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William White
Wayne University

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PROFESSOR OSLER: PEDAGOGICAL ESSAYS OF THE GREAT PHYSICIAN*

WILLIAM WHITE

Sir William Osler's position as a teacher rose to unchallenged superiority with the publication in 1892 of his *magnum opus*—*The Principles and Practice of Medicine*—a position which he held for the next twenty-seven years, until his death. He, probably more than any other single man in the history of medicine, made it possible for medical students to work at the bedside in the hospital wards. "Here lies the one who admitted students to the wards," he wanted his epitaph to read. In 1889 in one of his earliest addresses of a pedagogical nature ("The Licence to Practise"), he said of the American system of medical education:

It makes one's blood boil to think that there are sent out year by year scores of men, called doctors, who have never attended a case of labor, and who are utterly ignorant of the ordinary everyday diseases which they may be called upon to treat; men who may never have seen the inside of a hospital ward and who would not know Scarpa's space from the sole of the foot. Yet, gentlemen, this is the disgraceful condition which some schoolmen have the audacity to ask you to perpetuate; to continue to entrust interests so sacred to hands so unworthy. Is it to be wondered, considering this shocking laxity, that there is a widespread distrust in the public of professional education, and that quacks, charlatans and imposters possess the land?

I

It was these abominable conditions which Osler set about to correct through his work at the University of Pennsylvania and Johns Hopkins; and he later did what he could about Oxford medical education. He always battled for new ideas in schools of medicine to sup-

plant the old order, which, though admirable in some respects, permitted, he said, "a criminal laxity in medical education unknown before in our annals." He believed in the so-called unit system: a "medical unit . . . of about seventy beds . . . , a large out-patient department, and clinical laboratory close to the wards," all in charge of an *ex officio* professor of medicine in the university, aided by a staff of four assistants and four house physicians.

Deeply implanted in Osler were the sentiments of Abernethy: "The Hospital is the only proper College in which to rear a true disciple of Aesculapius"; and of Oliver Wendell Holmes: "The most essential part of a student's instruction is obtained, as I believe, not in the lecture room, but at the bedside."

He also favored the abolition of examinations, which he called "stumbling blocks and rocks of offence in the pathway of the true student." He felt that most teachers should be able to tell days before the examination those students fit to pass. But these teachers should not get out of touch with the profession and with the public. As he wrote Dr. George Dock, now of Pasadena, a former assistant who had accepted a full-time clinical position in St. Louis, "This would be nothing short of a calamity. There are always men of a quiet type like Halsted, who practically live the secluded life; to have a whole faculty made up of Halsted's would be a very good thing for science, but a very bad thing for the profession."

Playing a major role in the education reform movement in England, Osler in 1913 en-

* From the Department of English, Wayne University, Detroit, Michigan.

gaged in a controversy between advocates of training the so-called practical doctor and those desiring to train men to the scientific spirit, outlook, and attitude of mind. The latter, he said, "may be steeped in it and be at the same time thoroughly practical." He called those who railed at scientific education as representing a "type—the men who jeered at Harvey, scoffed at Pasteur and scorned Lister—the carpenters in surgery and the pill-mongers in medicine, without vision beyond the bench or the counter. The tragedy is that the type persists."

Sir William's presidential address at the January, 1916, meeting of the Association of Public School Science Masters, in London, insisted on preliminary science courses, and said of objections to specializing too early in the schools:

Nature is never special, and a knowledge of her laws may form a sound Grecian foundation upon which to build the superstructure of a life as useful to the State, and as satisfying to the inner needs of a man, as if the groundwork were classics and literature. . . . Upon the life, not the lips, of the master is the character of the boy moulded.

Another presidential address, "The Old Humanities and the New Science," read before the Classical Association in 1919, compared old and new ways of thought, using the medical and premedical curricula to illustrate his points. It is one of a group of essays which although directed at the treatment of science in particular, have great literary value in their presentation of ideas. To show his brilliant literary style in addition to his ideas on teaching medicine, this and other pedagogical essays have been chosen, a few of which are *Doctor and Nurse*, *Teacher and Student*, *Teaching and Thinking*, *Licence to Practise*.

