THOUGHTS ON EDUCATION.

AN ADDRESS

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BY THE PRESIDENT,

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PRESIDENT'S ADDRESS.

My first duty, gentlemen, is to thank you for the honour which you have done me in electing me your President. When I recall to mind the names of those who have preceded me in this chair, I feel the distinction a very high one, and prize it very greatly. Like most such positions of honour, it carries with it a penalty which presses on yourselves as well as on me. I am obliged to make a speech of some kind or other, and you are condemned to listen to it. Thinking over what I should say to you, I tried to find if there was any subject on which I could speak to you with any degree of authority resulting from unusual opportunity of observation, or experience more extended than may fall to the lot of my hearers.

Having spent some of my early life in school work, amid the active energies of teaching, and having of necessity watched with some interest the phases which this important department of our professional life has undergone, I feel that any opinions I may express will have at least the

weight due to maturity, and be the outcome of prolonged and anxious thought.

I am, however, met by the difficulty that the subject has been worn threadbare, and has been already discussed by some of the ablest and most thoughtful amongst us, but we cannot regard it as exhausted when we consider its gravity, as it concerns not only our own profession, but every individual who has life to be jeopardized or health to be impaired by ignorance or incompetence.

Viewing the entire system of education at the present time, three conditions arrest the attention. —The great increase in the number of subjects which constitute the sum total of a liberal education. The briefness of the time in which they have to be acquired. The expansion of the examination system and so-called judgment by results.

Steam and electricity having fused the nations of the world into one great family, modern languages, formerly accomplishments, are now a necessity, and have displaced, in a great measure, the so-called dead languages. They must, however, be chiefly colloquial, and cannot supply the culture and intellectual training which is afforded by the study of the Ancient Classics—mental callisthenics, as they have well been called. Again, our social progress has rendered necessary a knowledge of all

branches of Physical Science. Hence, if we look into the schools, we do not now find the overgrown head form toiling over ponderous volumes of Greek and Latin Classics preparing for the over-weighted entrance examination. The youth at fifteen is now an undergraduate, and at two-and-twenty will have completed his professional course and stepped into the arena equipped for the battle of life. In this rapid race of education how little opportunity is afforded for the formation of individual character, or the development of reason and personal judgment. Memory, the mere faculty of retaining communicated knowledge, is the rope of sand on which modern education hangs; it is the fetish which our teachers worship; the philosopher's stone which can turn everything to gold. Memory—a valuable gift no doubt, and well worth cultivating—I cannot regard, with Professor Stokes, as the total of man's faculties. By simple memory, our horses stop at the doors where we are wont to visit in our daily rounds. By simple memory the child in its nursery will in a few months learn its mother tongue, a feat far surpassing anything which it can attain in maturer years.

It is, I believe, now very generally admitted that the flippant answerers at competitive examinations fail in administrative capacity, where hard

facts have to be dealt with by common sense, unaided by books or the tips of the tutor, looking to result fees. And here we may pause to inquire: Is State interference in this direction wise or equitable? Do not result fees offer a direct inducement to teachers to take up the quick and brilliant boy, who, by mere power of memory, can win money for them, and neglect the dull and heavy boy—the boy who most needs the teacher's care? I have no hesitation in saying, that the honest education of one of these is a greater triumph of scholastic skill, a nobler work of humanity for the public good, than cramming a hundred prize winners. The dull boys form the majority of those who have to be taught, and they should not be unjustly sacrificed in order to realize the dreams and theories of modern statesmen.

Education comprises two essential elements, —teaching and training. Deficiency in either of these will render it weak, illusory, and valueless.

The vital error of the existing system, is the desire to cram the head with detached fragments of learning without the least effort to train the intellect. This may be seen in the number of so-called Student's Aids—the dumpy Vade-Mecum, as Arthur Jacob used to call them. They swarm and crawl over the fair fields of scientific literature like

the frogs of the Egyptian plague. Day after day the student is required to hunt up and collect so many musty dates, so many trite quotations, the crotchets of this or that examiner, to fold them carefully up, ticket them, and store them in the pigeon holes of his memory, like so many pawnbroker's pledges, until they are called for by the potentate, who, by a few set questions, is supposed to guage the national intellect, and place standards on what he is pleased to call knowledge. We are told knowledge is power, but here is knowledge which is absolute weakness, for the mind has not been strengthened by training.

