OUR HERITAGE FROM WILLIAM OSLER*

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ON THE first day of January 1920 in the ancient chapel of Christ Church Cathedral, Oxford University, a distinguished assembly of Britain's great gathered for the funeral services of Sir William Osler. Not only the great were there. The students and the simple people who compose the more humble echelons in every great University town also crowded the aisles for their friend, the beloved physician, was dead.

The quiet which brooded over the lovely spires of Oxford spread widely. It crossed the Atlantic and was acutely sensed over our great continent shrouding the United States and Canada. A medical student, returning from his Christmas holiday on the second of January, was suddenly aware that something of consequence had occurred. That was before the day of radio but even so my family physician in the small Ohio city in which I then lived had called to tell me in a grief-stricken voice that William Osler was dead. Osler had been his teacher at Johns Hopkins. I returned to school to find my own Professor of Medicine quite broken, for Roger Morris had been Osler's resident and later had served under him in the Hopkins Department of Medicine.

So, as it happened, I never saw him, never heard him speak, but William Osler's character and personality have exerted a direct influence down through the years of my life which has been equalled only by a very few persons with whom I have had the fortune of intimate contact. His textbook of medicine through which he said he came in contact "mind to mind with the profession" was the student's bible in my day and his published essays and lectures I have read and re-read whilst Harvey Cushing's magnificent biography has been constantly at hand since it was published in 1925.

But, as was inevitable, there has come a generation "which knew not Joseph." Medical students of today and most physicians under thirty years of age have little knowledge of Osler's tremendous contribution

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to medical education in the United States and they are quite unaware of the truly great debt of gratitude which they owe to him. *Aequanimitas* they all have had through the wise generosity of one of our great pharmaceutical houses, and William Bean's little labor of love, Osler's "Aphorisms" has been available since 1950, to say nothing of Cushing's two volumes; but they are so seldom read. We are all too busy with "important things."

I will speak about Osler tonight, not as a medical historian for I would be poorly cast in such a role, but rather as a physician who would acknowledge his own debt, and, if my discourse runs largely into the field of medical education, it is because I hold today, however unworthily, the office Osler once graced, the Presidency of the Association of American Medical Colleges. The business of that Association is medical education and not one of its long list of Presidents has measured up to the accomplishments of William Osler in this field.

I am asking you to pause and journey back with me some sixty years. The year will be 1892, the place, the University of Minnesota, and the occasion marked the dedication of the new medical buildings at that University. The speaker was Dr. William Osler.

What he said might well have disturbed many persons in his audience, because on that day, devoted to the opening of a new medical school, Osler elected to speak quite deliberately of the fourth-rate position occupied by the American medical schools when compared with the advanced university schools of Germany, Britain and France. He declared that "in this eminently practical country the teacher of medical science has not yet received full recognition, owing in part to the great expense connected with his work, and in part to carelessness or ignorance in the public as to the real strength of a nation." As a result schools of medicine had not developed as faculties of universities except in rare instances but instead they were still proprietary schools of a type to be countenanced only in a frontier economy. He said quite frankly: "To equip and to maintain separate laboratories in the sciences of Anatomy, Physiology, Biological Chemistry, Bacteriology, Pathology and Pharmacology and to employ skilled teachers, who shall spend all their time in instruction and research, requires a capital not today at the command of any medical school in the land. There are fortunate schools with two or three departments well organized, not one with all." And of the one hundred and fifty-odd medical schools in the nation

on that day the fortunate ones with two or three departments well organized could have been counted on the ten fingers and with fingers to spare. That was in 1892, within the lifetime of many persons in this hall today.

Dr. William Osler was then forty-three years old. He had recently been appointed Professor of Medicine at the new Johns Hopkins Medical School which was destined to exercise so dominant an influence upon the future of American medical education. I am not guilty of exaggeration when I refer to our "heritage from William Osler" because, even in that group of brilliant teachers who appeared on the American scene as his contemporaries, he stands out pre-eminent, the apostle of modern medical education. No man of his time was more earnestly concerned with the problems of the medical schools, no man was more articulate in expressing their needs, and no one struggled so constantly to remedy their defects.

