

5/97 81

The  
Scottish Society  
of the  
History of Medicine

(Founded April, 1948)

REPORT OF  
PROCEEDINGS

---

SESSION 1984 - 1985

---

# The Scottish Society of the History of Medicine

## OFFICE BEARERS (1984-85)

<i>Honorary President</i>		Dr. HALDANE TAIT
<i>President</i>	- -	Dr. A. H. B. MASSON
<i>Vice-Presidents</i>	-	Dr W. CUNNINGHAM Professor D. A. G. WADDELL
<i>Hon. Secretaries</i>	-	Dr D. J. WRIGHT Dr. D. A. DOW
<i>Hon. Treasurer</i>	-	Dr. M. EASTWOOD
<i>Council</i>	- -	Dr. ELIZABETH ROSE Dr. MATTHEW GARREY Dr. JACQUELINE FALCONER Dr. HAMISH WILSON Dr. H. W. NOBLE Mrs. ROSEMARY GIBSON Dr. BRYAN ASHWORTH Dr. M. MENZIES CAMPBELL

The Scottish Society  
of the  
History of Medicine

(Founded April, 1948)

*Report of Proceedings*

CONTENTS

Introduction

Papers

- (a) John Wanless M.D.
- (b) Jewish Medical Students - Graduates  
at Edinburgh University (1767-1859).
- (c) Leith's Greatest Charity.
- (d) Sir David Wilkie (1882-1938).
- (e) "Old Spasm" The Medical Theory and Practice  
of William Cullen.
- (f) Music and Medicine.

---

SESSION 1984 - 85

---

# The Scottish Society of the History of Medicine

---

## REPORT OF PROCEEDINGS

SESSION 1984-85

---

### THE THIRTY SIXTH ANNUAL GENERAL MEETING

The Thirty Sixth Annual General Meeting was held in Edinburgh on the 10th November 1984 in the new Symposium Hall of the Royal College of Surgeons. Forty six members or guests attended. Dr. Alastair Masson was elected President in succession to Dr. William Cunningham and Professor David Waddell was elected Vice President in place of Sir Charles Illingworth. Three new council members were elected — Drs. Jacqueline Falconer, Matthew Garrey and Elisabeth Rose — to fill places vacated by Drs. Margaret Fleming, Nicholas Gordon and Ian Porter who were warmly thanked for their contributions to the Society.

### THE ONE HUNDRED AND TWELFTH ORDINARY MEETING

This meeting directly followed the Thirty Sixth Annual General Meeting in the new Symposium Hall of the College of Surgeons, with Dr. Masson taking the chair. Dr. Masson introduced Mr. John Dickson, a surgeon from Ipswich, who talked about his 19th century relative, John Wanless.

#### JOHN WANLESS, M. D.

The Wanlesses were weavers from around Dundee, in the Carse of Gowrie, of whom the earliest record is of an Alexander Wanlace. Gaps in the local parish registers have frustrated attempts to determine the dates of his birth, marriage or death. The birth of his son William was recorded in the registers of Liff and Benvie on October 28th, 1734. On February 11th, 1758 William's marriage was recorded in those of Lundie and Fowlis, to Margaret Webster (evidently descended from weavers) of Newtyle. Their first-born, James, was baptized on January 23rd, 1760. Four other children followed, while William and Margaret continued to live in Bowhouse. By 1810, James was described as a manufacturer in Dundee, on his marriage to Agnes Sime of that parish. Their second son was John, the subject of this paper, born on May 27th, 1813, in a house on Perth Road.

Of his childhood we know little, and of his schooling nothing. His father died in 1822, and at the age of 13, John was apprenticed to Dr. James Johnston, one of the leading physicians, as well as one of his father's executors. Johnston died soon after, however, and another executor, James Hay, merchant, ship-owner and a governor of the Royal Infirmary, obtained for him the post of dresser and clinical clerk, which he held for three years, working from time to time under John Creighton, the lithotomist. In 1831 he entered the Royal College of Surgeons of Edinburgh.

There he studied under Robert Knox in Anatomy, Alexander and John Lizars in Anatomy, Physiology, and Operative Surgery, Robert Jameson in Natural History (he became, in 1867, a member of the Natural History Society of Montreal), John Thatcher in Midwifery and Diseases of Women, John MacIntosh in Principles and Practice of Physic, Thomas Aitken and Robert Christison on Materia Medica and Pharmacy. He must also have heard Robert Liston and James Syme. He was also a pupil of William (later Sir William) Fergusson in the Principles, Practice, and operation of Surgery. Years later, in 1872, an approach was made to the College with a view to his being granted the Fellowship. Letters in support of his candidature were written by various influential friends to Sir William, but without success and the

## INTRODUCTION

This is the first independent extended Report of Proceedings of the Scottish Society of the History of Medicine since that of 1969-70 and a brief historical and explanatory note is therefore in order.

The first Report of Proceedings of the Society was issued in 1949. It briefly described the foundation of the Society on the 23rd April 1948 and contained short summaries of papers presented at the first five meetings. It concluded with a brief statement on the future policy of the Society which included the following "At the moment, the Society does not feel justified in publishing more than the above brief Annual Report, although at first it was hoped that the papers might form the basis of a regular publication of periodical nature. . . . The project has not been abandoned, but merely deferred for the present".

Succeeding Reports carried similar short summaries of papers presented and in the Report for 1952-53 it was noted "The suggestion has been made that members of the Society might inform the Secretary of any items of medico-historical interest or submit an interest on historical publications so that consideration might be given to the inclusion of such items in this Report in future issues".

One and a half pages were devoted to such items the following year (1953-54) and three and a half pages in 1955-56, in which issue the papers presented to the Society were printed more or less verbatim and the full Report of Proceedings ran to 34 pages with two black and white photographs. This solid foundation was built on over the next 14 years with a Report for 1969-70 totalling 74 pages.

