

but even then I find its potency much exaggerated, and in many cases not even so good as iron, arsenic, and strychnine.

These remarks are the practical outcome of several hundreds of cases during a three years' residence in South Africa, and not from a knowledge gleaned from text-books on the subject. My endeavour shall not have been in vain if in the future it prevent even one similar case being thrown into that cesspool of medical incompetency—influenza.

Obituary.

PROFESSOR JOSEPH COATS, M.D.

PROFESSOR JOSEPH COATS died on Tuesday, 24th January, 1899, at his residence, 8 University Gardens. He was appointed editor of the *Glasgow Medical Journal* on 28th November, 1877, at the time when it was changed from a quarterly to a monthly periodical. As he was still the senior editor at the time of his death, he had thus held office for the long period of twenty-one years; and it is, therefore, fitting that in these pages we should first of all refer to the great services he rendered to the *Journal*. Our readers have now to mourn the loss of the man who succeeded in placing the organ of the Glasgow School on a more secure footing than it had ever before occupied. He assumed the reins of office at a time of difficulty and stress, and, by his energy and literary skill, he succeeded in gaining for the *Journal* a most honourable place in the current medical literature of the day. Dr. Coats had a deep affection for, and a profound belief in the power for good of, the periodical for which he did so much. He did not believe that the articles appearing in its pages were buried, as many asserted, and the fact that for a long period of years a regular series of the *Journal* could be found in many of the great medical libraries of the country, was to him a guarantee that the Glasgow Medical School was thereby recognised as a great centre of medical education and activity. Not the least part of the great and useful work which Coats accomplished for the welfare of his school, was that which he did as editor of the *Glasgow Medical Journal*.

In presenting a short memoir of a man so eminent in his

profession as Coats, a twofold method of treatment suggests itself. We may regard the subject of the sketch in his position of teacher and public man; and, secondly, we may look at him as he appeared to those who knew him in his family and more private relationships.

TEACHER AND PATHOLOGIST.

For more than quarter of a century, Joseph Coats held a prominent and distinguished position in the Glasgow Medical School. He graduated with honours at the University of Glasgow in 1867, and thereafter he was successively resident-assistant to Sir William T. Gairdner and to Lord Lister in the Glasgow Royal Infirmary.

After serving his term as resident in the Glasgow Royal Infirmary, Coats went to Leipzig, where, for a year, he engaged in experimental physiology in the laboratory of Professor Ludwig. On his return from Germany in 1869 he was appointed pathologist to the Glasgow Royal Infirmary, in succession to Dr. Samuel Johnston Moore, a post which he filled till the year 1875. During his tenure of office at the Royal, he laboured at morbid anatomy and histology, with unremitting zeal, as his report books, now preserved in the laboratory, abundantly testify. The museum, also, received his careful attention; and, besides adding many specimens to its shelves, he published in 1872 the first printed catalogue of the collection. Since then two other editions of the catalogue have been published; the second, in 1878, by the late Dr. Foulis; the third, in 1889, by Dr. David Newman. After his appointment to the Royal Infirmary he again went to Germany, and studied pathological anatomy under Rindfleisch at Würzburg. In 1875 he was appointed pathologist to the Western Infirmary, and there he laboured until the end building up the Glasgow School of Pathology. He also acted for a full term as dispensary physician, and for a time had charge of an extra ward, which it was found necessary to open to meet the pressure on medical beds. For a few years, also, he devoted himself to the study of the diseases of the throat, but the pursuit of pathology was the serious business of his life. From the first he threw himself actively into the work of teaching, and with his appointment to the Western the opportunity for the full development of his powers in this direction came. From 1876 onwards he was an independent teacher. Before that he had lectured merely as one of the assistants to the Professor of the Institutes of Medicine. His

class, which, till the opening of the new buildings in 1896, met in the Medical Lecture Room of the Western Infirmary, was one of the most popular in the medical curriculum. Coats was not a fluent or rhetorical speaker, and for the first few years he read his lectures; but after 1878, these were delivered without the aid of notes. His style as a speaker was sometimes a little monotonous, but the slowness and distinctness of his utterance enabled the students to take him down almost verbatim; and it was generally agreed, in the time of the present writer, twenty years ago, that Coats's notes on pathology read well. In 1877 he commenced the teaching of practical pathology to a class of about four students; in 1879, when the writer attended, there were about a dozen. The accommodation then available for practical teaching was of the most meagre description, but the pathologist made the best of it, and there was no class in those days more thoroughly enjoyed and appreciated than "Coats's practical." In addition to his teaching he laboured without ceasing at microscopic pathology, and his contributions to literature on this subject were many and valuable. He showed what could be done on limited means. His workroom for twenty years was a small den, perhaps 12 feet square, with a table at which he and his assistant were wont to work, and frequently to lunch when the work was particularly heavy during the summer session.