II

In April, 1918, Osler wrote to T. A. Malloch, an old friend, "I have to do a lot of reading for the Presidential Address of the Classical

Association! Every other year an outside man is chosen—not a classical scholar, & Morley, Asquith, Balfour, Bryce have been recent ones. I am the first Doctor, so I take it as a compliment, but a bit of a burden. I shall talk on 'The Classical Tradition in Science.'"

Only Osler himself would say he was not a classical scholar; yet hardly a single member of the Classical Association had a more profound appreciation for the classics, or more deserved the label "scholar." He had accepted an invitation from Gilbert Murray in behalf of the council of the association to act as alternate president in succession to Lord Bryce, the preceding "outsider."

The address had been on his conscience for several months, and of all his talks, "bothered" him the most. It was delivered on May 16, 1919. A second title he chose was "The Old Humanism and the New Science;" and finally, after five drafts and innumerable notes, he settled at the last minute upon "The Old Humanities and the New Science." Cushing tells the whole story in his *Life of Sir William Osler* (1925), and says that "probably no other living man would have ventured to deal with this topic in Oxford of all places, and before a national body of classical scholars—nor could many other men have succeeded in steering an equally safe course through the narrows of his subject."

Professor Murray had spoken of Osler as a man who, in a peculiar way similar to the learned physician of the seventeenth and eighteenth centuries, stood for "a type of culture the Classical Association does not want to see die out of the world—the culture of a man who, while devoting himself to his special science, keeps nevertheless a broad basis of interest in letters of all kinds."

Osler's stirring plea for the mingling of science and the classics in all higher education began by harking back to Linacre's time, when to know Hippocrates and Galen was to be a

physician. As medicine was lifted out of Cimmerian darkness and that "dyvine cloude of unknowynge" to the present era, he took some time for blasts at World War I. His words, "The finer sense of humanity has been shocked to paralysis by the helplessness of our civilization and the futility of our religion to stem a wave of primitive barbarianism," are as applicable today as they were in 1919.

He protested against the selection of professors for special blame—particularly President Wilson's charge that the universities of the Central Powers used science to destroy mankind and should redeem science by seeking out secrets of life, not of death. Every means of butchery is sought by science once a nation goes to war, and "scientific men, in mufti or in uniforms, are not more brutal than their fellows, and the utilization of their discoveries in warfare should not be a greater reproach to them than is our joyous acceptance of their success."

He spoke of the members of the association as larvae, and compared what the thyroid does for the individual to what the guild does for society. The Humanities are the hormones, and meant in the ancient classical world all that man knew of both nature and himself. And by going as far back as 1267 to see what Oxford means by *Literae Humaniores*, Osler showed that there has been *no change* in subjects, although they have been given different names—"Greek and Latin authors, logic, rhetoric, grammar, and the philosophies, natural, moral, and metaphysical." In the soil of Greece and Rome is our civilization rooted, and it is the Humanities which bring the student into contact with the immortal master minds. But now the Humanities are criticized as preventing learning in other directions and teaching methods "antiquated and out of touch with the present needs."

"We should be ready to sacrifice a holocaust of undergraduates every year to produce in

each generation a scholar," yet the average unscholarly student, taught Latin and Greek ten years by pernicious methods, still cannot find the hidden beauties. Pleading for the average man, for whom to know the instruments of construction is superfluous and for whom the greatest single gift would be to infect him with the spirit of the Humanities, Osler paraphrased Mark Twain's comment on Christian Science: "The so-called Humanists have not enough Science, and Science sadly lacks the Humanities."

Students of science, he said, are given little knowledge of Humanities, so the two should be fused into one. "No man is cultivated up to the standard of his generation who has not an appreciation of how the greatest achievements of the human mind have been reached; and the practical question is how to introduce such studies into the course of liberal education, how to give the science school the leaven of an old philosophy, how to leaven the old philosophical school with the thoughts of science."