In 1970-71, however, the issuing of the Report as a publication of the Society ceased. A three page newsletter explained the change in arrangements whereby the Report of Proceedings was printed in *Medical History* and then made available as a reprint for the Society. This change was brought about by the financial position of the Society, which became unable to maintain the previous arrangements. *Medical History* very generously agreed to print what was at first a fairly extensive report, some 37 pages with papers referenced. By 1975-76 this Report had been reduced to brief summaries of papers and the decline has been more evident in recent years, although the newsletters have continued to be issued.

Because of the very generous provision made for the Society by the wills of Dr. & Mrs Douglas Guthrie, the Society is now in a position to reconsider publishing its Proceedings in an extended manner. Since 1984-85 copies of papers presented to the Society have been collected by the secretaries and it is proposed that where possible these will be published verbatim. On occasions, summaries only will appear, either because no copy has come into the hands of the secretaries, or perhaps because the paper has been published elsewhere.

This year we are publishing a Report of the Proceedings of 1984-85. Over the next few years, by publishing more than one year's Proceedings at a time, we hope to catch up. Until we have caught up, the newsletter will be published as a separate item. On that subject we would repeat the plea of previous secretaries and ask our Members for contributions of interest, which can be sent in at any time.

March 1990  
David Wright, Derek Dow  
*Joint Honorary Secretaries*

project was dropped. On his professional paper used for prescribing treatment and regimen to patients, he described himself as "of the Royal College of Surgeons of Edinburgh".

Among his contemporaries were Edward Forbes, the great naturalist, geologist and palaeontologist; John Goodsir, later to become a celebrated Professor of Anatomy; James Young Simpson, the founding father of anaesthesia; and John Rae, the most famous explorer of his day. It must have been an extraordinarily stimulating atmosphere.

The interest in whaling of Professor Ian Bouchier, of the Department of Medicine in the University of Dundee, is well known, as published in his paper, "Some experiences of ships' surgeons during the early days of the sperm whale fishery".<sup>(1)</sup> As he says, "There is a rich heritage of literature related to the whaling industry . . . . Remarkably little has been contributed by the medical profession; remarkable because from the seventeenth century British whalers carried a surgeon as part of the crew". One of my purposes today is to bring to your notice the unpublished MS of a journal kept by John Wanless on three voyages to Baffin Bay, in 1832-34, and bequeathed by my father to the Dundee Museums and Art Galleries. It is now kept among the excellent collection of whaling relics at Broughty Castle, on the north shore of the Tay. A good photocopy is in the library of the Scott Polar Research Institute in Cambridge, and another is with Professor W. Gillies Ross, of Bishops University, Lennoxville, Quebec. He proposed "to select about fifteen first-hand narratives of the Davis Strait whaling and present excerpts from them, linked with a text giving historical background and connecting the selections. I chose, among others, the Wanless journal . . . ." (*Personal Communication, 1983*).

During the session of 1831, despite that he had only just come up to the Royal College, his father's executor, John Hay, offered him the post of surgeon on the whaler "Thomas", Alex Cook Master and he made his first voyage in March, 1832, at the age of 18.

I am indebted to Mr A. G. Credland, of the Town Docks Museum, Hull, for information about the "Thomas". She was built in 1809 at the small village of Paull, east of Hull on the bank of the Humber: length 107ft. 10in., breadth 27ft. 10½in., 355 tons burthen; square terned flush deck. She was re-registered at Dundee in 1823. From the Dundee Directory, it appears that she belonged to the Union Whale Fishing Company, but there were only nine vessels among five companies. It was in the days before steam, and for a ship unable to extricate herself from the ice, the outlook was grim. In 1830, nineteen vessels had been lost, and "Thomas" herself was lost in 1836.

Wanless's experiences, "Journal of a Voyage to Baffins Bay", were dated 1834. The "Journal" is a small exercise book, 7½in. x 6in. of 106 pages, two of which are blank. At first sight it seems straight-forward enough. Closer study shows it to have been begun at both ends, and detailed examination reveals dates and days of the week, which, while incompatible with 1834, do fit with 1832 or 1833. This is not the place for a detailed bibliographic analysis. One explanation for this state of affairs is at least plausible: that only a little of the story of the first journey survived and that he took what there was on the second journey in 1833, but got little further. In 1834, however, he came to grips with the problem, kept the diary as well as a private note-book (now lost) and wrote up a fair copy of the 1832 and 1833 voyages, separating them from the main account by turning the book upside down and back to front, starting to write at what was originally the back. This time he completed the task, having, as it were, "dislocated" a week in May, which has now turned up 69 pages and 150 years later.

The book is written in a small, sometimes minute, and careful script, often requiring a magnifying glass. It has already begun to diverge from school copper-plate, though with no signs of its later degenerations. So neat is it that one cannot believe that the fine steel nib worked away every day, with the ship "louping" under him, so that he had to wedge himself in at the table. It must have been written up when they were becalmed, from earlier notes; and with much reference to the ship's

log, to judge from the detailed references to the wind and the sails. If that be accepted, it becomes more difficult to account for the style: often jerky and a little breathless, with punctuation varying from nothing to excess, and a great fondness for semicolons everywhere. Capitals are often missing, and also shoot up in the most unlikely places. There are occasional purple passages and one probably unwitting parody of Johnsonese, as well as 24 stanzas of dreadful doggerel. In one thing he is consistent — the Ship, the Wind, the Weather, Water, Sea, Ice, Boats and Men always receive the dignity of capitals. However, to a man who could beat a wounded Polar Bear over the head with the butt of his musket, more can be forgiven than lapses from literary style. (Family tradition has it that he had a morbid terror of mice).