The crusade which was already well under way when Osler spoke at Minneapolis may be followed in his published addresses. His analysis of medical education became more precise in the decade leading to the turn of the century and repeatedly he emphasized three great defects. The first was the need for the development of true university schools, the second for the intimate integration of medical school and hospital so that the wards should become the true laboratory of the clinical departments, and the third need was for the active prosecution of research in every department in each medical school. All of these things had been accomplished abroad—in the United States they were sadly lacking.

To understand these three needs we must try to look at them as Osler saw them because their fulfillment was to be the legacy of William Osler to medical education, and we must comprehend the inheritance in order to evaluate the manner in which we have invested our heritage.

In the nineties, as I have said, there were but few university medical schools. The great majority were independent proprietary institutions, only a few with nominal university affiliations. It was quite clear to Osler that the schools which were most vital and progressive were those with close university ties, and his constant plea was for a tightening of the bonds between medical school and university throughout the country. He was not unmindful of the important contribution made by the proprietary schools during the first half of the 19th century but

he argued quite correctly that these schools, so numerous and so very inadequate, the product of a crude frontier society long gone, must merge and then find sanctuary in the shadow of a university or they must close their doors.

Medicine, at the end of the century, had indeed entered a new era. The epoch making discoveries in bacteriology, physiology and pathology; the birth of immunology, hematology and biochemistry were to change the entire complexion of medical thought. New techniques of diagnosis and treatment, the results of those discoveries made largely in the research laboratories of Germany, France and England, were to find practical application in the hospital and at the bedside. The only sound way to introduce them was through the schools of medicine, and that would involve nothing less than a complete reconstruction of American medical education: a vast program of physical expansion to provide laboratories and other facilities, and the training of a small army of teachers and investigators to provide pre-clinical faculty to teach the medical sciences. And while this was being accomplished it would be necessary to change drastically the educational requirements prerequisite to the study of medicine, for the proprietary schools in most instances accepted students directly from high school. These schools had served their purpose and their day was passing; it was passing because the demands to be made upon them were overwhelming. To replace them Osler led an ever-growing band of physicians devoted to the conviction that "thoroughly equipped laboratories in charge of men thoroughly equipped as teachers and investigators was the most pressing want . . . in the medical schools of this country."

This was the first great need, that the schools be remade so that they might teach medicine as it was being taught abroad and faculties, literally, must be created where they did not exist, to carry forward teaching of medical science.

As a corollary to this first need, that the schools should be expanded as an integral part of the universities, comes Osler's second plea: that the hospitals in which the teaching of clinical medicine was to be done should be intimately associated with the schools and that medical students should be taught in small groups on the hospital wards and in the dispensaries. He expounded the great value of the clinical clerkship which does not merely admit the student to the amphitheatre and lecture bench on sufferance, but instead brings him into the hospital as an important

member of the physician-student team. This team was to be organized upon the basic assumption that all members from medical student on through house staff, attending staff and service chief were students together, differing only in degree of experience and wisdom. Necessarily the opportunity for graduate training in the hospitals should be greatly expanded through the development of intern and residency programs.

Less than fifty years ago they were far ahead of us abroad in this correlation of medical school and teaching hospital. We were still lecturing and demonstrating to large numbers of students in crowded lecture rooms and Osler was pleading for small groups, each with a competent instructor, studying the actual, daily progress of disease on the hospital wards and in the out-patient dispensaries. What he wanted seems obvious enough, and reasonable too, for it is the essence of sound clinical instruction, but a profound change in point of view involving medical teachers, visiting physicians, hospital authorities and university authorities was necessary to make it possible. It was the last of Osler's three "needs" to be adequately satisfied.