In 1882 he began the writing of his *Manual of Pathology*, the first edition of which appeared in 1883, and now the fourth is in course of preparation. From the first this book took rank as one of the standard works on pathology in the language, and its publication established the reputation of its author as one of the foremost pathologists of the day. His work upon "The Pathology of Phthisis Pulmonalis," published in 1888 in a volume entitled *Lectures to Practitioners*, in collaboration with Sir W. T. Gairdner, is also authoritative.

Until 1893 there was no Professor of Pathology in the University of Glasgow. The chair was founded by the University Commissioners in that year, and Coats, who for nearly twenty years had been professor in all but name, was unanimously called upon to fill it. There was a general feeling of satisfaction throughout the entire profession when the hard-working, self-denying pathologist received this reward of his labours. For many years the foundation of the chair had been talked of, and Coats must often have experienced that hope deferred which makes the heart sick, but no word of bitterness or complaint ever escaped him. In

1896 the new laboratories at the Western Infirmary were opened, and the professor could now regard his accommodation and apparatus for teaching as satisfactory. But just when his life's reward had come the first symptoms of the malady, destined to cut short his career, manifested themselves, and during the last three years his work was much interfered with by bodily suffering.

In addition to his University work, Coats was an active member of the medical societies of Glasgow, and he filled the offices of president of the Medico-Chirurgical (1891-92) and Pathological and Clinical Societies, two of the most important. Of the latter, indeed, he was one of the founders. In the social life of the University he always took a prominent part, and in the promotion of the Students' Union he was one of the most zealous workers. He was also an active member of the British Medical Association, and filled successively the offices of vice-president and president of their section of pathology.

It is difficult, indeed, so near to his life and work, to form an impartial estimate of his character as a teacher and a public man. Perhaps there were not a great many, even of his own students, who can be said to have known him intimately. There was a certain coldness of demeanour and a certain habit of looking one through and through which made the junior and the stranger perhaps just a little bit afraid of the tall, silent-looking man whose teaching and work they so much admired. But behind all this there was a kindness of heart, a single-mindedness of purpose, an innate inflexible sense of justice, and a passionate love for his work and his profession which united his intimates to him in the bonds of affection. The welfare and prosperity of his students were ever close to his heart, and if he was less given than most to the expression of his emotions, they were none the less real and sincere. One of his favourite authors was Thomas Carlyle, and we have often thought that both in cast of countenance and mode of thought Coats much resembled him. The sage himself could not have hated cant and quackery more, nor have had a greater love and esteem for all that was high and noble, just and powerful. As a pathologist, Coats made his mark rather as a morbid anatomist and histologist than as an experimenter. Indeed, as things were in Glasgow, it could hardly have been otherwise, and perhaps it is well that they were not. One thing Coats could impress upon his pupils, and that was the close relationship between clinical medicine and pathological anatomy and physiology. His long association with clinical work caused him to realise this in a

sense that the mere laboratory worker could never hope to, and the clinical bearings and importance of his demonstrations were never forgotten—most important, surely, in a school where the great majority of the students are to become general practitioners of medicine. His example of continuous steady work had a most beneficial effect upon his pupils, all of whom regarded him with the respect which his upright and just character inspired; and those who were more closely associated with him in professional work looked upon him as the warmest of friends and the most generous of masters.

J. L. S.

FAMILY HISTORY AND EARLY DAYS.