To solve this question he pointed out, with a wealth of illustration from classic authors, the mutual beginnings and parallel course of science and philosophy. Now, while a student of philosophy can have no real knowledge of his subjects unless he is acquainted with the scientific work of great names in his field—the work of men like Archimedes, Aristotle, Lucretius, and even Roger Bacon—this side of the subject actually is little understood by the modern philosophy student. And the modern student of science is kept wholly in the dark concerning the genesis and development of his branch of learning. Osler believed that an agreeable middle ground for the meeting of these two seemingly opposed forces of learning could be found in the obviously logical study of the history of science, a study which falls deep within the realm both of science and of the humanities.

III

From the essay just considered, one of his most brilliant and the last of his formal addresses, it is a far cry back to June 4, 1891, when he read one of his earliest pedagogical essays, "Doctor and Nurse," now printed in *Aequanimitas*, pages 13-20. The occasion was the ceremony for the seventeen young women who made up the first graduating class of the Johns Hopkins Hospital Nurses' Training School. To those leaving school to play their part in "the great drama of human sufferings," he spoke kindly:

If, Members of the Graduating Class, the medical profession, composed chiefly of men, has absorbed a larger share of attention and regard, you have, at least, the satisfaction of feeling that yours is the older, and, as older, the more honourable calling. In one of the lost books of Solomon, a touching picture is given of Eve, then an early grandmother, bending over the little Enoch, and showing Mahala how to soothe his sufferings and to allay his pains.

Before predicting for them a busy, useful, and happy life, he clearly outlined their position in the world—their part in the struggle of man against the dogs of war and against nature, the Great Moloch. The history of the race he described as a "grim record of passions and ambitions, of weaknesses and vanities, a record, too often, of barbaric inhumanity." It was in one of the attacks of race-mania that Florence Nightingale gave nursing the position it holds today.

Doctor and nurse—"useful accessories in the incessant warfare in which man is engaged"—must judge not, ask no questions, but mete out to all alike worthy hospitality and feel honored to be allowed to act as its dispensers. They must hesitate to suggest in epidemics that "it is for our sins we suffer"—when they know the drainage is bad; one cannot soothe a bereaved heart with "whom the Lord loveth He chasteneth" when he knows the milk should have been sterilized. Osler urged that his hearers rise to a true conception of nature

and its inexorable, cruel laws, and teach these to the public.

Being busy and useful caring for those who cannot care for themselves, the nurse should, Osler promised, also be happy, for "happiness lies in the absorption in some vocation which satisfies the soul."

IV

Marriage, honeymoon, preparations to move into a new and larger home with Mrs. Osler—all these distractions and more, unfavorable to composition, he labored under. Yet Cushing (1925) says, "He had sufficient 'equanimity' to write one of his most effective addresses, 'Teacher and Student,' " which was given October 4, 1892, at the opening of the new medical school buildings of the University of Minnesota in Minneapolis. It was also included in the *Aequanimitas* volume, pages 21-43.

In showing the change in medical education he outlined three types of medical schools in this country: those "devoid of organic union" with universities and responsible to neither the public nor the profession, being the most numerous; those with close university connections, which were the most progressive and thorough; and the State school, of which the college to which he was speaking was one of the few examples. To be under State or university control is secondary, as are endowment, and equipment. "The inherent, vital element, which transcends all material interests, which may give to a school glory and renown in their absence, and lacking which, all the 'pride, pomp and circumstance' are vain—this vitalizing element, I say, lies in the men who work in its halls, and in the ideals which they cherish and teach."

Turning to the teachers, he charged that "nothing less can satisfy a teacher worthy of the name" than "the best that is known and taught in the world." The two aspects from which to view a teacher are as a worker and

instructor in science, and as a practitioner and professor of the art. Departments should be in charge of men who have enthusiasm, a full personal knowledge of the branch taught, and a sense of obligation. "Thoroughly equipped laboratories, in charge of men, thoroughly equipped as teachers and investigators, is the most pressing want to-day in the medical schools of this country."

