

Remarks

ON

THE MEDICAL LIBRARY IN POST-GRADUATE WORK.*

BY

WILLIAM OSLER, M.D., F.R.S.,

PRESIDENT OF THE MEDICAL LIBRARY ASSOCIATION.

WITH collectivism the order of the day it is very natural that those interested should associate themselves in an organization which has for its object the welfare of the Medical Library. As stated in the circular, the Provisional Committee has given the new society a wide basis. The objects are:

- (a) To bring together those engaged in or interested in medical libraries and medical literature, and for the discussion of matters associated with their fostering and care;
- (b) To maintain an exchange for the distribution of duplicate books and periodicals;
- (c) To increase the facilities for reference work;
- (d) To encourage the study of the history of medicine;
- (e) To issue publications dealing with medical library work;
- (f) To form a library union amongst those of the medical libraries between which the exchange of books can be arranged—

all unexceptionable objects, and with the additional merit of being within reach of accomplishment.

Let me say at the outset that this is not to be simply a society for those whose work is more or less officially concerned with libraries, but it is for all interested in the book as a living factor in the education of the members of a learned and consequently of a very bookish profession. Whether the British doctor has been a better book-lover or book-maker is an open question, but from the first Oxford movements in the thirteenth and in the early fifteenth centuries we find him ever in the ranks of the keenest bibliophiles. He has never been a great student of the book as such, and it is strange not to find in the long line of splendid bibliographers, from the lovable Conrad Gesner to the encyclopaedic Billings, an Englishman of the first rank. I do not forget the useful books of Douglas, of Young, and of Forbes, nor the Rabelaisian (in the mirth-loving sense) two-letter bibliography of Atkinson †; but they are feeble efforts in comparison with the works of our foreign and American brethren. But the Englishman has made up by being a great book-lover. Some of the best known of collections have been made in this country by physicians. It would be impossible to parallel elsewhere the libraries of Mead, Askew, and William Hunter. The sale catalogues of the former tell of treasures (and of prices) that send a thrill of regret through the book-lover that his lot was not cast in those happy days. The William Hunter Library met a better fate, and in the University of Glasgow is an enduring and worthy monument to the elder of the two great brothers, so unlike in mind and manners, so like in the capacity to see the true value of collections. It is to be hoped that a complete catalogue of this library may be issued before long, in companion volumes to the splendid catalogue of the manuscripts recently edited as a memorial to the late Professor Young.

It is safe to say that in proportion to population there are more medical libraries in these islands than in any other country in the world. We hope before long to have a proper census of them, and meanwhile I base the statement on casual observation. One of the first questions I ask on visiting a new town is, "Where is your medical library?" and I have been astonished at their extent and value. Usually in connexion with the county hospital or the medical society, or both, many of them go back to the middle or later part of the eighteenth century, and bear witness to the culture and intelligence of the provincial physicians of those days.

* Delivered at the inaugural meeting of the Medical Library Association, held at Belfast, July 28th, 1909.

† The only man, so far as I know, who has had the courage to write a diverting bibliography, but unfortunately he only got through A and B.

There are three groups:

First, in the national libraries of the capitals and of the universities, such as the British Museum and the Bodleian, are large collections of medical books—that of the British Museum the largest in the country. Upon these public storehouses of bibliographical knowledge we all draw freely. In many of the small libraries there are special collections of great intrinsic or historical value. The college libraries of Oxford and Cambridge contain manuscripts and old books of exceptional interest. Diel's topographical catalogue shows how rich some of the colleges are in the Greek medical manuscripts, particularly Balliol, New, Merton, All Souls, and Caius. Stowed away on their shelves are many fine folios, the gift of old members. Gulston's books are at Merton; New College has a very choice collection, including some of Walter Bayley; Floyer's books are at Queen's, Paddy's at St. John's, Coggan's at Oriel—indeed there is scarcely a college library without interesting medical associations.