Joseph Coats was born on 4th February, 1846, in Paisley, where his forebears had been settled for several generations, having come originally from the south of Scotland or from England. His great-grandfather was a Paisley weaver of the old school, whose son James was the founder of the world-famed thread firm of J. & P. Coats. This son James was, in his youth, a corporal in a cavalry regiment called the Ayrshire Fencibles, and when he got his discharge in London with, I daresay, not much more than the proverbial half-crown in his pocket, he walked all the way to Paisley. His father had not heard of his discharge, and when he entered his house his reception was not that of the prodigal son, for before the word of welcome, or the rejoicing, came the stern—"Are you here with honour, sir?" This stern sense of duty, of just dealing, was characteristic of the race, and came out strongly in the subject of our sketch. Hereditary traits were strikingly marked in him, as might be expected from the vitality and strongly marked individuality of his fathers. I think the simplicity of character which now and again showed itself in him, and came almost as a surprise to those who did not know him intimately, he owed to his grandfather, Jervis Coats (a brother of the James above referred to), who was the Nathaniel of the family. His father—who died a few years ago at the advanced age of 92, with memory and intelligence apparently unimpaired—was a well-known and esteemed citizen, and at one time a magistrate of the town, who concealed under a grave, stern exterior, a kindly heart, doing many charitable deeds, giving very liberally for his means, and doing it all so that very few but those concerned knew anything about it. He was a just, upright man, whose persistence, in any course which he considered right, was such as to remind one of the phrase—"It's dogged as does it."

He was a deeply religious man, in many things—such as Sabbatarianism—tolerant to a degree, seldom found in Scotland thirty or forty years ago in any Protestant denomination. The Storie Street Baptist Church, of which he was a member, as were most of his name at that time, had always been noted for its liberalism, with the result of an occasional split from its membership of the more strait-laced. If one wants to realise the atmosphere in which the strong, tenacious, and yet tolerant religious life of young Joseph Coats was formed, let him read the well-known and charming sketch called *The Pen Folk*—a book well worth reading for its own sake, and also as being a precursor of what has come to be known as “kailyard” literature, but having, what most of that lacks, the touch of genius, and as giving a picture of a peculiar and intense religious life which flourished and found a congenial soil amongst some of the more earnest-minded of the well-informed and Radical Paisley weavers. But while Storie Street Baptist Church—now by the way represented by the magnificent Thomas Coats Memorial Church—had nothing in common with the Calvinism and narrowness of the Pen folk, the men were still ecclesiastically the same. “When the century was in its teens, what a band they made of single-minded, energetic, knowledgable men.” Their creed, though evangelical, which it still continues to be, was unwritten, and therefore permitted diversity of opinion on everything not regarded as fundamental. Thus it was that young Coats—who dare not miss going to church twice on Sunday—could, after church hours, walk in the country, or even read a novel, as he often did, without any sign of parental disapproval. With such heredity, and such surroundings, it is no wonder he grew up a grave, thoughtful, simple man, righteous in all his ways, and caring much more to do justly than to earn the applause of men. In his inner life he clung tenaciously to the theological opinions of his boyhood and early manhood; and, though he has been known, in the early days of his professional life, to preach from the pulpit of his old church, where neither apostolic succession nor any form of sacerdotalism was believed in, yet outside his family and church life, his religion was shown by deeds, rather than words, and he cared very much more for purity of life than purity of doctrine, and cared, too, more for the quality of his work—which, professionally and otherwise, was unceasing—than for the rewards which might come from it. No more striking testimony to the essential truthfulness of this description of the man could be furnished than the fact that,

throughout the long years in which he so manfully fought the battle of pathology in Glasgow, against indifference, if not hostility, of a kind to sour most men, he did so without a word of censure or blame for any one, being content to know that pathology was taught, and well taught, and to wait for the recognition which was sure to come.

Coats entered the arts classes of Glasgow University at an early age. He was sent there, after leaving the John Neilson Institution, Paisley, to "finish" his education, without any regard to his future vocation. When, two years later, he elected to enter medicine, it was against the wishes of his father, who only yielded when he found that his son would not be moved from his purpose. He was a distinguished student of medicine, and we remember his losing a portion of his third session at college by a severe attack of typhus fever, which he contracted while visiting the Paisley Infirmary during his holidays. He was much respected by his fellows, and loved by a few who knew him intimately, and remained through life his fast friends. Amongst his set at college were many who, at home and abroad, attained to considerable eminence in their profession. Several, like himself, have done, and are doing, good work in connection with medical education in Glasgow.