Osler then passed on to a delicate matter in college faculties—the disadvantages "of having too many men of mature, not to say riper, years." With the physical change of silvering hair and lessening elasticity comes also the mental equivalent, and while the mind may grow clearer and the memory retentive, "the change is seen in a weakened receptivity and in an inability to adapt oneself to an altered intellectual environment. It is this loss of mental elasticity which makes men over forty so slow to receive new truths. . . . The only safeguard in the teacher against this lamentable condition is to live in, and with the third decade, in company with the younger, more receptive and progressive minds." *

He advised the students of medicine of influences by which they would become good students. They should acquire the *art of detachment*—the faculty of isolating themselves from pleasures and pursuits of youth; the *virtue of method*—the orderly arrangement of work and the observation and classification of facts to found general laws; and *quality of thoroughness*—the most important, which consists of a full and deep knowledge of the principles of fundamental sciences, a familiarity with methods for advancing knowledge "and the paths the great masters have trodden." To these should be added "that which can alone give permanence to powers—the *grace of humility*."

* Thirteen years later in his "Fixed Period" essay this same idea was expressed which, misinterpreted, led to his persecution in the newspapers as the sworn enemy of all men over sixty.

And though this course does not necessarily bring position or renown, consistently followed it will at any rate give to your youth an exhilarating zeal and a cheerfulness which will enable you to surmount all obstacles—to your maturity a serene judgment of men and things, and that broad charity without which all else is nought—to your old age that greatest of blessings, peace of mind, a realization, maybe, of the prayer of Socrates for the beauty in the inward soul and for unity of the outer and the inner man; perhaps, of the promise of St. Bernard, "*pax sine crimine, pax sine turbine, pax sine rixa*."

V

Early in January, 1895, Osler was in Montreal for the dedication of the new buildings at his old alma mater, McGill University. At the ceremonies he gave an address, suited for the ears of a lay audience, entitled "Teaching and Thinking—The Two Functions of a Medical School." It also became part of the *Aequanimitas* collection, pages 115-129.

Osler's preliminary remarks had to do with medicine's progress in the nineteenth century: "The bitter cry of Isaiah that with the multiplication of the nations their joys have not been increased, still echoes in our ears. The sorrows and troubles of man, it is true, may not have been materially diminished, but bodily pain and suffering, though not abolished, have been assuaged as never before, and the share of each in the *Weltschmerz* has been enormously lessened." And because the profession excels in the greatest art—the concealment of art—many take for granted the ideals medicine has achieved.

With the remark, "A great university has a dual function, to teach and to think," he dwelt upon certain aspects of the university as a factor in promoting the physical well-being of the race. A knowledge of the mode of controlling epidemics, the introduction of anesthetics, and the adoption of antiseptic methods of surgery he named as the three greatest advances of the century. He also reiterated his distrust of drugs, and said, "There are only two sorts of doctors; those who practise with their brains,

and those who practise with their tongues." The former must have preliminary education to grasp the fundamental truths of the science on which medicine is based, and they must have good teachers to receive that all-important bent of mind.

The public itself presents some difficulties, for common sense in medical matters is rare, "and is usually in inverse ratio to the degree of education." The clergy, best educated, are most superstitious, and besides, man has a craving for drugs. The university, in teaching what disease is and how it may be prevented and cured, is fulfilling a noble function, and its highest mission is to fit men "to carry on the never-ending warfare against disease and death, better equipped, abler men than your predecessors."

Osler next turned toward the other function of the university—to think. Defining this function as "that duty which the professional corps owes to enlarge the boundaries of human knowledge," he remarked that it is this which enables the university to influence the minds of men. Teachers must go beyond current knowledge, and if the school wishes to think as well as teach, teachers must also have ideas, with ambition and energy to put them over and to thus add to the world's knowledge. And an idea which permeates all of Osler's pedagogical essays was here expressed: Give the professors plenty of assistance, so that they will not be worn out with teaching, and encourage graduates and others with bright young minds to carry on researches. And he closed with these words of advice to McGill:

There remains now to foster that undefinable something which, for want of a better term, we call the university spirit, a something which a rich institution may not have, and with which a poor one may be saturated, a something which is associated with men and not with money, which cannot be purchased in the market or grown to order, but which comes insensibly with loyal devotion to duty and to high ideals, and without which *Nehushtan* is written on the portals of any School of Medicine, however famous.