At one time, I considered editing and publishing it but having discussed the project with the Curator of Broughty Castle Museum, Mr. David Henderson, concluded that though it was of interest as one of the earliest journals, it was insufficiently detailed on whaling to justify separate publication. Nevertheless, it contains much information on the crew, many of whom were picked up from Orkney; on details of whaling practice; birds and Polar Bears; the state of the weather and the sea; the hardships of wet and cold; the squalor of decks slippery with blood and blubber; and a fairly monotonous diet. He messed with the master and officers, and records little contact with the lower deck, though asides indicate that when the boats were lowered in pursuit of whales, he played a useful part, even as steersman. He spent many cold hours in the crow's nest, in those days a barrel secured at a mast-head, on the lookout for whales. As a result of his being accidentally pitched overboard into the near frozen sea, one of the mates is reported to have said "that the doctor should always be taken on the shooting parties for he could dive for the wounded fellows".

In all the pages of the journal, there are only two references to clinical practice — one, when he amputated a finger crushed in hauling gear, and one when he attended "a clumsy fellow", whose foot had been lacerated. Admittedly, opportunities and surroundings appropriate for study were not readily available, but it strikes one nowadays as strange that a young man within a few months of qualifying should have recorded so little of medical interest. Only once does he admit to having read a medical book, and only once more to a book at all. There are no observations on the health of the crew, very little on diet, nothing on frost-bite, only one reference to mild snowblindness, despite the fact that it had long been known and that the Eskimos had devised primitive but effective goggles. There was no thermometer for air or water temperatures.

From time to time the daily round was relieved by what sound like pretty uproarious parties, when ships' crews would visit other vessels. On one occasion he and a fellow surgeon from another ship visited a settlement in Greenland and were nearly overcome by the heat, and the stench of unwashed bodies, seal-blubber and urine, as well as by a good many drams. They crawled aboard the next morning somewhat the worse for wear.

The piety expressed on the outward journey (in which he commented that seamen had more opportunity for worshipping God than other men, and that a good sale of Bibles could be set up), had been diluted several months later into an admission that the Sabbath had ceased to have much significance. Indeed, by the time they were homeward bound, practices akin to witchcraft were in evidence. One can see the ancient beliefs breaking through.

Among the Wanless Papers is a certificate signed by John Mackintosh, M.D., to the effect that J. W. had "very regularly attended my lectures on the Principles of Pathology and Practice of Physic from November 6th 1832, to the end of April 1833". However, on April 9th, 1833, young John was off down the Firth of Tay! Students and possibly medical ones, have not greatly changed.

What requires explanation is why, having received all his academic training in Edinburgh, he should, at the last moment, as it were, have qualified in Glasgow. His diploma of Licentiate of the Faculty of Physicians and Surgeons of Glasgow is dated

April 10th 1835. Five weeks later, he was married to Margaret, daughter of Duncan McDonald, weaver of Dundee.

For the next two years he served as House Surgeon at the Royal Infirmary, before setting up in practice in the city. The Dundee Directory for 1837-38 shows his father James at Ryehill Wynd, Hawkhill and "John Wanless, surgeon", at Perth Road. John's and Margaret's first-child, another John, was born on March 10, 1836, but died nine months later. Margaret Rose followed (born November 26, 1837) and James (born June 15, 1839). James was recorded in the 1841 Census Return for Blairgowrie as "born in the County of Perth" and aged one year. Thus, before mid-1839, the family had moved to Blairgowrie. What made them go? Two reasons come to mind. After three Arctic voyages full of adventure, followed by two years of servitude at the Infirmary, John was probably feeling restless. Also the competition was increasing. In 1782, ten physicians and surgeons were listed in Dundee; in the year he qualified, 34; and in 1840-41, 39. More over, Scotland in the 1840's was in a period of economic difficulty, in which providing for a growing family would have presented problems and anxieties. It is therefore not surprising, knowing our man, than an energetic solution was proposed. How energetic it was may have astonished the participants, as the whole family removed itself in 1843 to Canada, that is to say, John and Margaret with four children, John's widowed mother (reported in 1887 to be in full vigour at the age of 96), his brother James, together with his sisters, Agnes and Elizabeth, and their husbands, John McDougal and John Foote respectively, twelve in all.

Crossing the Atlantic would have taken about three weeks, and it has come down in the family that they then travelled by ox-wagon for several more weeks to Southern Ontario, in the neighbourhood of London. An account of such a community has been given with wit and love, by the famous Harvard economist John Kenneth Galbraith who was born into one, in his book, "Made to Last". They lived first on a farm in Huron County, Stanley Township, on what was described as Lot 24, which later became the site of a hamlet known as Bannockburn. The reason for its name is given in a directory of Ontario.<sup>(2)</sup> William Mumby, an Englishman, established the first grist mill at the small settlement, but was worsted in a dispute with a Scot. The name stuck and was made official when a post office was established in the early 1860's. By 1871 Mr. Mumby found himself faced with two McCallums both millers, two McLeods, both blacksmiths, and a Maitland, J. P. By the 1870's, Bannockburn was an important community, with flour and sawmills and a quartz mill nearby where there was some gold mining. The Canadian National Railway reached London in 1853, but the community had reached town status in 1845 and that of a city in 1855. It is not very surprising that our John had become proprietor of Bannockburn by 1856. I have a map of the hamlet, showing many vacant lots, and it is described in such glowing terms as to make it certain that it was up for sale. Dr. Helen Woolcock, of the Department of the History of Medicine and Science in the University of Western Ontario, has made a special study of the area, and tells me that at that time the country was wide open for development and that any energetic person could be full of hope.