In those days pathology, or rather pathological anatomy, was not properly or systematically taught in Glasgow. The pathologist to the Royal Infirmary was then a genial and very able general practitioner, ignorant of scientific pathology as we now know it, who was busy at the time building up the extensive practice which he afterwards attained to. He taught us very well how to make a *post-mortem*, and his occasional lectures or demonstrations were rather suggestive, and always interesting, though not, perhaps, always accurate from a medical point of view.

Our lot as to pathological teaching would have been a sad one, but that we had in our professor of medicine a good pathologist, who gave us abundantly of his rich stores, illustrated freely by morbid specimens and drawings. The over-lectured, much-crammed student of to-day, who is like to be swallowed up by many lean specialties, need not think we were badly off, for, with teachers like Allan Thomson, Gairdner, and Lister, not to speak of some other admirable teachers, we could do without a deal of what goes at present for medical education. We were not crammed, but taught to think, and inspired to work with enthusiasm. To Gairdner and Lister, in particular, Coats owed much of the inspiration

which made him the devoted student of his profession which he remained almost to his last hour. He revelled, as most of us did, in the broad philosophic views of medicine and of medical history which we got from Gairdner, and which were supplemented by careful clinical teaching. I presume our old master still lectures as he did then, but I have often wondered if he ever lectures upon insanity, and under it upon the will, as he did then, and talks eloquently, like a professor of theology and psychology rolled into one; and we remember, after such a lecture, he was told next day, much to his delight, we think, by one of his students, afterwards, I think, a Congregational minister in one of our English manufacturing towns, that he had been guilty of some dreadful heresy, *sub- or supra-lapsarianisms*, I forget which at this time of day. With Syme's *Principles* for our text-book we were taught surgery, and we were grounded by the great surgeon in the foundations of that science which he has done so much to advance, so very fruitful in medicine as well as surgery, which has since then blossomed into bacteriology. How heartily many of us wished, as we listened to the lucid and fascinating story of inflammation or fermentation, and their relations to suppuration, as told by Lister, that he were our teacher of physiology as well as our teacher of surgery. How the memories of those old days, when life was young, come surging up, under the influence of the emotions of this sad day, when he, one of the best of us all, has left the stage on which he played his honest and good part so well. It was in this school that his medical education, just ended, was begun, and we have done but scant justice to the spirit and the fruitfulness of it.

Coats, whose analytical type of mind pointed him out as well-fitted to pursue the scientific side of his profession, was quick to see that, in the defective condition of pathological teaching in Glasgow, there was a good opening in a department which, from the rapidly advancing microscopic side, had great attractions for him. He therefore, after graduating with honours, proceeded to qualify himself by special studies in Leipzig and elsewhere. At Leipzig he worked for some time in the physiological laboratory of Ludwig, where he had as a fellow-worker his friend Dr. Lauder Brunton, of London. Before this he spent a short time as a temporary assistant at the Argyll and Bute Asylum under Dr. Sibbald, now the distinguished Senior Commissioner in Lunacy. His friend Dr. Sibbald, long afterwards, told us that when there he showed his characteristic enthusiasm for medical work, and

worked much with the ophthalmoscope. He was also about this time closely associated with Dr. J. B. Russell, then medical superintendent of the old Parliamentary Road Fever Hospital; and he very early in his professional career succeeded Dr. Russell as editor of this *Journal*.

Soon after his return from Germany, the office of pathologist to the Royal Infirmary became vacant, and Coats got his opportunity, and soon began to lecture systematically on the subject to which he continued to devote his life. It was characteristic of his striving after thoroughness that, after a year or two, dissatisfied with his knowledge of the more recent German advances in pathological anatomy, he obtained leave of absence, and spent some months studying under Rindfleisch, in Würzburg. There were some who did not quite appreciate the result, as I remember, about twenty years ago, a young medical practitioner grumbling badly because he had to come through the ordeal of an examination in what he called "Joe Coats's German Pathology."