Let us briefly consider what training is, and what is its educational value. A city man walking over the heather with his country cousin, is asked by him, "Do you see that hare beyond there?" "No, I cannot." "Don't you see it by the clump of furze?" "I see the clump of furze, but see no hare." This man may be a Cuvier, an Owen, or a Huxley; he may be perfect master of the natural history of the *Rodentia*; he may have at his fingers' ends the anatomy of the *Lepus timidus*, from the fur on its back to the marrow of its bones; he may have as good, nay better, eyes than his companion, yet here is an object in the field of his vision, nay, actually impressed on his retina and he

cannot perceive it, and why? Because he is not trained. Again, put a rifle in the hands of a man for the first time; he may have an intimate knowledge of the mechanism of the lock and other parts of the weapon; he may be learned in the chemical symbols and expansive properties of explosive substances; he may express, in an algebraic formula, the laws which govern the course of projectiles, but he cannot make the bullet strike the mark, and why? Simply because he is not trained.

Training developes observation and accuracy. The artisan, however skilled by training, cannot execute a perfect work of art without constant observation. At each stage he must see that it is true to the plan, that it is an accurate model of the original design. Hence the inestimable value of training in our profession. No two faculties of the human mind are so essential to the man who would practice medicine or surgery as observation and accuracy; no amount of book teaching can develop them, they can be acquired by training, and by training only.

It is much to be regretted that in our public schools more attention is not now paid to training in Physical Science, not as a matter of severe study but as a pleasing recreation and relief from school work. I can remember, and many who hear me

can remember, how attractive these subjects were made by a clever Irishman, Surgeon Lover, as he wished to be styled; how pleasantly he imparted the fundamental truths of science, and developed in the fresh and youthful mind a taste for the hidden wonders of nature. What valuable aid his training gave to the profounder studies of maturer years. His mantle has not fallen on a worthy successor, and his teaching is a thing of the past. I would be sorry, however, to see this idea strained as it has been lately, by some who would have little children's heads stuffed with abstruse physiology, as evidenced by a child being asked the other day to describe the *ossicula auditûs*—mere pedantry—the result of publishing written questions—a system which serves no purpose except to ventilate the crotchets of examiners. Had training found more place in the schools of the working classes of Ireland, a stronger and healthier tone of mind would have prevailed. The little learning would not have been the dangerous thing which it has proved itself to be; statements would not be accepted by our people as true, simply because they appeared in the newspapers or other prints; they would be sifted by sound and independent judgment, criticised by reason and reflection, and we would have been spared much social and political obliquity.

So in the sister island, more training and less teaching would render unnecessary the cruel tyranny of the School Board teaching to death the sickly brains of poor famishing children. Passing in my holiday through a cathedral town in England, I strayed into the court-house where the Mayor was sitting. A wretched little child was prosecuted by the School Board, and sentenced to a long term of imprisonment. When the punishment was declared the poor child looked dazed, and the mother, with a shriek at the thought of separation, fell fainting on the floor. The spectators were of the roughest, but many a coat-sleeve was raised to glistening eyes. I turned sick at heart from the scene, and thought to myself how that child, that mother, must execrate the very name of school. They who can present teaching in no more loveable form than a prison and a rod of iron, have nothing in unison with the training of children. We are, however, here more interested in Medical Education, especially as it exists in Dublin. A review of its history presents two great epochs which we may distinguish as the apprentice system and the lecture system, and these two epochs differed materially in the emphasis laid on the two elements of education. Under the apprentice system we had training with very little teaching; under

the lecture system we have teaching with little or no training. In the earlier epoch books were few, the best being in Latin or Greek; knowledge was therefore more demonstrated than taught, more communicated than learned; men of extensive reading or literary attainments were few. They were the great teachers to whom apprentices flocked for instruction. The great increase in the number of candidates seeking admission to the profession rendered this system inadequate to supply their wants; it became impossible that any single master could control and supervise the training of so many students, and do them even a share of justice. Hence, the opening of a new era—the lecture system. Apprentices, properly so called, ceased to exist.