Secondly, the medical libraries proper, among which those of the Royal Colleges of the three capitals are the most important. Easily first in extent and in the wide sphere of its influence is that of the Royal College of Surgeons of England, which is a model of good management. The library of the Royal Society of Medicine is the largest, I believe, connected with any medical society, and with the new organization is rapidly growing. The libraries of the Faculty of Physicians and Surgeons of Glasgow, of the Medical Institution of Liverpool, of the Birmingham Institute, of University College, Bristol, the Worth Library of the Steevens Hospital, and the Manchester Medical Society, form collections of the first rank. One of the most valuable of professional libraries is that of the British Medical Association, under whose auspices, so to speak, we meet to-day. Founded in 1889, it now possesses more than 20,000 volumes, with a large catalogue. The books are chiefly modern, with a large proportion of monographs and valuable sets of foreign periodicals. It receives also, and this is a very important point for borrowers, the theses of the French universities. Through it the Association has already done good work by aiding in the formation of local libraries, and between 6,000 and 7,000 duplicates have already been distributed. An important step has recently been taken to make this a lending library for members of the Association, who will be able to borrow expensive works and periodicals such as are only occasionally required for consultation. Having frequently visited the library in the old building, I very gladly bear testimony to its usefulness and to the admirable way in which it is managed by the librarian, Mr. Honeyman. I am not surprised to hear that the annual number of readers is very large, more than 6,000 in 1906. In the new building the arrangements are excellent, and I have no doubt that provincial members visiting London will more and more resort to this library. In all matters of management and detail these large libraries will be able to guide and assist us with their experience. Certainly we shall get much more from them than they from us, but theirs will be the richer blessing of the giver. With a well-managed exchange we may be able to help them fill the lacunae on their shelves, and it should be our aim to make these national collections more and more complete.

By far the best work we can do is in the organization, preservation and extension of the smaller libraries already existing in the provincial cities and towns. Many of these are already well housed and well arranged, as for example the Reading, York and Norwich libraries, to speak of those which I know personally. There are scores of hospitals with good collections, some of the greatest value, as those of Exeter and Bath and the Brackenbury Library, Preston. Some of them have associations of exceptional interest. I have always been an admirer of Caleb Hillier Parry of Bath, type of the old naturalist-physician, more common a few generations ago than now. His library in the Royal Hospital remains a fitting monument to a scholarly man of wide sympathies, and who left a deep impression on that part of the West Country which has given us such men as Jenner, Pritchard and Symonds. In those days life was not so full, and competition was less keen, so that men had more time to read and to think. Many of the best of these smaller libraries date from the latter part of the eighteenth century and the

beginning of the nineteenth century. Some of them have died into cupboards and barrels, and sadly need the kind care of a Philip de Bury, one of the founders of Oxford libraries, who, in the fourteenth century, complained bitterly that he found precious volumes defiled and injured by mice, worms and moths. A collection of this sort, offered me a few years ago, I was able to buy through a friend, for the Johns Hopkins Medical School. It had associations with Joseph Priestley, with John Aikin, Thomas Percival and James Kendrick, well-known names in the North. As illustrating how valuable may be some of these out-of-the-way collections, there were in this one scores of seventeenth and eighteenth century pamphlets which were not in the London libraries.

Our best work will be in stimulating an interest in these smaller libraries, either in connexion with the medical society or with the hospital, and in helping to organize them; and from every one of them we hope to have in our society a representative.

And, lastly, there is the private library of the practitioner, the scope of which will depend on his training, his tastes, and his purse; and this brings me to the subject of my remarks, "the value of the library in post-graduate study."

Some of the best of men have used books the least, and there is good authority for the statement that shallowness of mind may go with much book-learning. Descartes, one of the most brilliant of thinkers and observers, had no library. At Egmond, asked by a friend the books he most read and valued, he took him into his dissecting room and showed him a calf—"There is my library." An identical anecdote is told of John Hunter. But these were exceptional men; and few will be found to doubt the importance of books as a means to what the same author called the end of all study—the capacity to make a good judgement.