The significance of his efforts in this direction is attested to in the dedication of Harvey Cushing's monumental life of William Osler where we read:

"To Medical Students

> "In the hope that something of Osler's spirit may be conveyed to those of a generation that has not known him; and particularly to those in America, lest it be forgotten who it was that made it possible for them to work at the bedside in the wards."

When he left Johns Hopkins Medical School, Osler was not convinced that he had accomplished more than a local reform which changed the nature of clinical teaching in a scattered half dozen medical schools, and he had devoted more than fifteen years to his crusade in behalf of medical education. However, from those schools, acting as secondary foci, the influence spread so that Cushing's dedication, written in 1925, was entirely appropriate.

When the university medical school and the teaching hospital should be consolidated into an effective educational unit the stage would be set for the realization of a third development which would vitalize and nourish American medicine. Osler insisted that the new schools of medicine must appreciate the dual function of a university, namely, to

teach and to think. The idea was quite simply expressed in his own words: "What I mean by the thinking function of a university is that duty which the professional corps owes to enlarge the boundaries of human knowledge. Work of this sort makes a university great, and alone enables it to exercise a wide influence upon the minds of men." Research must become a responsibility of equal rank in its importance with teaching, and then the third great "need" which Osler expounded would be satisfied.

He realized the error in the point of view then widely expressed by the men of "common sense," which maintained that a few select schools should be equipped and staffed for the pursuit of investigative work while the great majority would continue to train practical doctors much as they had been doing. Only a faculty which contained a leaven of men seriously interested in widening the field of knowledge could be progressive, and to remain static in this new era of medical education was to deteriorate. Repeatedly he called attention to the obvious significance of what had happened in France, Germany and Britain and he insisted that the recent developments in medical research abroad were vast enough to challenge every faculty of medicine in this land.

I hope you will forgive me for taking so much time to recall what many of you have long known, but we must neither permit time to dull the great importance of William Osler's analysis of medical education, nor forget his untiring efforts to bring the urgent need for adequate corrective measures before both the physicians and the intelligent laymen of the nation. A few years later A. N. Whitehead was to make his striking plea for the necessity of "the habitual vision of greatness," for, he said, "if we are not great it does not matter what we say or what we do." I submit that Osler did indeed hold the habitual vision of greatness in medical education before the profession in the United States; he did not permit them to ignore or to forget it. This was his legacy to us.

In 1905 he left Johns Hopkins University to become Regius Professor of Medicine at Oxford, and soon thereafter became Sir William and the second living Canadian Baronet. He knew he was leaving a positive movement and an active ferment in certain American schools of medicine. He could not know how amazingly that movement would accelerate. The time was ripe, of course, or Osler's would have been a vain voice among that tragic host of wise men who lived before their time. The Johns Hopkins conception of medical education succeeded

beyond the most ambitious expectations of its proponents; the ideas it developed and the men it trained spread through the medical schools in spite of the bitter resistance of entrenched reactionaries. The stern admonition of President Eliot of Harvard leveled at the faculty of medicine in that university a decade earlier, that they promptly bury the dead past and put about the business of setting their house in order, had echoed through the country. The time was indeed ready and everywhere sincere and competent men were carrying forward the crusade which Osler had preached for almost twenty years.

Ask a well-informed physician what brought about the great renaissance in medicine in this country and today the chances are about ten to one that he will reply, "The Flexner study and the Report of 1910." Time as it passes folds cause and effect into each other so that true relationships are often lost. Nothing should be said to detract from the importance of the Flexner study, but it must be remembered that the famous report was both an ending and a beginning. It marked the end of a period of intense preparation which made the nation ready for the findings of Dr. Flexner, and permitted development of an effective program in medical education which implemented the report. It marked the beginning of an era of such rapid progress that within three decades the medical schools of America had not only drawn abreast of the schools abroad, which Osler had held as the almost impossible goal, but had indeed surpassed them, providing the most effective training for all the young physicians of a nation that the world has seen.