VI

Taking up the reins of his old McGill professor, Palmer Howard, who had fought for a higher standard of medical education in Canada, Osler dared to speak on the terrible conditions in American medical schools in his fiery address delivered April 23, 1889, before the Medical and Chirurgical Faculty of the State of Maryland. "The Licence to Practise," already quoted from, stressed the conditions which made, he exclaimed, "the American system of medical education a byword amongst the nations."

Those engaged in the practice of medicine he divided into three groups: the regular or so-called old school, the homeopaths, and the eclectic school. And he pointed out that there were three courses open in connection with the license to practice: (1) to continue to allow the college to judge those fit, (2) to have the State appoint a board of examiners to pass or reject candidates, irrespective of diplomas, and (3) to organize "the entire profession in each State into an electorate which shall send representatives to a central parliament, having full control of all questions relating to medical education, examination and registration." But to achieve legislation, he had warned them, they must ask for it—all three branches together, for class legislation to rule out the curricula of homeopaths and eclectics is impossible. They "must bury animosities and agree to differ [only] on the question of therapeutics."

The speaker then ran over the phases at that time in operation—the medical schools where the larger the enrollment, the higher the teachers' income, and where irreparable wrong was being done through requiring as little as two years' work for the degree. He pointed out that required four-year courses in the larger colleges would be possible if the physicians throughout the country would, with the great

influence they had, direct their students to such institutions. He recognized that colleges were timid about lengthening the curriculum, yet since Harvard had taken the lead in raising standards in 1871, the success—not in numbers, but in equipment, practical teaching, and clinical instruction—was obvious. Still, in spite of agitation, most doctors were graduated with only two sessions of work. Osler was appalled at the horrible standards prevalent through an attempt to learn the subject matter of one of the most difficult of professions in two years—just eighteen months, to be exact—with no practical training, not even a visit to hospital wards!

“But the handwriting is on the wall, the interpretation has been read, and the prophecy indeed is in course of fulfillment.” He predicted that in ten years no State would recognize a degree as the only prerequisite to practice.

Next Osler discussed the second plan—placing the entire question of registration “in the hands of examiners, appointed by the Governor or by the State societies.” The Virginia Examining Board’s record of twenty-two per cent rejections was a good example, but he believed a higher percentage would result through practical examinations in practical branches. A more elaborate plan would prevail, but it would give control back to the practitioners and do away with the minority rule of the college. Osler next outlined the election of this medical parliament to control medical education, and possibly public health within the State. Such a body as he described would correspond to law societies and to the synods of various religious denominations. Three functions of the board should be: the regulation of minimum standards of education; the examination and registration of candidates; the prosecution of irregular and unlicensed practitioners, including the removal of some for cause.

The difficulty in organizing the boards could be underestimated, as schools would strongly oppose measures likely to interfere with their prerogatives, and the homeopaths and eclectics would dread lest justice should not be meted them. But this opposition need not be serious, as some schools supported the State board plan, and many favored return to the condition in which the degree was regarded as an honor and had no relation to the license to practice.

Osler closed on a sympathetic note, but no less filled with the power of his opening phrases:

To move surely we must move slowly, but firmly and fearlessly, confident in the justice of our claims on behalf of the profession and of the public, and animated solely with a desire to secure to the humblest citizen of this country in the day of his tribulation and in the hour of his need, a skill worthy of the enlightened humanity which we profess, and of the noble calling in which we have the honour to serve.

VII

So numerous are Sir William’s essays which deal with teaching problems that a mere list of them would take pages; there are indeed 153 titles under “Medical Education, etc.” in the *Osler Bibliography*, compiled by Dr. Maude E. Abbott, Minnie W. Blogg, and others. Numerous other publications have educational ideas and concepts as their secondary objectives.