It cannot be denied that many men practise, and do so successfully, with few journals and still fewer books. Radcliffe, whose memory is enshrined in two of the finest library buildings in the kingdom, and whose travelling Fellows are supposed to have at least a triennial thirst for new knowledge, neither read nor wrote books; and he is credited with the famous *mot* that he could set down the whole art of medicine on a sheet of paper. But conditions have changed, and medicine is now a rapidly progressive science, as well as an exceedingly complicated art, of which, at qualification, a man has only laid the foundation; and if he is to develop his intelligence—that is, get an education—it must be by systematic post-graduate study. Out of leading-strings he must himself be at once teacher and pupil, and make and keep certain self-made laws. Whether he will get this education, whether, indeed, he will be able to keep what he has, will depend in part upon the sort of training he has received, and in part upon the type of mind with which he has been endowed. Unless as a student he has got that "relish of knowledge" of which Locke speaks; unless he has got far enough to have his senses well trained to make accurate observations; unless he has been taught how to use his intelligence so as to form a good judgement, the teacher will have more or less of a fool for a pupil, and between them make a sad mess of an education. After a few years such a man gives up in despair, and without mental exercise grows stale and is fit to do only the ordinary reflex practice, in which cough means an expectorant mixture, and heart disease digitalis, just as surely as a tap on the patellar tendon brings out the knee-jerk. A glance at the consulting-room suffices for the diagnosis of this type: the BRITISH MEDICAL JOURNAL or *Lancet* lies uncut in heaps on the table, and not a book is in sight! Some of the men of this type play a good game of tennis, others shoot and ride well, more play a good game of bridge, but they are lost souls, usually very dissatisfied with the profession—the kickers, the knockers, the grumblers, without a glimmer of consciousness that the fault is in themselves.

Post-graduate study is a habit of mind only to be acquired, as are other habits, in the slow repetition of the practice of looking at everything with an inquiring spirit. A patient with pneumonia has grass-green sputum. "Have I ever seen it before? Have I a note of it? Where can I get a good description of it? What does it signify?" These are questions preliminary to getting a bit of clinical education, trifling in itself apparently, but when stored up

and correlated with other facts may become the basis for an intelligent judgement on an important case.

There are many factors in this training—note-taking, reading, the medical society, and the quinquennial brain-dusting at a hospital or a post-graduate school. But I am only here concerned with one—books. I would like to speak of the value of notes, however brief, collected through long years as the sole means whereby a man gets his experience codified and really helpful; but I cannot wander to-day from the book, in which I include the JOURNAL.

But how can a busy man read, driven early and late, tired out and worried? He cannot. It is useless to try, unless he has got into the habit when he was not so busy; then it comes easy enough, and the hardest-worked man in the land may read his journals every week, even if he has to do it in his carriage. My old teacher and colleague at McGill, Palmer Howard, was the busiest practitioner in Montreal, but the weeklies and the monthlies, English and French, the good old Quarterly, the hospital reports, the new monographs—nothing escaped him, and I have often heard him say that he did his best reading as he drove from patient to patient.

It is not so much a question of *when* but of *what* and of *how*. What sort of reading will best help a man in his education, will help him to keep up with the times and to develop into a thinking, reasoning practitioner? Let him get rid of the notion that much has to be read; one or two journals, a good weekly—the *Lancet* or the BRITISH MEDICAL JOURNAL—a good monthly—the *Practitioner* or the *American Journal of the Medical Sciences*—suffice; but let them be read thoroughly. Then each week strip the husk of advertising sheets, and keep on the desk a file of reasonable proportions, and to the articles which have been of interest refer again and again. At the end of the half-year bind your journals and insert slips where you have found articles bearing directly on your cases.

Carefully studied, a couple of journals are the very basis of post-graduate work, and year by year the files on the shelves become not simply the nucleus of, but actually a good working library, and, well marked in his mind, he has in them volumes on every special disease and a complete summary of the progress of medicine.