It looks as if John Wanless had found himself in sympathy with the expansionist ideas of the 1840's and 50's. Later, he moved into London, where he remained for some fifteen years establishing a sound practice, and in due course, being appointed Surgeon to the 2nd Battalion of the local Militia, and Coroner for the City of London and County Middlesex. Details of his activities in London during these years await further research.

The family legend, however, has it that in his early days, he would ride upon his rounds with wolves howling in the woods as he passed, and Dr. Woolcock tells me that this was not improbable, as "Early London inhabitants were not surprised by a visit from a deer or a bear, and wolves were a constant menace. A local Act in 1830 placed a 20 shilling bounty on wolf scalps — not a mean sum in those days".<sup>(3)</sup>

The regulation of medical practice at that time presented many difficulties, described by C. G. Roland<sup>(4)</sup> who refers in particular to Henry Riggs Goodman, of Grimsby, Ont., who passed his examination before the Medical Board in 1842.



though he had been in practice for at least eight years before receiving his licence. Some of the unlicensed were highly qualified, some had been in practice before the licensing board existed. Also there were so few practitioners, "even poorly trained ones, that it would have been 'politically dangerous' to have eliminated the unqualified".

In 1818, as the population of Upper Canada was increasing by the arrival of the United Empire Loyalists, the Government, seeking to regulate the physicians who were accompanying them, proclaimed that graduates of British universities, all surgeons of the army and navy and all who could claim "honourable participation in the War of 1812" would be permitted ipso facto to practise medicine in Upper Canada but that all other would be required to appear before a Board set up to enquire into their qualifications. Among the physicians who practised in Western Ontario without examination by the Board was John Wanless of the Medical Faculty of Glasgow, George Holmes of the Royal College of Surgeons of Dublin and Royal Marine Hospital of Plymouth, and Henry Going, of the Royal College of Surgeons of Dublin.

The Board was far from exacting. It did not require that the candidate have a degree but only that he had attended lectures in a medical school, or exceptionally, that he had been apprenticed to some well-known physician and surgeon.<sup>(5)</sup>

Bearing in mind the somewhat confused state of licensure, one begins to find a way through the tangle of John Wanless's legal position. We have seen that by virtue of his Glasgow diploma, he was authorised to practise in Western Ontario, presumably from the start. In 1849, the same diploma enabled him to obtain the licence of the Governor-General, having been certified by the College of Physicians of Lower Canada, i.e. the Province of Quebec.

Some time later, in 1859 he was "converted" to Homoeopathy, then a much despised school of therapeutics. The story is that he found a homoeopath, Dr. A. T. Bull, attending a man who had fallen out of a two-storey window. He asked him "Don't you think shame of yourself in giving that useless trash to a man in that condition". Dr. Bull was able to prevail upon him to study the homoeopathic system, and after observing and recording the effects of treatment for two years, John Wanless found himself convinced and compelled to join those whom he had previously reviled.<sup>(6)</sup> "Local members of the medical profession refused to have dealings with Wanless, accusing him of being a dispenser of 'Patent or Quack Medicines'. Despite opposition, both Homoeopaths and Eclectics advocated their cause through journals, newspapers, and public lectures, and by the early 1860's had won legal recognition. Dr. Bull was appointed to the first Homoeopathic Board of Upper Canada, and Dr. Wanless was instrumental in establishing the Homoeopathic College in Montreal."<sup>(7)</sup>

Whether it was the attitude of the local practitioners, or an appreciation of the need for postgraduate academic discipline, John Wanless decided to study for a degree. Certificates are preserved attesting to his having passed examinations "in *Chemica*" (2nd class honours) and "in *Chemica Administrativa*", in 1861, and on June 6th 1861, he received the degree of Bachelor of Medicine of the University of Toronto. The following year, he proceeded to the Doctorate with a thesis entitled "Powers of Social Instincts in Abnormalities". What he meant by "local instinct" or "local intelligence" was close to Wolff's Law on the mechanism by which tissues and organs adapt themselves to changing functions, e.g. the hypertrophy of the muscles of a blacksmith's arm, or of the bladder in obstruction. I quote:

"It is the object of the medical art to assist nature in the performance of her functions and Medical Men can only do this, with wisdom, when their appliances correspond with the known living and chemical physiological laws. Mere experience, unless it has been founded upon such knowledge, and well weighed in the ballance (sic) of impartiality, without prejudice and self interest, for the support of ourselves or our adopted system of practice — may be a useless and blind guide to the end in view".

It is lucky that an almost complete copy of the thesis, in his own hand, survives. The McGill M.D., C.M. thesis (1867) of his son, John Robson Wanless, on Diabetes Mellitus has disappeared. Theses, once submitted, seem to have been disregarded. I am indebted to Dr. Bensley, of McGill for his help — "Indeed, Osler's thesis was never published and only a fragment of it remains".<sup>(8)</sup>

In January 1862, before obtaining the M.D., he had been granted the diploma of the Homœopathic Medical Board of Canada, and in July 1863 received the Licence of the Board of Upper Canada, to practise Physic, Surgery and Midwifery according to the principles of homœopathy. Local attitudes in London and the acquisition of his new doctorate may have led him to move to a larger theatre, but whatever the influences, the family moved to Montreal, probably in 1863. They had at least three addresses. His address on arrival in Montreal is not so far known, but in 1873, he was at 646, Palace Street. A move was made on 13th October, 1877, to 146 Metcalfe Street, and on 12th November, 1879, to 88 Union Avenue, Westmount. Margaret Wanless must have had a disturbed life.

The practice flourished, and he spoke and wrote in promotion of the doctrine. He was named, with six other petitioners, as wishing to form the Montreal Homœopathic Association, and an Act of Incorporation (28 Vic., Cap 59) became law on March 18th, 1865. An amending Act (29 Vic., Cap 95) came into effect on September 14th, 1865, changing the name to the "College of Homœopathic Physicians and Surgeons of Montreal" and a further, entitled Assembly Bill No. 93, was passed on March 30th, 1883.

