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By James Finlayson, M.D., *Physician to the Glasgow Western Infirmary, and to the Royal Hospital for Sick Children; Honorary Librarian to the Faculty of Physicians and Surgeons, Glasgow.*

When I wrote "An Account of the Life and Works of Dr. Robert Watt, Author of the 'Bibliotheca Britannica' (London, 1897)," I stated that I had been unable to find, anywhere, a copy of his medical catalogue.[1] A few months ago I saw this little book, bound up with a miscellaneous lot of pamphlets, in the catalogue of a second-hand bookseller in Glasgow, and I secured it at once for the Faculty Library.

The method pursued by the great bibliographer in teaching medicine is worthy of notice, even at the present day. He says:

"The reading of the student is too often confined to systems, and to compilations, which are generally the works of men of no experience, or of men writing under the influence of preconceived opinions. By the first, materials of little value are as readily selected as those of real importance; while by the last, only such facts are recorded as go to support a particular theory. To obtain correct views in medicine, it is necessary to have recourse to original authors, to such as write from actual observation, who have seen and treated the diseases they describe.

"Many students, however, are neither possessed of such works, nor have they access to them. To remedy this defect, the present plan of establishing a library is undertaken, and it is hoped that it will meet the approbation of those for whose benefit it is intended.

"In my lectures on the Practice of Medicine, after considering the history and treatment of each disease, I give a list of the best

[1] "Catalogue of Medical Books, for the use of Students attending Lectures, on the Principles and Practice of Medicine, with an Address to Medical Students on the best method of prosecuting their studies, by Robert Watt, M.D., Member of the Faculty of Physicians and Surgeons of Glasgow, Member of the London Medical and Chirurgical Society, etc., and Lecturer on the Principles and Practice of Medicine in Glasgow," 8vo, Glasgow, 1812, pp. 69.

authors who have written on the subject, and I now put it in your power to peruse these authors, to examine their facts and opinions, and to draw your own conclusions" (pp. 5, 6).

He goes on to combat the idea that ancient literature is useless.

"An idea has too generally prevailed, that there is little useful knowledge to be derived except from writers of the present day. . . . After having suffered ourselves to be more or less diverted from the true path of inquiry, by the dreams of enthusiasts and the reveries of system-mongers, we are glad to resume our march in the road which Hippocrates and Sydenham traversed with such signal caution and success. By comparing the practice of the ancients with modern improvements, we shall learn to appreciate justly the value of the latter. By marking the errors into which our predecessors have fallen, we shall be enabled to pursue, more steadily, the right method of research" (p. 7).

Watt's catalogue represents, for its time, an admirable collection of books in all departments of medicine. It consists of fifty-one pages, and contains over a thousand entries. The ancient literature of the Greeks and Arabians is well represented, and Celsus and Cælius Aurelianus, of course, are there too. Paracelsus, Van Helmont, Stahl, Hoffmann, de Haen, Boerhaave, Van Swieten, Gaubius, etc., are all there. Works then recent are also entered. Thus we have Baillie's "Morbid Anatomy" (1807), as well as Bonetus and Morgagni; the last, as in many other cases, is in an English translation. Books by Glasgow physicians and surgeons are, as might be expected, well represented; mention may be made of the two important works of Allan Burns, and the various volumes by his brother, Professor John Burns; Dr. Badham on "Bronchitis" (to use the name he invented [1]); Dr. John Riddell on "Fever"; Dr. Richard Millar on the "History of Medicine"; Dr. John Moore's "Medical Sketches"; Cullen's well-known works; and Dr. Watt's own book on "Diabetes" (his book on "Chin Cough" was not published till later). Peter Lowe's "Chyrurgerie" is represented by the 3rd edition (1634). The collection included many volumes of medical journals also. Dr. Watt points out, in a note, that the deficiencies in his list are chiefly as regards books of the last ten or fifteen years, a defect which he was trying to remedy. In addition to the books, he mentions that he had a collection of about 1000 theses, from Edinburgh, Glasgow, and the Continent, which were all available for reference. He further states that "manuscript catalogues, arranged alphabetically according to the author's names and the subjects treated, may be seen in the library, and will be printed as soon as the collection

[1] In the "New English Dictionary," Dr. Murray gives priority in the use of the word "Bronchitis" to P. Frank, 1812, noting Badham's book as 1814; he seems, however, to have overlooked Badham's first edition, which was issued in 1808.

is completed." It has been stated, indeed, that this classification, by authors and subjects, of his own medical library suggested the idea of his great "Bibliotheca Britannica."

Although referring to a somewhat different matter, it may likewise be quoted here, that "Dr. Watt has also made some progress in forming a museum for illustrating the different parts of the animal economy in health and disease"; and he announces that in the meantime, by the kindness of his friend and neighbour, Mr. Allan Burns, he could show from his museum "specimens of many of the most remarkable organic affections."

This method of medical teaching, by the use of a library, does not seem to have been entirely new in Glasgow. When the celebrated Cullen was an apprentice to Mr. Paisley, a Glasgow surgeon, he found the library of his master very useful for himself, as it was unusually good; and when Cullen began his distinguished career as a teacher of medicine in Glasgow, he was able to arrange for his pupils having access to this collection of books. Mr. Paisley, as "Bibliothecarius" to the Faculty of Physicians and Surgeons in Glasgow, was no doubt impressed with the value of having direct access to authoritative books, and with rare generosity he laid his library open to Cullen's students.