Let him follow the same practice with books. Buy with discrimination, and not too many, as here again it is a question of reading. If, as is said, the man of one book is dangerous, the man of a few books is more useful and more apt to keep the open, plastic mind. A good "System" of medicine and of surgery, an occasional monograph or work on special diseases, a new edition of a favourite textbook (when you can trust that it is really an editor's, not a publisher's, edition), should suffice, and do not mean a large annual expenditure.

It is much simpler to buy books than to read them, and easier to read them than to absorb their contents. Too many men slip early out of the habit of studious reading, and yet this is essential to a man if he is to get an education. To be worth anything it must be associated with concentration—with that mental application which means real effort. Of the new Allbutt and Rolleston "System" I can read comfortably about twenty pages in an hour—sometimes of a tough author not more than fifteen. Half an hour a day would finish the six volumes already published within a year.

More than once I have referred to the three essentials in the house of the general practitioner—the library, the laboratory, and the nursery—and of these the first is much the easiest to get, as he starts with a nucleus in his students' textbooks. Effort and system gradually train a man's capacity to read intelligently and profitably, but only while the green years are on his head is the habit to be acquired, and in a desultory life, without fixed hours, and with his time at the beck and call of everybody, a man needs a good deal of reserve and determination to maintain it. Once the machinery is started, the effort is not felt in the keen interest in a subject. As Aristotle remarks, "In the case of our habits we are only masters of the beginning, their growth by gradual stages being imperceptible, like the growth of a disease"; and so it is with this habit of reading, of which you are only master at the beginning—once acquired, you are its slave.

So far as the library is a factor, the greater part of a man's post-graduate education must be at home. In this

country no man practises very far from a county town in which there is a medical society or a general hospital with a library attached. A notebook for special points to look up, or for certain books of reference, will get him into the habit of frequenting it, and he should become a subscriber, as in this way not only does the library widen its influence, but finds means for its support. The county library, wherever situated, should be the much-esteemed consultant of the general practitioner.

But it is in the towns of 20,000 in population and upwards that the library is of the greatest value, and where it becomes a factor of the first importance in the development of the progressive man. These are days of great opportunities, when we have discovered other ways to the top, toilsome all the same, than up the old rungs of the academic ladder, or the weary climb of the stairs of a London hospital. We are waking up to the fact that the man may make his own environment, and may make it just what and where he pleases; he may even perform a miracle—the mountain may come to Mahomet. Let me give you a notable illustration.

A few years ago when two young Irish-Americans called Mayo began to frequent the surgical clinics of Europe, no one knew where they came from; no one had ever heard of Rochester, Minnesota, and when informed that it was on the "Prairies," about 1,000 miles north-west of Chicago, there was a shrug of the shoulders and "Oh!" Self-education, post-graduate study, books, journals, laboratory work, have enabled these remarkable men to build up one of the largest and in some respects the most important surgical clinic in the world, and a town of less than 20,000 inhabitants has become the Mecca of all surgeons.

To the man who is ambitious to use his opportunities in a town or city, a well selected library is essential, and whether he be surgeon, physician, or specialist, he needs as a rule more than his own shelves supply, often indeed a good deal more than the library can offer. As I have already stated, the library of the British Medical Association is offering great facilities to its members. In England, too, he can and should join the Royal Medical Society, from which monographs and special journals may be had, but he cannot always wait, and there is no reason why in the larger towns there should not be a library which ministers to the ordinary wants of all ranks. The journals at once become a serious consideration—French, German, and American—but a few of the best suffice when supplemented by the admirable German *Centralblatte*. By means of an exchange this association can render great assistance, while in the thickly populated districts a system of exchanges between libraries would cut in half the cost of the more expensive journals. In this matter, too, a central library like that of the British Medical Association may be most helpful.