All these expressly stated his own conviction that the doctrines of homeopathy were to be taught as additional to the obtaining of a proper medical education. The Montreal Homœopathic Hospital was not established until 1894.

My father told me that the death rate from diphtheria was lower in John's practice than in many others, and that this was attributed to his insistence on fresh air. Having ordered the window of the sick-room to be kept open even in Montreal winter, if he found it closed on his next visit, he would put his stick through it.

In addition, he had a keen interest in mental disease. He was a member of the first, or provisional, directorate of the Protestant Hospital for the Insane, at Verdun, and its first Honorary Secretary from December 1886 to 1892. My father told me that his opinion was much respected as an expert witness in medico-legal matters concerning insanity.

On personal matters, it seems that he was a Liberal in politics, and a Congregationalist in religion. He was a vigorous member of the St. Andrew's Society of Montreal. "A Scottish Bill of Fare",<sup>(9)</sup> is evidently the menu for a Burns' Night dinner.

There were in all eleven children of that marriage in the Church at Perth Road, Dundee, in 1835. The children were ill-fated. Of those, of whose death anything is known, six died young, including John Robson Wanless, who died aged 44 in 1889 in Dunedin, New Zealand.<sup>(10)</sup> The last child of all, who died at under six months, in June 1885, casts a little light on his father's political views. He was named Charles Louis Kossuth, in honour of the Hungarian patriot and revolutionary (the terms are curiously up-to-date) whose visit to the English London in 1851 provoked such a stir, following his activities in 1848, that year of European revolutions. "Louis (Lajos) Kossuth" is well enough, but "Charles"? This name has not been seen before or since, in the annals of their house. For a staunch Congregational Whig, it has an oddly Jacobite scent. What was on his mind?

It is interesting to note, one hundred years later, a reception in honour of Lt. Greely,<sup>(11)</sup> Mrs. Greely, and Lt. Roy, in 1884, to which John Wanless was invited. Whether this was because of his position as a man of substance in Montreal or because of his Arctic experiences fifty years before, is impossible to say — possibly both. The invitation signed by the three guests of honour, is in the author's possession.

John Wanless finally retired from practice in 1897, when the event was recorded in the Montreal Homoeopathic Record, as was his death in 1901. He returned to Toronto, and died on April 4th, 1901, six weeks before his 88th birthday.

I think he must have had a sense of humour. Looking through such family records as survive, he presents a certain effervescent quality, combined with seriousness of purpose. Seen across three generations, he seems to have put a lot into life, and to have got a lot out. What he could not know, but which I think would have given him pleasure, was that in the four generations which have succeeded him in the profession of medicine, all have borne in his memory, the baptismal name of Wanless. Will there be a fifth, making six in all?

(1) Bouchier, I. A. D., *British Medical Journal*, 285, 1811-1813, 1982

(2) "PLACES IN ONTARIO", Nick and Helma Mika, 1977.

(3) "THE HISTORY OF THE COUNTY OF MIDDLESEX, CANADA", Toronto: W. A. & C. L. Goodspeed, 1889, p.574, by courtesy of Dr. Woolcock, who has provided the reference.

(4) ROLAND C. G.: "DIARY OF A CANADIAN COUNTRY PHYSICIAN: JONATHAN WOOLVERTON (1811-1883)" *Medical History* 15 168-80, 1971

(5) SEABORN, Edwin: "THE MARCH OF MEDICINE IN WESTERN ONTARIO", Toronto. The Ryerson Press, 1944, p.36.

(6) A CYCLOPEDIA OF CANADIAN BIOGRAPHY: REPRESENTATIVE CANADIANS. George Maclean Rose, Ed. Toronto: Rose Publishing Co. 1888, p.p. 128-31

(7) DR. HELEN R. WOOLCOCK: M.A. Thesis, University of Western Ontario. Personal Communication.

(8) EDWARD BENSLEY, M.D., Osler Library, McGill University, Montreal. Personal Communication, November 15th, 1982.

(9) Appendix 1

(10) The only example known in the family of the Highland "second-sight" concerns his death. his sister Violet (my grandmother) then living in Montreal, had a very vivid dream in which she saw all the circumstances of his death in New Zealand. These were later confirmed as to time and particulars, by letter. She had never before had any second-sight, nor did she thereafter.

(11) ADOLPHUS WASHINGTON GREELEY (1844-1935) served in the American Civil war from private to brevet Major. Later Lieutenant, U.S. Army, and a major arctic explorer, 1882-84. See *Encyclopaedia Britannica*.

APPENDIX 1

**A Scottish Bill of Fare.**

"I will be blithe and licht,  
My heart is bent upon sae gude a nicht."  
*A wee drappie Tallisker.*

**KAILS AND BROTHS.**

Het Spiced Indien Kail.                      Calipee Broth.

**FISH.**

Slices o' Indien Saumon wi' Butter Bree,  
Indien Haddies Smeekit.

**FIRST COORSE.**

Stewed Hens wi' Puddock Stools.  
Minced Collops on a bane, wi' sma' Peas frae France  
*A wee Donal' o' Glenlivat.*

**SECOND COORSE**

Chickens bakit in an Ashet.  
Giggot o' Mutton wi' Red Curran' Jeelie.  
Scotch Haggis.

"Fair fa' yir honest, sonsie face,  
Great chieftain o' the puddin' race!  
Aboon them a' ye tak' yir place,  
Painch, tripe, or thairm;  
Weel are yer wordy o' a grace,  
As lang's ma airm."