The colleges ordained, as the means of Medical Education, a cumbersome system of lectures, which, by the piling on of speciality after speciality, has at length reached such a height, that the fabric has well nigh toppled over by its own weight; and more lectures were demanded than there was time to attend, and in truth and honesty they were not attended. The certificate represented neither teaching nor training, but was simply a large sheet of paper indicating the receipt of so many guineas, according to a scale fixed by the combined schools.

But the colleges failed to insist on any definite

order or plan in their educational requirements. Everything was left to the discretion, or rather the indiscretion, of the student; a chaotic mass of work was thrown upon him to accomplish in any way which his caprice might suggest, the result being that his education was crude and unsound. Men received the license to practice who were unfit to be trusted with human life; the public services were the first to take the alarm; they refused any longer to accept the diplomas of the colleges; they established examination tests of their own, and supplemented even these by a special course of training before the candidate was permitted to take up his appointment, or enter on its duties.

It may be interesting to note the history of efforts to reform Surgical Education in Ireland; so early as 1847, an attempt was made to establish some kind of method, and to sub-divide the cumbersome examination, so as to have some approach to training. The student was permitted to pass part of his examination at the end of his third year, part at the end of his fourth year, and to be submitted to one day only, at the final trial for Letters Testimonial. The examinations held under this plan appear to have been conducted with undue severity; a large proportion of the candidates were rejected; the system caused trouble to the grinders,

who accordingly denounced it, and it fell through. It appeared to decay, but it was the living germ of our present system dropped into the soil and destined to bear good fruit in the future.

In 1870, a second attempt was made by the party of progress to improve the education of the student, and to place it on a sounder basis ; and after much deliberation—a storm of opposition from without and obstruction from within—a scheme was propounded which seemed a step in advance and likely to promote the cause of systematic training on the plan of Sessional Examinations. This reform was shipwrecked like the last, by too high a standard of examination ; two-thirds of the young candidates were rejected; the grinders denounced it ; the Council of the day had not the courage to make it compulsory, and it also fell through.

In 1880, a third attempt was made in this direction ; and after months of tedious discussion, obstruction, and delay, the existing scheme of Sessional Examination was established. I have no hesitation in declaring that the present century has not produced any movement so beneficial to the cause of sound education ; it has conferred inestimable benefit on the student, as well as on parents and guardians. The advantages to the student are manifest ; the entire plan of his education is now laid down in

methodical order, he is obliged to pass from stage to stage, so that the entire fabric of his mental training is placed on a solid and enduring foundation. Having passed his first examination, a feeling of self-respect urges him to further effort for another success ; he cannot idle, for the date of his second examination is definitely fixed, and is fast approaching. There is no time to listen to the siren voice of procrastination, so delusive, so destructive to youthful energy.

Each session has its allotted work, and must bear its own fruit. The chronic fire-worshipper, the bane of our dissecting rooms, will have no place in nature, as he cannot survive a second session. Again, the student is relieved of subjects in which he has attained a competent knowledge, and can devote his undivided attention to the more important departments of science, which are more directly relevant to the practice of his profession. It is to be regretted that this principle of exemption has not been even more fully carried out in our new scheme.

To the parent and guardian it affords satisfactory protection. He can know that his alumnus has to undergo certain examinations at regular stated periods ; he can see that the name of his boy does not appear in the published pass lists along with

his class fellows, and he can ask the reason why it is so ; he can be warned in time by repeated failure that his goose is no swan, that he is totally unfitted for the profession, and before he has thrown his money and time away, may find some occupation more congenial to his tastes. This reform will thus tend to mitigate an evil which is at this moment crying loudly for redress. I understand that it is in contemplation, in order to remedy this disappointment and loss, to utilize in London a preliminary Medical School, in which the aptitude of candidates for the profession may be tested before they fruitlessly invest their money and lose their time attending the regular classes. Again, money entrusted for lecture fees cannot be now squandered in dissipation, and payment deferred until the day of reckoning comes, when the school secretary presents his heavy demand for arrears.