The question arises, Might not modern teachers of medicine do well to imitate Watt's method? No doubt, since Watt's time, a great improvement has occurred as regards text-books, which are now produced, at but little cost to the student, by those of high standing and great practical experience; but now, as then, reference to cyclopædic works, to original memoirs, and to special articles in journals, is constantly required for any adequate presentation of certain subjects. Of course, some teachers may say that they present as much of this as is good for the student's stage of education, and some even bring before the students for their inspection copies of great works which have left their impress on medicine. In such matters, however, just as in clinical work, it is of the utmost importance that a student should learn how to go about these inquiries himself; a little found out for himself, as to the literature or history of a disease, counts for more than a great deal told him by a teacher. By the former method, what is supplied is information; by the latter, the student obtains education.

How seldom has a young practitioner even a remote idea of how to prosecute an inquiry into the literature of any subject in which he may be interested, and how apt he is, through such ignorance, to think his case "unique," or his observation original! No doubt these difficulties might be lessened by some regular demonstrations in a fairly good medical library, in which the practical use of catalogues, indexes, and books of reference could be shown. Such demonstrations, just as clinical demonstrations, would have their value; but personal investigation (carried on, it

may be, in a tentative or blundering manner) is the only way to acquire any real mastery of the situation, either with books or patients.

Professor Osler of Baltimore tells me that, in the case of a senior student, he may give such a subject as Graves's disease, and request him, in two or three weeks, to bring up a very short verbal account of the literature or history of the subject, explaining who Graves was, and where and when he described the affection; and in the same way as regards Basedow. Owing to their proximity to the great medical library in Washington, with its index-catalogue, his students have no doubt certain advantages. The information thus acquired, and communicated, it may be, from one student to another, is apt to be better assimilated than if it came from the professor. The student thus finds his way to original sources of information, and learns much in the process in addition to what he is searching for.

In my own cliniques I have not gone so far or so systematically in this direction as Professor Osler, but I have sometimes made a demonstration of the leading books, in various languages, on children's diseases, or physiognomic diagnosis, for example, placing them on the table for personal examination. Occasionally, I make a student read aloud from the original treatise the description (for example) given by Sydenham of Chorea Sancti Viti; and I have given Hecker's book to a clinical clerk, and asked him to bring up by and by a short verbal report of the differences or relationships of the dance of St. John, the dance of St. Guy, and Sydenham's chorea, when such a case was under his care.

I think, however, it is not often that this can be done in the Scottish schools of medicine. The continual complaint still is, that the student has no time for such work. He is so much belectured that he has not the necessary time to prepare a few minutes' lecture of his own! Professor Osler's students have the enormous advantage that they have *no* systematic lectures on medicine at all, either from him or any one else; all his teaching is by clinical work, or such methods as those referred to. Why should he lecture systematically, when he has done his best in this way by his printed book on medicine?

In Scotland, our medical professors in the universities were formerly tied down by a hard-and-fast ordinance, so that they had to give a hundred systematic lectures in winter and fifty in summer, whether they thought this wise or not. By the new ordinances they were liberated; but no sooner were they free than they seem to have voluntarily bound themselves with the old shackles, with the result that matters are practically unchanged in this respect. The new ordinances ordain only a time limit (five months and two and a half months) for each entire course, laying down no rule as to the number of lectures. The General Medical Council, on which the Scottish Universities are so ably

represented, went further: after prolonged discussion, some years ago, they recommended that *systematic lectures should not be given oftener than thrice a week.* So far as the Scottish Universities are concerned, this is a dead letter. Till the student's time is liberated, how can he study? How can he work in laboratories, wards, or libraries? How can he learn the business of his life? In point of fact, he has to learn most of it after his graduation.

No doubt lecturing has advantages of a kind. A system under which the student can give back to the professor, at the examination board, not only the special views but the *ipsissima verba* of the professor, as taken down by dictation, may result in a wonderful percentage of passes and a remarkably high standard of marks! Such a method of lecturing, however, is beneath contempt, and its true value would no doubt appear at any really independent examination.

Even when the professor aims at a higher style of lecturing, his selection of subjects, and the aspects of them taken up, afford indications to the student, which he highly appreciates, in view of the examination being conducted by his professor. Passing this examination is but too often the single aim of the student in his work; anything different from the professor's notions is apt to be regarded as useless or worse.

The question here introduced (no doubt somewhat episodically) is one of urgent importance. In other parts of the kingdom, notably in London and the English university schools, the responsible authorities are alive to the necessity of practical work superseding to a large extent the traditional lecturing system. A succession of brilliant teachers, for two or three generations—not yet quite extinct—has blinded the Scottish Universities to the needs of the times and to the revolution wrought by cheap printing. Practical work and instruction in laboratories, wards, and dispensaries are now the really urgent matters which reading, lecturing, or even demonstrations cannot supersede; but with systematic lectures five days a week the time and energy of the student are used up, and the power or even the desire of learning anything beyond what his professor tells him is apt to be lost. In some schools, indeed, it has been reckoned dangerous to know anything else!

Untrammelled by traditions, the Johns Hopkins University has abolished systematic lectures on medicine. Is it too much to ask the Scottish Universities, under their new ordinances, to conform to the recommendations of the General Medical Council, on which they are so fully and so ably represented?