This all-important period of preparation to which Osler contributed heavily saw an entire profession so dedicated to self-improvement that the Council on Medical Education and Hospitals, created a year before he left Johns Hopkins, could go to the Carnegie Foundation for the Advancement of Teaching, with the full approval of the House of Delegates of the American Medical Association, and propose an objective study and report which, as was well known in advance, would close sixty per cent of the nation's medical schools should it prove successful. In order to keep the record clear one must emphasize the fact, frequently ignored, that the implementation of the ideas implicit in Osler's crusade was, and had to be, carried forward by the organized medical profession. The Flexner study was conceived and proposed by the A.M.A. and its membership stood ready to support the findings even though they destroyed almost two-thirds of the institutions which had

produced them—a truly unique accomplishment which tested the effectiveness of that period of preparation.

There is not time this evening to tell the story of that amazing rebirth of medical education and subsequently of medical practice which marked the first quarter of this century. Indeed there is no need to do so since we are all familiar with the story and many of us have been permitted in a small way to contribute to its writing. Though the full flood of this progressive movement has been reached there has been no ebbing of the tide; the schools of medicine have not become smug and complacent.

Since it was Osler who constantly measured our deficiencies by contrasting the American schools with those abroad, perhaps we, in turn, might measure the American achievement by reversing the process, and look at our schools through the eyes of a modern and competent foreign observer. Robert Debré, the distinguished professor of Pediatrics of the Faculty of Medicine, University of Paris, has made several extended trips to the United States since the end of the war for the purpose of studying medical education in our country. Recently he published an account of his impressions in an important magazine, the "Revue de Paris," thus choosing to speak widely to the people of France through a lay journal, rather than limit his message to the medical profession. I wish to quote from the French publication.

"Each of these great Universities of America has a School of Medicine. They are richly financed . . . they are designed to instruct relatively small classes of students (as judged by European standards) winnowed from numerous candidates, whose intellectual and moral qualifications are taken into careful consideration in the delicate matter of their selection. Each stage of promotion in their select schools involves sound basic education . . . Young men reared in these colleges understand the technique of therapy which they themselves have practiced, they know how to discuss problems of biological chemistry such as come up in clinical practice, they base their ideas on sound physiological foundation. Our students cannot do the same in spite of the efforts of excellent professors. But, to tell the truth, they cannot be compared. In this domain as in others the differences are too great, the organization and the resources too dissimilar. There is no resemblance between these peerless American Schools of Medicine and ours."

And only fifty years earlier Osler was speaking in almost identical

words, only the implication was reversed. Professor Debré goes on to say: "It is not only the importance of the laboratories and their good equipment, their adequate resources, that must be emphasized. The spirit which animates this university corps and the type of life which is organized in these schools cannot be considered with too much attention. . . . The free intercourse, less formal and less hierarchic than in the Old World, of these men passionately interested in their task really gives the impression of a balanced team. The whole group spends its day in the hospital and laboratories. The hospital, associated with these medical schools, is an integral part of the organization. . . . The School of Medicine is one mingled with the hospital and there is none of the fragmentation from which we suffer in France. The fusion, material and spiritual, of the teaching staff with the research staff and the hospital staff is total. When shall we arrive at this solution, the only logical and satisfying one!"

I hope you have noted how strikingly though quite unconsciously Professor Debré highlighted the fulfillment of Osler's three great needs in these passages I have quoted from his critique of our medical education. His evaluation is not unlike many others which have come from abroad in recent years and I believe one might conclude that, judged by the evidence of foreign medical educators, we have indeed given a good accounting of our trusteeship, have promoted our heritage so well that it has yielded a golden harvest. Surely Osler would have no criticism but instead only astonished praise for the way in which we have carried forward his endeavors to accomplishments which he could not have anticipated in his most optimistic moments.

But, of a sudden, doubts creep in and now I am not so certain. The material, the physical and the intellectual achievements; the organizational integration of hospital, university and research laboratories, all would meet with Osler's most enthusiastic approval were he to pass judgment on our efforts today; but then, I fear he would somewhat sadly suggest that in the face of this truly great achievement we seem to be in danger of neglecting one of our first obligations, namely, to do our utmost to bring to each student some awareness of the essential spiritual nature of our profession.