Like its predecessors, this great improvement was ridiculed and derided in the class-rooms of Dublin ; but the sustaining principle of truth which pervaded all these efforts at reform, surmounted all difficulties. Like the advancing tide, each receding wave returned with renewed impulse, with fresh energy, and carrying before it every obstacle, triumphed at last as truth alone can triumph. The scheme, of course, has some defects which time and experience will rectify.

The entire system of lectures demands sweeping and thorough reformation. Respect for so-called vested interest, and the preponderating influence of teachers in our legislative councils have too long propped this cumbersome institution of days gone by. It is simply impossible that students can derive benefit from the enormous amount of attendance on lectures exacted from them, to the exclusion of practical work. The Rev. E. Thring, in a remarkable book on teaching, has compared the modern system to a man pumping water with all his energy over a series of kettles; one or two of them have the lids carefully removed and they are quickly filled; one or two have the lids partially removed and a little water enters; but six-tenths of the kettles have the covers fastened down so that although they are plentifully splashed outside, no water can possibly enter, unless by chance a drop or two are projected into the spout from adjacent kettles. If this be, as I believe it is, a true picture of lay teaching, drawn by the pen of a working teacher, is it not a perfect photograph of our system of Medical teaching? A great deal of spouting, a great deal of splashing and tiresome pumping over kettles with the lids on.

Training would see that the covers were carefully removed, and that the kettles were so disposed that

the greatest quantity of water would enter the greatest number of kettles. The redundancy of lectures must be cut away by the pruning knife of reform; it is only a question of time. Lectures were a valuable means of instruction when books were few, meagre and imperfect, when industrious research and extensive reading were confined within a narrow circle. Under such conditions, systematic lectures, and even the reiteration of them were a necessity; but we live under very different circumstances. Year after year fresh books, new editions, team from the press; week after week, the latest advances in Medical Science are recorded, so that the student, in the still quietude of his own room, can master most of each subject, and work at it until he does master it, with better results than if he learned it from the most eloquent lecturer. Lectures cannot now be a substitute for reading, and to be of any use at all must serve some other purpose.

The delivery of a series of set orations *ex cathedra* cannot now fulfil the responsible duties which a teacher owes to his class; he must see that they are taught and that they learn. Lectures must now be demonstrations; the truths of science may no longer be enunciated as mere abstract propositions; they must be made evident to all the

senses. Much jealousy has long existed between the lecturer and the grinder; but, however unwilling he may be, the lecturer must adopt the method which the grinder finds so useful.

Catechetical instruction is a valuable aid to education, and if adopted regularly and systematically throughout the student's course as a part of the lecture system, would render unnecessary the baneful system of cram, and would at once indicate whether pupil and teacher were both doing their work efficiently.

The necessity for this thoroughness entails changes which are being spontaneously developed. The sciences auxiliary to Medicine have become so extended, that he who would teach them efficiently must devote his entire life to them. The day is past when two or three hours snatched from a busy life of active practice will suffice for the onerous duties of a teacher of Anatomy, Physiology, or Chemistry, as they must now be taught. He who takes up the role of a teacher now must hope, and may fairly demand, to live by teaching, but he must be satisfied to seek some of his reward in the pleasure of pursuing his favourite study. The State in Ireland will give him no help; there are no State endowed professorships to encourage scientific work, although there are State laws to cramp and retard

it; no fat sinecures for his declining years. Even our colleges do not encourage scientific progress as they should, by promoting well paid lectures on the higher branches of Medicine and Surgery. Recent events should warn us that existing conditions are fast bringing about a dearth of teaching power in Dublin. This must, eventually, be provided for by judicious concentration.

There are departments in which all the students in this city would not provide a class yielding sufficient emolument for a single lecturer—now distributed among five—at least, if such departments are to be worked properly and brought up to the standard of knowledge of the present day. We may apply to the whole of our lecture system the advice of the Prince of Denmark "Reform it altogether."

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