Stuffed Bubbly Jock roastit, an' Soo's Leg bakit.  
Tatties biled an' champit; Bashed Neeps; Biled Ingins.  
Gleskie Magistrates wi' Tatties roastit.  
*Anither wee Donal'.*

**THIRD COURSE.**

Jeelie Dumplin'.                      Grosset Tairt.  
Truminlin Tammy Oranges.  
Paisley Corn Floor Cauld Snaw Puddin'.  
Mity Dunlap Cheese.  
Ingins, Lettuces, Loo Aiples, Syboos, an' a lot o' ither  
green things.

*Jist anither dram tae keep a' doon.*

"Food fills the wame, an' keeps us livin';  
Tho' life's a gift no worth receivin'  
When heavy dragg'd w' pine an' grievin';  
But, oil'd by thee,  
The wheels o' life gae down hill, scrievin'.  
Wi' rattlin' glee."

## APPENDIX 2

On the back of the map of the village of Bannockburn, in Southern Ontario, of which John Wanless was Proprietor in 1856, there appears a book-list, written on cloth which is probably the surviving remnant of the original backing fabric. The list is an interesting side-light on what an alert provincial doctor would have read. It is authenticated by a pencilled note in the handwriting of his grand-daughter, my Aunt Margaret, as "Grandfather Wanless Professional Notes".

The list is as follows:

The Physician's Handbook of Practice for 1859	
W. A. Townsend & Co., Publishers, 277	. . . . . N.Y.
Physicians . . . . .	List
Rational Medicine a Paradise of Doctors	
By Jacob Rigdon M.D.	
Symptoms of Homoeopathy	\$ 1.25
Henderson's Homoeopathy fairly represented	\$ 1.25
Simpson Compressed Air as a therapeutic agent in Consumption	30 cts.
Richardson on the Hygenic Treatment of Pulmonary Consumption	\$ 1.60
Science on the . . . . . Sunday & Brockerton?	
On Nature and Art in the Cure of Disease by Sir John Forbres	\$ 1.00
S. S. ? & Wm. Hood . . . . .	N.Y.
The Nature Cure in Consumption a Demonstration of its Curability by John Balbirnice M.A., M.D., Longmans . . . . . Green & Longman	

Mr. Dickson's paper was followed by one by Dr. Kenneth Collins of Glasgow on

### JEWISH MEDICAL STUDENTS — GRADUATES AT EDINBURGH UNIVERSITY (1767-1859)

Although there is a long tradition for Jewish practitioners in medicine stretching back to Talmudic times, when medical schools came to be established in Europe in the Middle Ages there were often restrictions placed on Jewish students. In many instances universities were religious institutions and these were frequently closed to Jews. In earliest times physicians were trained by apprenticeship and records of Jewish physicians entering into contracts for the training of medical apprentices can be found dating back to the 15th century.<sup>(1)</sup> While there is no direct account of the teaching of medicine in Talmudic times it is firmly believed that this was carried out by the training of apprentices by an established physician.

The Church Council of Basel (1431-3) had decreed that no Jew should possess a university degree and this was confirmed by a Bull of Pius IV in 1556.<sup>(2)</sup> However, there were some universities which permitted Jews to qualify in medicine, the most notable being the university of Padua in Italy where some hundreds of Jewish doctors gained their medical qualifications especially from the 16th century onwards.<sup>(3)</sup> Apart from the more liberal university of Montpellier, most universities in France did not admit Jews until after the Revolution of 1789 and in Germany, Jews only began to graduate in medicine from the beginning of the eighteenth century.<sup>(4)</sup>

Restrictions also applied in England. Candidates for matriculation at Oxford had to subscribe to the articles of the Church of England and while Jews could study at Cambridge no practising Jew could graduate at the ancient English universities until the repeal of the Test Acts in 1871. The situation in Scotland appears to have been quite different and no religious tests were required either for matriculation or for graduation.

The first Jew to graduate in Scotland was Jacob de Castro Sarmiento who received his degree of Doctor of Medicine from Marischal College, Aberdeen in 1739 with three recommendations including one from Sir Hans Sloane, President of the Royal Society. There were a few Jewish physicians who followed the example of Sarmiento and obtained degrees, often 'in absentia' from Marischal College and King's College in Aberdeen and a significant number of Jewish medical students can be identified in Edinburgh from 1767 onwards. These numbers are sufficient to refute the suggestion that medicine was not a common profession of the Jews in Britain in the eighteenth and early 19th centuries<sup>(5)</sup> and also show that Jews did indeed make use of the spirit of academic and religious freedom available in Scotland at that time.<sup>(6)</sup> Indeed, in the early formative years of the Edinburgh Jewish community, between 1775 and 1820, there was hardly a year in which there was not a Jewish medical student enrolled at the University of Edinburgh.

The medical matriculation index at Edinburgh University is comprehensive and complete covering the period 1760-1860. For the period prior to 1760 it is possible to consult the class lists of Cullen and Monro. Similar records are not available for the University of Glasgow where medical students were not required to matriculate before the 1840's. Study of what material is available for the class lists from 1803 to 1820, suggests that all the Jewish students coming to Scotland to study, whatever their geographical origin, preferred Edinburgh to Glasgow.

It was only in the 1820's with a medical student population of about 400 that the Glasgow medical school began seriously to compete with Edinburgh. Edinburgh faced little competition during this period and alone of the Scottish universities it had an international student composition.<sup>(7)</sup>

If a Jew in England wished to graduate in medicine at university in the eighteenth and early nineteenth centuries the options were strictly limited: the qualifications

could only be obtained in Scotland or at one of the continental universities. In 1840 the famous Jewish pharmacologist Jonathan Pereira, author of 'The Elements of Materia Medica', decided to leave his post to become a candidate for the post of assistant-physician at the London Hospital.<sup>(8)</sup> At first he planned to leave London for a couple of years to come to Scotland, presumably to study in Edinburgh, but he changed his plans, took the qualifications of the licentiate of the Royal College of Physicians of London after two weeks study and preparation, obtained the diploma of M.D. from Erlangen in Bavaria and was then elected to the post he sought. He had reached the position of Professor of Materia Medica with the qualification of licentiate of the Society of Apothecaries but had been unable, as a Jew, to obtain an English University medical qualification.