In large cities the profession should have its own home in connexion with the leading medical society, and of such an organization the library forms an important part. Belfast has set a good example, and through the munificence of Sir William Whitla you have a splendid building for the Medical Institute. About such rooms or buildings should centre the life of the profession, present and past. Portraits of the old worthies, memorials of friends, and to our heroes (such as the beautiful stained-glass window in the Institute here to Dr. William Smyth), show-cases full of the interesting relics of the profession, with manuscripts and books illustrative of local history—all these memorials make the past live again. At York you may see in the medical library the actual forceps with which Dr. Slop broke the bridge of Tristram Shandy's nose, and in every county there are relics of the profession well worth preserving.

It should be the ambition of the men in each county to have well-equipped rooms, such as those I have visited with much pleasure at York and Norwich. If, as at Reading, Exeter, Preston, and Dublin (Steevens' Hospital), rooms have been furnished in the hospital, see that the equipment is attractive; many libraries have deservedly fallen into disuse because men will not seek books or journals in dull, dark, cold, dusty, uninviting rooms.

Like everything else that is worth having, a library costs money. Do not try to do too much, strive to have a large membership, which enables the fees to be low; and when the library is in connexion with a hospital, the current English journals should be furnished by the

governors to the staff. In towns with a tax for the upkeep of a public library, a grant should be made for the medical library. But the financial and other questions of organization and support will be discussed, I hope, at an early meeting.

Were there time I should like to say a few words on the subject of *how* to read, but the essence of the whole matter I found the other day in the Bibliotheca Lancisiana, Rome (founded in 1711, and containing the books of the famous Lancisi). In the opening address, 1714, *De recto usu Bibliothecae*, the Abbé Carsughi discusses the subject in three sections, and gives some good rules. The first section, *Librorum scilicet delectum*, need not detain us, but in the second, *Legendi methodum*, he urges two important points—to read in a certain order and with a definite object, and *lente festinans*, "unhasting but unresting." In the third section, *Adnotandi modum*, he urges the necessity of careful note-taking, quoting the praise of Clement of Alexandria, "Oblivionis medicamentum, monumentum senectutis et adjumentum memoriae." He dwells upon the importance of study in the morning, which was all very well in those days, but is not one hour after six in the evening worth now two before eight in the morning? (I am sure it is to me!) With half an hour's reading in bed every night as a steady practice, the busiest man can get a fair education before the plasma sets in the periganglionic spaces of his grey cortex.

But there is another side of the question of books and libraries—man does not live by bread alone, and while getting his medical education and making his calling and election sure by hard work, the young doctor should look about early for an avocation, a pastime, that will take him away from patients, pills and potions. One of the best features I find in my "old country" colleagues is the frequency with which they have hobbies. No man is really happy or safe without one, and it makes precious little difference what the outside interest may be—botany, beetles or butterflies, roses, tulips or irises, fishing, mountaineering or antiquities—anything will do so long as he straddles a hobby and rides it hard. I would like to make a plea for the book, for the pleasant paths of bibliography, in which many of us stray to our great delight. Upon this how charming is old Burton (really one of us, "by profession a divine, by inclination a physician," he says), whose *Anatomy of Melancholy* is the only great medical work ever written by a layman. "For what a world of books offers itself, in all subjects, arts, and sciences, to the sweet content and capacity of the reader! In arithmetic, geometry, perspective, optics, astronomy, architecture, sculpture, painting, of which so many and such elaborate treatises are written; in mechanics and their mysteries, military matters, navigation, riding of horses, fencing, swimming, gardening, planting, great tomes of husbandry, cookery, falconry, hunting, fishing, fowling, etc., with exquisite pictures of all sports, games, and what not! In music, metaphysics, natural and moral philosophy, philology, in policy, heraldry, genealogy, chronology, etc., they afford great tomes, or those studies of antiquity, etc., *et quid subtilius Arithmetice inventionibus, quid jucundius Musicis rationibus, quid divinius Astronomicis, quid rectius Geometricis demonstrationibus!* What so sure, what so pleasant?"