Among the more interesting essays is “The Library School in the College,” which deals with training the custodian of books along broad foundations of a liberal education in addition to technical mastery in an important field. In showing how a “School of the Book” should prove an active ferment to literature and history departments, Osler said:

A few “Professors of books,” to use Emerson’s phrase, would introduce bibliography into the curriculum in a practical way. Take Milton, for example. The booklet with “Lycidas”—what a story in its few pages and how it completes the fascination of the

poem to know the circumstances under which it was written! Only a few libraries possess the 1638 edition, but in an enterprising seminar, one member would get a photograph of the title page, another would write an essay on these college collections, so common in the Seventeenth Century, a third would discourse on Milton's life at Christ's College, while a fourth would reconstruct the story of Edward King. The 1645 edition of the Poems, with Milton's famous joke beneath the ugly reproduction of his good-looking youthful face, would take a term, while the Paradise poems and the prose writings considered bio-bibliographically would occupy a session. How delightful to deal with Erasmus in the same way!

Another essay more pedagogical than medical was Sir William's "Greek at Oxford," giving his views on the then burning question of compulsory Greek for admittance to Oxford. Of his great regard for the old learning, the benefits from studying the classics, the importance of inculcating the ideals of the ancient Greeks in the youth of today, Osler had spoken many times. And though he stressed the value of learning the sciences, he never lost sight of the fact that any foundation must have its roots buried in the past. In this article he said that he believed in relaxing the present regulations but wanted compulsory Greek for graduation in theology, medicine, and law. Of the candidate for the medical degree and Greek, Osler wrote:

Taught as it is to-day, it may not be of much use, but if for no other reasons, reverence for the memory of Hippocrates and honour of the labours of Galen demand that we should have some men in the profession with a knowledge of the language of our origin. Could the student be taught the dead languages "without the perplexities of the rules talked into him" (Locke), could we but cease from "forcing the empty wits of children to compose themes, verses and orations" (Milton), could we but adopt the rational method by which Montaigne learned Latin and Greek as he learned his native tongue, these languages might become working instruments, keys to great literatures and to the minds of great masters; and the student could read his Celsus and Hippocrates as freely as his Watson or Trousseau.

As president of the Canadian Medical Association, he spoke, on September 2, 1885, at Chatham, Ontario, on the growth of a profes-

sion. Here he was concerned with the preliminary education of the doctor, the regulation of the medical curricula, higher admission requirements, and the vesting of licensing power in the hands of a Federal Bureau of Registration.

At the opening of the session of the Medical Faculty, McGill University, September 21, 1899, he gave his "After Twenty-five Years," later preserved in *Aequanimitas*, pages 189-206. He reminisced over the years he had spent as a teacher of the Institutes of Medicine at McGill. Of a capable teacher he said, "The devotion to a subject, and the enthusiasm and energy which enables a man to keep abreast with its progress, are the very qualities which often lead him into pedagogic excesses. To reach a right judgment in these matters is not easy, and after all it may be said of teaching as Izaak Walton says of angling, 'Men are to be born so, I mean with inclinations to it.'"

Osler believed "the student tries to learn too much, and we teachers try to teach him too much," a condition caused by the neglect of Plato's principle that education is a lifelong process. And he urged the students to keep up an interest in literature, to refresh their minds from anatomy with Oliver Wendell Holmes, to turn to Keats or Shelley for consolation from physiology, to seek peace from chemistry in Shakespeare, and to lighten pharmacology's burden with Montaigne. And "in the group of literary physicians Sir Thomas Browne stands preeminent. The *Religio Medici*, one of the great English classics, should be in the hands—in the hearts too—of every medical student. As I am on the confessional to-day, I may tell you that no book has had so enduring an influence on my life."

Several years later, on June 28, 1910, in Nottingham, England, Osler, now Oxford's regius professor of medicine, spoke at the opening of the new club and library of this city's medical society. His subject was "Remarks on Organi-

zation in the Profession." He advised that the hospital be turned into a postgraduate school, because with no postgraduate work "a doctor was stale in five years, in the rut by ten, and by twenty in so deep he could never get out."