That a number of Jewish medical students came to Edinburgh to study medicine in the late eighteenth and early nineteenth centuries has never been described before, either in histories of the Jews in medicine or in Scottish medical histories. This may be because of the small size of the Jewish community in Scotland especially prior to the 1880's. An additional reason may be the small number of Jewish students and graduates involved in comparison to the very substantial output of the Scottish medical schools in a period when the vast majority of those holding M.D. degrees gained them in Scotland.<sup>(9)</sup>

The medical school in Edinburgh, and indeed the University as a whole, reached the height of its reputation between 1760 and 1820 and the intellectual achievements of Professors like William Cullen and Joseph Black in Chemistry and the three generations of the Monro dynasty who each held the chair of Anatomy, acted as a magnet to the students. Edinburgh University was growing during this period. The number of students grew from 400 at the start of the eighteenth century to 1,000 by 1780 and it doubled again by 1815.<sup>(10, 11)</sup> Students were attracted from Europe, the West Indies and North America. Many students also came from England and Ireland attracted by the religious freedoms of the Scottish Universities,<sup>(9)</sup> and for the opportunity to earn a medical degree.

Students attending Edinburgh University would have had to possess some financial resources. The cost for attending for one year in about 1820 was £30, low by English standards, but beyond the pocket of most.<sup>(11)</sup> However this period of expansion of educational facilities, allied with the pursuit of medical excellence, coincided with the appearance in Britain and other English speaking countries of settled Jews, some with family medical tradition, with the financial resources to obtain for themselves or their sons a medical education. Medicine had always been regarded in the community as a high status occupation and thus the factors leading to study in Edinburgh become clear.

The education had to be good because the professors and lecturers received little salary and depended on income from class fees. The University then had a less rigid system of curriculum than that obtaining today and many students studied in Edinburgh for a short time, often only one or two sessions. Some did not graduate but became licentiates of the Royal College of Surgeons of Edinburgh. In many cases those who graduated did so outside Edinburgh, a common practice of the period, possibly to save fees or to avoid presenting a graduation thesis as was required in Edinburgh.<sup>(12)</sup> The thesis would involve the intending graduate in some publication expense as well as a certain amount of medical and literary work. However, the standard of theses varied, with some being significant pieces of medical research while others were mere medical plagiarism. Thus, compilation of a thesis in no way automatically conferred specialist status on the author.

The first Jewish undergraduate in Edinburgh was A. R. (? Abraham Raphael) Mendes da Costa who matriculated for the session 1767-8. No further medical particulars can be discovered about his subsequent career and it may even be that he died soon after this. The first Jewish physician to have graduated in Britain after a period of regular undergraduate study was Joseph Hart Myers (1758-1823). Myers was born in New York but received much of his early education in London and he commenced his medical studies there at the lectures of William Hunter and George

Fordyce.<sup>(13)</sup> This educational experience was of value to Myers, and to many other American students intending to study in Edinburgh, as the large number of students in Edinburgh and the local emphasis on theory meant that there were less facilities available for practical bedside teaching than in London.<sup>(13)</sup>

Myers came to Edinburgh in 1776 studying for 4 sessions graduating in 1779 with a thesis on diabetes.<sup>(14)</sup> He served as librarian of the Medical Society of London and was admitted a licentiate of the Royal College of Physicians of London in 1787.<sup>(15)</sup> Myers was physician to the Hebra, treating the poor of the Congregation in London of Jews of Spanish and Portuguese origin. He was also the colleague of Dr. John Lettsom at the dispensary at Aldersgate Street.<sup>(16)</sup>

Other American Jewish medical students in Edinburgh included Levi Myers and Joel Hart. Levi Myers, the first Jewish medical graduate at the University of Glasgow completed three years of study in Edinburgh and matriculated for the 1787-8 session as Dr. Levi Myers M.D. (Glas.) Levi Myers returned to South Carolina to practise and was elected to the State Assembly. He served as Apothecary-General for South Carolina until his death in an accident at sea in 1827. Joel Hart, a licentiate of the Royal College of Surgeons of London studied in Edinburgh for only one session but later returned to Scotland as U.S. Consul in Leith from 1817 to 1832 being appointed by the Madison administration.

One of the most remarkable features about the Jewish students who came to study in Edinburgh was the high proportion who had close links with the West Indies, and in particular with the island of Jamaica. The Jews in Jamaica achieved political emancipation at an early stage and they found the facilities available for study in Scotland to be extremely congenial. Names like de Leon, Henriques, Bravo, Adolphus and Stern belong to Jamaican Jews who studied in Edinburgh and there is evidence that Moritz Stern and the Henriques returned to Jamaica to practise. Moritz Stern was a surgeon to the militia in Jamaica and was President of the Jamaican branch of the British Medical Association in 1884.<sup>(19)</sup>

Louis Ashenheim was another Edinburgh student with Jamaican links. He, however, did not graduate in Edinburgh after his studies there, but became the first Jewish medical graduate at St. Andrew's University in 1839. Louis Ashenheim (1816-1858) was born in Edinburgh the son of a jeweller who had immigrated to Scotland from Holland. After working in London where he showed some early talent as a writer, he emigrated to Jamaica practising initially in Kingston and later in Falmouth where he encouraged public health measures and rendered valuable services during a cholera epidemic.<sup>(18)</sup> In Jamaica he edited the local Jewish journal "Bikkurei Hayam" and was proprietor of the Jamaican daily paper "Daily Gleaner".