Our society will, I am sure, be very helpful to men who take up this study. We hope to have two groups, mutually helpful—the professional bibliographers, the men in charge of our libraries, who have to do with the book, as such, and who care little or nothing about its contents; and amateurs, like myself. As Professor Ferguson says in his charming essay¹:

¹ He (the bibliographer) has to do with editions and their peculiarities, with places, printers, and dates, with types and illustrations, with sizes and collation, with binding and owners, with classifications, collections and catalogues.

There are scores of book collectors whose hobby also takes them in this direction, but we should have a large amateur group who will be happier in following other lines. Personally, I collect on two principles—first, interest in an author, which is a good guide, as the book illustrates the biography, a principle which has the advantage of helping at least to keep you within the limits of purse and shelves, more the latter than the former. Take, for example, the two small groups of books I have placed

in our exhibition, the one illustrating Servetus, the other Ulrich von Hutten. Valuable as they are from the standpoint of the professional bibliographer, this is nothing to the interest awakened in the men themselves, in their aspirations, their labour, and their tragic fates. For the amateur this personal note clothes the dry bones of bibliography and makes them live. And my other principle is this: a student of the history of medicine, I look out for books which have left their impress on it in some special way. If one is particular to examine carefully into the claims of a book before admitting it to the select company on your shelves, you here again cultivate a due regard for purse and space. For example, five or six books illustrate the whole subject of auscultation and percussion, only the masterpieces are chosen. I confess there may be a certain satisfaction in tracing out the biography of a book, but it is cold work unless you love the author.

Judiciously cultivated, bibliography has many advantages as a pastime for the doctor; a little patient care, a very small expenditure of money, and a constant look-out for the books wanted are the essential requisites. Nor is there ever any difficulty in the choice of a subject—anything he may be interested in has its bibliographical side. One friend (Dr. Turrell), a very busy man, is a keen fisherman, and has found the time to collect a library on this subject, and has written the article on it for the *County History of Oxfordshire*. Another man has kept up his classics, and collected everything relating to Horace. Another has a library relating to the order of St. John. Another friend in large general practice has found time to make a collection of the masterpieces of English literature, which has not only been a diversion and an education, as it has brought him into the best company of the past four centuries, but he tells us there is another side—it has been a better investment than life insurance. A member of our profession, the late Professor Corfield, made one of the best modern collections of bindings, the sale of which at Sotheby's in 1904 was one of the bibliographical features of the year. Once in a subject it is extraordinary how it grows and develops. As Atkinson says, "It is an art of itself, which is not easily sought into or acquired, but which, if so acquired, may stand both his pleasure and profit in very great stead in a very long or a short life." And the busiest general practitioner may find the time for first-class work. Many of you may have seen a book issued two years ago from the Oxford Press on Greek and Roman medical and surgical instruments, the only separate treatise on the subject which has appeared in English. It illustrates the hobby of a very hard-worked practitioner in the town of Hartlepool—John Milne, whose spare time and whose vacation have been spent in studying this aspect of Greek and Roman archaeology.

We shall hope to have in our society both the professional and the amateur—the man whose life-work is in libraries, and those of us who are fond of books, either from a biographical or a bibliographical standpoint. We should be able to encourage library organization, and once established as a common meeting ground for all interested, the society should be of great value to the profession. We look for a large membership, and many will join who do not belong to either of the above-mentioned groups, the men who feel that, as a matter of policy, such a society should be supported. *Non sibi sed toti*—let us work in the spirit of this motto, and our future is assured.

In starting an organization of this sort the work always falls on one or two men. We have to thank Dr. Stanley Hall, of Bristol, and Mr. C. E. A. Clayton, of the Manchester Medical Library, to whom is due entirely the success of this preliminary meeting. We have also to thank the university authorities for allowing us to meet here, and furnishing us with rooms for the exhibit.

REFERENCE.

- ¹ *Some Aspects of Bibliography*, Edinburgh, 1900.

