilliant but idle fellows, whose powers are undeveloped, but still capacious; the flattery of injudicious friends frequently confirms a weakness of disposition into a habit of life, and the youth grows into the man with a sanguine faith that he is distinguished by the possession of great mental endowments, and that he ought to command the highest places in the world's gift. Why does he not? Why does he return from his charge dispirited, crest-fallen, sick at heart, and disgusted? Because he has never learned the conquering strength of perseverance. He is a stranger to the might and dignity of labour.

Does he boast of his "genius?" He is judging by a false standard. Genius he has none. He is deficient in one of its primary elements—industry. I have known several men in my life who may be recognised in days to come as men of genius, and they were all plodders, hard-working, *intent* men. Genius is known by its works; genius without works is a blind faith, a dumb oracle.

But meritorious works are the result of time and labour, and cannot be accomplished by intention or by a wish. The immortal thoughts that seem as if they flowed spontaneously from the soul of Shakespeare, were nevertheless moulded in a die which, doubtless, required many years of unremitting attention to fashion it to his exquisite taste. His intellect, by constant study, had at length been trained to that perfect discipline which enabled it to move with a grace, spirit, and liberty incomprehensible to those minds that have not passed through the same severe ordeal. Every great work is the result of vast preparatory training. Facility comes by labour. Nothing seems easy, not even walking, that was not difficult at first. The orator whose eye flashes instantaneous fire, and whose lips pour out a flood of noble thoughts, startling by their unexpectedness, and elevating by their wisdom and truth, has learned his secret by patient repetition, and after many bitter disappointments.

If any young man thinks that I have exaggerated the importance of industry, and depreciated the value of mere talent, I am willing to be judged by those men who *have* succeeded—who have asserted the greatness of their genius by the magnitude of their works. That there may be “mute inglorious Miltons” and “village Hampdens” I am prepared to a certain extent to admit; but of what benefit have been their talents to the world or to themselves? They never put their sickle into the corn-fields, and they brought home no harvest; we therefore owe them no gratitude. They are as unknown as if they never were; and no flower growing above their tomb breathes around the world the fragrance of their good deeds.

John Hunter was a remarkable instance of perseverance. He was always in his work. At his meals, in his carriage, in the hospital, in the sick chamber, in the dissecting-room, in the museum, he was always collecting and registering facts, or following out some train of meditation. Hence the stupendous monument which he has raised to his imperishable glory. “Patience” is the motto inscribed upon its walls. He began with a broad basis, and industriously piled fact upon fact, while the learned world looked on in amazement at the grandeur of his labours. This monument, seen in the light of his genius, projects its mighty image down the avenue of the far off future, and, like the shadow upon the dial, measures the altitude of the intellect that established its foundations.

Not less characteristic was the career of the illustrious Newton. When asked how he managed to work out his grand principle of gravitation, he replied, “By always thinking about it.”

If there ever was a man in our profession who might be reputed to possess a “genius” for its practice, it is William Fergusson, the present Professor of Surgery in King’s College. He commenced his profession at seventeen, at twenty-three tied the subclavian, and thenceforward quickly established his character as a great surgeon. He is yet a young man. Do you think that

his extraordinary facility in the use of the knife is due to an abstract and occult quality popularly called "genius?" Not at all. In the sketch of his career recently published in the 'Medical Circular', it was stated that his motto was "Work! work!" He was in the habit of spending sixteen hours a day in the dissecting-room; and in his working hours, as he called them, his thoughts were never for five minutes directed from his profession. Like Newton, he was "always thinking about it."

Activity without concentration is idleness. It acquires little and retains less. It is not labour, nor even exercise—it is dissipation. It neither strengthens nor sharpens the faculties, but emasculates vigour, extinguishes the power of attention, deteriorates the understanding, makes men frivolous and self-sufficient, and leaves them ignorant and useless. Without a purpose a man is like a ship without a rudder, making no progress, helplessly baffled by every wave, and driven to leeward by every gust.

However rich the soil, no man's mind will produce fruit worth acceptance unless assiduously cultivated. Genius is not an occult power, like a stage sprite, that will reveal itself at our bidding, and perform intellectual feats to remove difficulties and lead us to success. There is nothing mysterious in its nature or operation; it is no more than the ordinary faculties of the mind educated, invigorated, and rendered productive by industry. Any other belief is a snare.

Although it cannot be expected that every youth should become great in the world of letters or science, yet it must be clearly understood that no man can do even an ordinary thing well unless he place before himself a higher object than that which requires his immediate duty. He who is content with doing a small thing, and doing that, too, indifferently, will be content to do less when the stimulus to exertion is removed. We owe it to society and to ourselves that we develop our powers to their fullest limit, directing their application always to those objects which more immediately concern us in our daily avocations.

It is not the overt work that so much taxes the faculties as the preparation for it. A runner must undergo many weeks of severe training before he engages in the race, and then, amid astonishment and plaudits, he may easily distance his competitors. This extraordinary speed was not the natural pace of the runner. Let every young man reflect on this truth, and train his powers in secret, in his closet, and by quiet meditation.

The great advantage of industry consists in the increased capacity for work. We know not what we can do until we try; our capabilities are almost illimitable. He who comes to me crying, "There is a lion in the path, an adder in the way," I set down as a man having the soul of a slave: he has no self-reliance. Try your strength—persevere—and your faculties will expand with your work, and you will perhaps wonder at the extent of your own perform-

ances. Nothing has surprised me more than the extraordinary self-development that comes by practice, and the wondrous ease with which difficult undertakings are subjugated to our mastery. The more we have to do the more we can do; and the word "impossible" comes to be struck out of our vocabulary. I despair of nothing; but when I do not succeed I know that the fault is in myself.