VIII

This paper has considered a group of essays, most of which have been overlooked by many readers and critics. Yet these works are as truly literature as are Milton's "Of Education" and parts of Dewey's *Democracy and Education*.

The essays are concerned in content wholly with arguments in support of ideas. These ideas are established, either by historical observation, as in the case of "The Old Humanities and the New Science," or by ethical and humanistic reasoning, as in "The Licence to Practise." They present opinions concerning the betterment of the race.

These pedagogical essays, in their broader aspects, are of value to the profession as well as to the lay mind. The spirit of the search for knowledge has become universal, and in this light "The Old Humanities and the New Science" takes on significance for everyone who would get the most from his intellectual life. Pointing out as it does the absolute necessity of a proper balance between what Huxley chooses to call culture, and a study of the nature of the physical cosmos, it compels the attention of any serious intelligence to Osler's ideas of the relationship between the two.

On the other hand, the ethics of the profession of medicine, the preparation of members of that profession, and the relations between medicine and the lay public are of vital universal importance. It is the business of the State to safeguard its citizens by establishing high standards of medical education. The practical value of methods whereby such standards may be raised is apparent.

But it is not within this sphere that the liter-

ary value of the group just treated lies. The actual concern of these essays lies again in the quality of Osler's doctrine, his vigorous observations, which form the bases of his works, upon the human philosophy involved in the process of education. Thus, ideas again comprise the groundwork upon which the structure rises—thoughts of a personal nature. This is an argument in support of subjective material.

So are the pedagogical essays founded. They deal with what Osler thinks education should be, a philosophy of profound idealism based on a long life of observing educational methods. And they are universal in their application in that they apply to any teacher-student relationship—a quality existent not alone, or even most often, in schools, but everywhere to be found where one person may learn something from another.

This may easily be demonstrated. In the first place, it will have been observed that throughout the pedagogical essays one particular theme is dominant: Education is a lifelong process. This will be found to be the real keynote, not only of the group as a whole, but of each individual essay. In some, certain mechanical aspects of curricula are dealt with; but always the collegiate background is looked upon as merely an introduction to methods of study. Thus he advises his listeners of the influences by which they may become good students, "now in the days of your pupilage, and *hereafter* when you enter upon the more serious duties of life."

All his life he maintained the dictum that teachers are not masters but simply advanced students. They should not, he thought, set themselves upon pedestals and hand down their nuggets to the rabble below; rather they should enter wholeheartedly into the business of study, carrying on their own studies, and making available to the younger students the fruits of their long years of labor.

It was in this vein that he spoke of the medical society as an educational institution. Although he was speaking of the profession, there is a general thought behind and through the essay which applies to all group relationships, which may well be extended to make of any group assembly an educational force. This essay is not held to be in any sense literature; its bases do not justify that. But it serves well to illustrate the nature of his educational thought.

This sort of material is literary, both in essence and in form. It expresses, not what invariably and incontestably *is*, not a great cosmic truth, but what ought to be, what could be, if circumstances were properly made to suit. It is beyond question an expression of subjective reflection, the result of Osler's keen observations of nature—a result which is not a record but an interpretation.

The universal application of the doctrine is easily seen. Unfortunately the circulation of these essays is limited to the medical profession. Again is discovered the old bugaboo which frightens the lay public away from any intimate knowledge of what takes place in medicine, the same awe which restricts curiosity concerning any science. But as was pointed out in "The Old Humanities and the New Science," both literature and science have common origins and parallel courses.

Thus Osler bridges the gap between the two. These are literary essays illuminating their ideas with illustrations significant to scientific thought. And they are ideas conceived in wisdom and executed with clarity and vigor.

They are Osler's interpretations and conclusions reached after long and careful concentration on the problems. Further, a fine intelligence and an unusually broad educational background equipped him to deal in a conclusive and valid manner with whatever presented itself to his mind for solution.

Finally they are personal observations, thus subjectively realized, dealing with ideas rather than things; and they are interpretations of things. Therefore they are criticisms of life.

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