To William Osler the practice of medicine was not only an interesting way of earning a living; it was something far more comprehensive—a way of life. This, in truth, is what the great professions have always

been—as long as they remained great. It is the common denominator which is to be found in everything Osler wrote and worked for, and nowhere is it more clearly expressed than in the last four addresses which he delivered before leaving the United States. Together they constitute his valedictory to the profession in this country. Even the titles are significant—"The Fixed Period," "The Student Life," "Unity, Peace, and Concord," and finally, only a few days before sailing, the exquisite little "L'Envoi."

For him the ultimate goal of all education was not technical competence, not accumulated knowledge, but the development of wisdom. What is wisdom in the physician? To the best of my knowledge Osler never spelled it out but I believe his meaning is clearly apparent; wisdom is knowledge which through experience is transmuted into understanding—and that is what we are in danger of losing in the excellent medical education of our day.

Paradoxically our very success in eliminating the three great defects which Osler deplored was a factor which contributed to the faults we now recognize and hope to correct. The brilliant interval which we might identify as the post-Flexner period of medical education saw the rapid shift of emphasis from the art to the science of medicine. Precise methods of diagnosis, new understanding of the nature and cause of disease growing out of an expanding scientific knowledge, and the development of specific therapeutic agents, not dreamed of even twenty-five years ago, have all exerted a profound influence upon the pattern of medical practice.

Increasing specialization which is ever the close companion of advancing technology has made it apparent that four years of undergraduate study even with a year of internship added did not allow adequate time for the mastery of any branch of clinical medicine. So the residencies appeared, grew and spread. The residency system is undoubtedly our outstanding achievement in clinical medical education. The idea came from abroad, like so many others, but we have developed it into a unique institution. However, the residency has accelerated the over-production of specialists and increasingly institutionalized our physicians.

The truth is that an objective evaluation of our progress will reveal the faults of our very virtues—and we know it. Any thoughtful person can list a disquieting number of defects, such as the increasing length

of time required to prepare a physician for practice; the too-apparent over-emphasis upon specialization; the practice of tempering the young physician in the press of institutionalized patients rather than in the field of active practice; and, growing out of this era of scientific influence, the distressing fact that too often our students have been trained to study disease rather than to understand the problems of a sick human being.

Many of us who teach medicine have become aware of our shortcomings. We are beginning to realize that specialization breeds technicians, not physicians in the Oslerian sense, and more has already been done to counteract our faults than is widely realized. The great upsurge in psychiatry in the medical schools has resulted in the beneficent intrusion of psychosomatic concepts into every special discipline, thus bringing into focus the sick patient rather than an exhaustive list of laboratory tests. The increasing emphasis now placed upon environmental medicine, and the widening effort to help the student become familiar with the impact of sickness in the atmosphere of the home, all are evidence that the medical schools are again becoming aware of the social responsibilities implicit in their job. In school after school the curriculum is being subjected to critical study. Experiments large and small are appearing throughout the land, and in the newly established Teaching Institutes of the Association of American Medical Colleges the medical faculties of the nation have embarked upon a program of critical cross fertilization which is unlike any previous experiment in the scope and ambition of its purpose.

What we now attempt to do is to humanize the competent technician produced by the brilliant post-Flexner period of medical education so that we may realize the full measure of William Osler's legacy to the medical schools. Several years ago I tried to express the ideal we strive for and I believe I can do no better than repeat what I said then: In his service the professional man must act in a three-fold capacity. He must appear simultaneously as skilled technician, as sage and as priest. In no professional role is this trinity more fully illustrated than in that of the physician. Knowledge is needed and often most detailed knowledge sharpened into tempered skill; but that is not enough. Wisdom must be there to condition knowledge; but that is not enough. Understanding must guide skill and humanize wisdom; then only do we see the complete physician.