There is no truth of which I am more convinced than of this—the indefinite extension of human capability. But this truth, like faith, must be felt to be known. When men talk about faith, and define it from their different points of view as "historical faith," "natural faith," "transcendental faith," I know this, that they do not possess "spiritual faith." Of moral truths nothing is known that is not felt. Would the young student be convinced of the truth of my axiom, let him believe and labour, and, with labour, he will gain the conviction of the progressive development of his powers. His fears will flee like a mist, and he will march forward rejoicingly in the broad daylight of self-knowledge.

Why do I urge upon you the great doctrine of self-trust? Because I have noticed that most men, young and old, break down for the want of it. Bend to your work; lay well out upon your oar; stretch forth to the wide sea; fear neither rock nor shoal, nor an ill-wind, and you will seldom suffer shipwreck from mischance. He who timidly hugs the land strikes upon the breakers, and the scoffing waves roll over his head.

Self-trust is especially demanded in a profession so full of direful contingencies as that we follow. In a moment, without warning, we may be summoned to rescue life under circumstances the most appalling:—a father has been struck by machinery — mutilated, gashed, bleeding — and an operation cannot be deferred; or a mother, in the agony of parturient throes, swimming in blood, gasping and pale, is shuddering under the touch of the cold hand of death. Here moments are hours. If the practitioner lose confidence his patient dies, and his own character and competency may be irreparably blasted.

The study of the science of medicine is a great privilege to an incorrupt and inquiring mind, and in entering upon it the pupil embarks in one of the noblest pursuits that can engage his contemplations. The universe is open before him; the book of nature is displayed in its every leaf and in its many-tongued language. Think you how vast is the domain of study, how inexhaustible! All the worlds of thought and science lie tributary at your feet. From the blastema, transitory, diffuent, and scarcely impregnated with life; the minute cell, enclosing within its lucent and filmy coats a magazine of occult powers, you ascend to the complex organisation of the human structure, with its wondrous mechanism and varied attributes, its muscles, nerves, bones, and ligaments; its sensuous apparatus, perfect and marvellous; its "strong flexures" and graceful forms, endued, moreover, with that diviner part—that

higher life which every man feels shining into his heart, and inspiring his eloquence, like the golden ray of the morning that thrilled the Memnon's lip. The land is yours, with its divers regions, animate and inanimate ; its minerals, useful to save and potent to destroy ; its fossils, the mute but eloquent inscriptions on the grave of buried worlds : its flowers, clothing it like a vesture of beauty, yet rife with the latent elements of salvation or death : the water is yours, and the myriads of living things it hides in its bosom : the light is yours, whether of the sun or moon, or the electric beam ; whether of the baleful fire vapour that smokes from some Serbonian bog, or the sweet influences shining down from the Pleiades or the Virgin's Zone : the air is yours, with its opposing elements, its "blasts from hell" and "airs from heaven," its death-distilling miasms and its Sabæan odours—the charter to the organic world "to live, and move, and have its being !" Land, water, light, air, all are your tributaries !

These are the heritage of the student of medicine. So various, so comprehensive are his studies, that he enters with the right of a native into every region of science. Pursuits that would be foreign to the avocations incident to nearly all other professions are an integral part of ours. Human life is in relation to the whole visible universe ; and with many powers, too, that are invisible, it is in close connexion. Mineralogy, botany, chemistry, meteorology—all the sciences, in short, concerned in revealing the laws of physical nature are subordinate to the great science of sciences—the relief of human suffering and the prolongation of life. How great, then, is the privilege we enjoy.

I have now only a few parting words to utter ; they are these:—He who does not love the profession he practises will not pursue it with happiness to himself or satisfaction to his patients. His disgust will diminish his zeal, and his patients will soon become sensible of his indifference. The way to learn to love your profession is, to allow your thoughts to be ever dwelling on it ; to avoid distraction, to discard other idols, and give all your attention to the due performance of the sacred duties you have undertaken. Medical men are the soldiers of humanity ; they are sent forth to combat with misery, pain, and death ; and, unless they accept their task cheerfully, and prosecute it with something of the spirit of heroism, they will do little useful service.

This love of your profession will set you above that discontent which men are apt to feel when they find their kind offices neglected, and their self-sacrifice returned with forgetfulness or ingratitude. Let none but your own conscience be your approver, and learn to fear nothing so much as a violation of duty. Mere money is a useless balm to a hurt conscience ; and however necessary it may be as the world goes, it can never be the primary object of the enlightened and humane practitioner.

In one respect your patients must ever be your debtor. Gold can neither purchase sympathy nor repay it ; gratitude can be, in the nature of things, its

only return ; and in almost every case the instincts of humanity will be true, as an echo to the voice of tenderness and solicitude. Sympathise with the sufferings of your patients ; show that you feel an ardent human interest in their agonies ; that in you the surgeon's effectual skill is tempered by the Samaritan's compassion ; that your heart is touched by every pang, and responds to every hope ; and rely faithfully that a full measure of esteem, affection, and gratitude will be your reward. Human nature is evilly disposed only when it is evilly treated.

In this spirit, then, should you strive in due time to fulfil your holy mission ; going about doing good for its own sake, dignifying the science of the man with the virtues of the Christian ; and while you are thus acquiring respect and consideration for yourselves, you will raise up testimony around you to the public usefulness and the moral grandeur of the profession it is your duty to honour.