At the time he was not only the pioneer in pathological teaching, but for many years afterwards was the only teacher of the subject in Glasgow. His lectures were necessarily recognised by the University as qualifying for the degree, but it was not till some years afterwards, and after his transference to the Western Infirmary, that he secured the position of University lecturer, and after successfully conducting his classes in the pathological department of the Infirmary for one or two years, he lost his hard-won position of being an independent and decently-paid lecturer by the action of the then Professor of the Institutes of Medicine. This gentleman had been a very distinguished physiologist, and was in every way a most estimable man, but by this time his day was done. His chair embraced not only physiology, but several other subjects more or less cognate to it, of which pathology was one. He may have said something about pathology in his lectures, though we never heard of him lecturing on anything but physiology. This gentleman insisted that Coats could only lecture on pathology as his assistant, and claimed the fees of the class, a proportion of which, about a third, he returned to Coats as salary. He told us that the first time he paid over his hard-won fees, he was very coldly received with the words—"Much obliged, Dr. Coats, for conducting *my class* on pathology." I remember him telling me this without a trace of bitterness, but rather with a sense of the humour of the situation. I need scarcely say that with the appointment.

of the present popular and eminent incumbent of the chair of physiology this arrangement came to an end. And then came the waiting for many years before the professor *de facto* became the professor *de jure*. He reminded me, by his long patience and its fruits in peace of mind and good work, of the lines of a favourite book of his, *Aurora Leigh*—"He worked with patience, which means almost power." In this connection I would venture to quote the words of a friend, whom he always regarded with special reverence and affection. Sir William T. Gairdner, writing to me since his death, says of it, "I need not say that it is for me the severance of a very old and dear association, and everyone here will sympathise alike with the family of one who, after fighting the battle of pathology in Glasgow for years as an unrecognised or only partially recognised teacher, and doing it so manfully and well, is now cut off just when his means and opportunities had come to full fruition, and when all the world, both in Glasgow and out of it, had come to recognise in him one of the ablest members of the professoriate."

The limits of this already too lengthy communication prevent me from making almost any reference to the many social and religious schemes for which he worked with untiring zeal. A Students' Union, a Theological Hall, a Central African Mission, the writing of a book on his recent travels to and from Australia in search of health, were all done as though they were the only things he cared to do. To his schemes and charities he gave not merely work and sympathy, but liberally of his means.

In reference to this appetite for work, after his appointment as one of the Crown medico-legal examiners, I asked him why he burthened himself with such an appointment, and found that he did it for the sake of the principle which he contended for, that such work should be done by a pathologist.

To those of us who mourn him to-day as a relative or intimate friend, we mourn him not for the good work cut short, however important that may be, but for the loss of the warm heart and the pure soul we learned to love better than we could have thought possible till our eyes were opened by the greatness of our loss.

D. F.

The malady from which Professor Coats suffered, and which finally caused his death, was, we understand, a malignant tumour of the splenic flexure of the colon. For a lengthened period the symptoms were of an obscure and puzzling character.

They first manifested themselves about three years ago, and took the form chiefly of repeated febrile attacks, closely resembling those of malaria. Indeed, he himself at first thought that the disease might be malaria, which, he thought, he might possibly have contracted during a visit to Rome. About two years ago a tumour was discovered in the left side of the abdomen, whose nature, however, long remained obscure. During his voyage to Australia the feverish attacks recurred several times, and in Egypt, on his way home, he suffered very severely from an attack of dysentery. During the later months of 1898, after he had suffered from one or two attacks of intestinal obstruction, the true nature of his disease became apparent. From this time he rapidly sank, and, in spite of all that medicine and surgery could do, he succumbed on the morning of 24th January, 1899.

CURRENT TOPICS.

GLASGOW AND WEST OF SCOTLAND MEDICAL ASSOCIATION ("GLASGOW MEDICAL JOURNAL").—The Annual Meeting of the Association was held on Friday, 20th January, 1899, in the Faculty Hall—Dr. Alexander Miller, of Crosshill, in the chair. The Treasurer's Annual Report showed a good balance, and the reserve fund at the credit of the Association was considerably increased. The Editors reported that the *Journal* had appeared regularly, and recommended that all contributions should be in the Editors' hands on the 15th of the month previous to publication. The necessity of keeping up the membership of the Association was also referred to, and members were urged to do their best to obtain new subscribers. The following office-bearers for 1899 were then elected:—

<i>President,</i>	DR. WILLIAM JAMES FLEMING.
<i>Vice-Presidents,</i>	{
		MR. H. E. CLARK.
<i>Editors,</i>	{
		DR. JOHN LINDSAY STEVEN.
<i>Treasurer,</i>	{
		10 Clairmont Gardens.
<i>Secretary,</i>	{
		16 Woodside Place.