UNDER the will of the late Rev. Edward Llewellyn Adams, a Congregational minister of Scarborough, sums of £4,000 are bequeathed to Manchester Royal Infirmary and the Scarborough Hospital, for the endowment of wards to be called the Elizabeth Adams Ward and the Sophie Adams Ward respectively. A sum of £500 is also left to the Smedley Memorial Hydropathic Hospital at Matlock.

A PLEA FOR A MORE LIVING PATHOLOGY.

By HARRINGTON SAINSBURY, M.D., F.R.C.P.,

SENIOR PHYSICIAN, ROYAL FREE HOSPITAL.

It is universally acknowledged that a diligent frequenting of the *post-mortem* room, supplemented by a careful study of the shelves of its annexe, the pathological museum, is essential to the education of the student of medicine and surgery. Admittedly it is not possible in any other way to gain that fuller insight into the problems set by disease, without which that fuller solution of these same problems, the final objective of the art of Hippocrates, must wait. Yet even now, in this twentieth century, after so much earnest labour and such an abundant ingathering, it is questionable whether we do look at the subject, pathology, from the right point of view; whether we utilize to their fullest the treasures of the dead-house and museum.

In the remarks which follow, those pathological changes which are discernible by the naked eye will have chief consideration, but the remarks are applicable to all changes in whatever scale of magnitude they present themselves.

Do we, then, look at the subject from the right point of view? The question is fundamental, but to its answering another question must be put—namely, What is the object of the *sectio cadaveris*? The reply seems obvious enough—the cause of death. But death is a negative quantity, and the search after negatives is apt to be unfruitful; moreover, the ultimate objective being the healing art, it is not apparent what bearing negative quantities can have upon this art—what appeal, that is, the *materia medica vel chirurgica* can make to this variety of nothingness. Can we define death more positively? Yes, death is the cessation of life; and, substituting this definition, the object of our search now becomes the cause of the cessation of life. Ah, that is more illuminating. We wish, then, to know why life tripped here, stumbled there, now slackened its pace and *rallentando* came gradually to a halt. Is this a real difference, or is it only a matter of words? It is a real difference in the *point of view*; for, whereas in the former case we looked at death, now we look at life. Let us, therefore, enter the *post-mortem* room or the pathological museum, looking at life and seeing not inanimate structures, not pictures of still life, but the instruments, more or less faulty, of life, the impediments, more or less obstructive, to life. Let us endeavour to conjure back the vital spirits, and see these in active play, within the organs and tissues, up to the moment when the play ceased.

The ordinary procedure of the pathologist is to seek out the spoiled organ or organs, and having found, to set apart in some suitable fixative, fixing so rigidly that it becomes a difficulty to conceive how these tissues ever moved; the epitaph follows in due course: *obit*, he died, for reasons plain to view; note the want of proper gland tissue here, the structural disturbance there. The comment of the intelligent reader of epitaph and specimen is inevitable: What, in the face of this disintegration, could any self-respecting man do, one priding himself upon being *integer vitae*—what else but die?

Is, then, the method of the pathologist wrong? No, so far as it goes it is all right even to the fixative; the fault is that it does not go far enough; it stops short just at the point of real interest. The method would show abundantly why the man *is* not, but just why he *was*, a few moments, hours, days, before his tissues put off vitality, that is not apparent; yet that is the one thing which interested himself and his family before *dies illa funesta*. In commenting thus we are not alluding to such major catastrophes as a massive aneurysmal rupture, or a smaller haemorrhage at a point of vantage, as in the medulla oblongata, or an embolism of the trunk of the pulmonary artery—in cases such as these the reason of the event is seen at a glance; but to those deaths, more or less gradual, which reveal to naked eye as well as to microscope changes we are wont to regard as essentially chronic in their development—for example, fibroid, fatty, caseous, or calcific changes. If these are the causes of death, then, as they have gradually amassed themselves by increments which from day to day must have been imperceptible, a summation of infinitesimals, should not life have dwindled in the same propor-