The link between Jamaica and the Scottish medical schools was maintained long after Jews were free to study in many other centres. In particular the Henriques families have maintained a remarkable Scottish connection, from 1789 when Moses Nunes Henriques, later a Jamaican physician and surgeon, came to Edinburgh, to 1937 when Horace Leslie Cohen Henriques graduated in Glasgow. Joseph Gutierrez Henriques<sup>(21)</sup> studied in Edinburgh in 1818-19 after initial medical studies at St. Thomas's Hospital. After returning to Jamaica he practised as an ophthalmologist but came back to London to practise in 1825, retiring early to devote himself to Jewish communal activities, being acting President of the Board of Deputies of British Jews during his absence from Britain in 1840 in connection with his diplomatic activity after the Damascus 'Blood Libel'.

Solomon de Leon, from the island of St. Kitts in the Caribbean, was one of many English speaking students who obtained their medical degrees from the University of Leiden in Holland. de Leon gained his M.D. there in 1790, after two sessions of study in Edinburgh, with a thesis 'on inflammation'.<sup>(22)</sup> He became a licentiate of the Royal College of Physicians in London<sup>(23)</sup> and for a time he served as honorary physician to the Hebra.<sup>(24)</sup>



There were only a few natives of Edinburgh amongst the Jewish students. The Jewish community in Edinburgh has never been large and in about 1850 would have numbered only about 100 souls.<sup>(25)</sup> Although some Jews have lived in Edinburgh in earlier times the community of today can be said to date its foundation from the founding of a synagogue in 1816 with immigrants from Germany, Holland and the Baltic ports. Jacob Ashenheim, whose son Louis was the first Scottish Jew to graduate, was a native of Holland and with his business success with jewelery and general merchandise he would have possessed the necessary financial resources to enable his children to enter university. Jacob Ashenheim's younger son Charles also studied medicine in Edinburgh pursued over the lengthy period of 9 years, between 1843 and 1852, before he eventually emerged with an M.D. with a thesis on 'delirium tremens'. Charles Ashenheim emigrated to New South Wales practising in the small country town of Dubbo, on the Macquarrie River about 250 miles north west of Sydney, where he died at the early age of 38 years.

The matriculation index of Edinburgh University medical faculty includes the name of Michael Levy for the session 1851-2. Hannah Ashenheim, Jacob's younger daughter, was married to a Michael Levy and it would be interesting to speculate that he matriculated in medicine to keep an eye on his wayward brother-in-law and ensure that his lengthy undergraduate career was brought to a satisfactory conclusion.

Heyman Lion, one of the very first Jews to settle in Edinburgh at the end of the eighteenth century, was an interesting and colourful character. He was in practise in Edinburgh as a chiropodist and dentist and sought to elevate his status by obtaining the degree of M.D. Accordingly, he commenced studies at Edinburgh University, matriculating for 5 sessions between 1790 and 1795. After completing his studies he was refused a medical degree in Edinburgh after examination but the authorities gave no reason for their refusal.<sup>(26)</sup> He then turned to Aberdeen, applying to King's College with appropriate recommendations from Dr. John Barclay, Dr. William Farquharson and Dr. J. Yule. However, once again he was turned down, not because of his qualifications which were entirely adequate for the degree of M.D. but on account of 'the public line of practice which he has for some time adopted'.<sup>(27)</sup> In other words the universities in Edinburgh and Aberdeen were not prepared to grant a medical degree to any candidate, no matter how well qualified, who was a chiropodist and dentist. One might also surmise that his continental origins and flamboyant personality also counted against him. Lion was the author of a remarkable 438 page work on the treatment of corns which was published in London in 1802. A copy may still be seen in the Edinburgh University Library.<sup>(27)</sup>

Another local medical family at this time were the Zeiglers, who included jewellers and medical men amongst their number. Their link with the Jewish community has not been established although it is believed that they were of Jewish origin. Alex Zeigler practised after 1816 as an obstetrician as did his son William both being members of the Medical Obstetrical Society, as well as conducting a general medical practice. They had left the Jewish community by the 1840's, if indeed they had ever been part of it, with William an active member of the Free Church.<sup>(28)</sup>

Among provincial Jewish practitioners in England was Isaac Abraham Franklin who is believed to have studied in Edinburgh, probably early in the 19th century. However, his name does not appear on the matriculation roll at Edinburgh University and it may be that he undertook medical apprenticeship in Edinburgh. The custom of obtaining a medical education by apprenticeship to an established physician was not uncommon in the 1830's (although much less frequent than a generation earlier) though it became almost obsolete by 1850.<sup>(29)</sup>

Franklin became one of the leading medical men in Manchester, was temporary hospital medical officer during the Manchester cholera epidemic of 1849 and was an active and devout member of the Manchester Jewish community.<sup>(30)</sup>

Another provincial Jewish practitioner who obtained an Edinburgh qualification was Henry Behrend (1828-93) who was born in Liverpool and conducted his medical studies at University College Hospital in London and in Manchester. In 1850 he was elected a Member of the Royal College of Surgeons in England and in 1859 he was admitted a Licentiate of the Royal College of Physicians of Edinburgh without examination, as he already held a registrable qualification under the terms of the Medical Act which became effective that year. His petition for Membership came before the College in Edinburgh in 1868 and it was approved by ballot in May of that year. Later Behrend practised in London where he won recognition for his communal activities and his medical and archaeological writing as well as for his medical work.<sup>(31)</sup>

Little evidence now remains of the undergraduate activities of these students and their role in the various clubs and societies which existed in Edinburgh at that time. A major influence on medical education was the Royal Medical Society which had been founded by the student body in 1754. The Saturday night meetings of the Society consisted of dissertations given four times a year by the student Presidents of the Society, four being elected each year. Hananel Mendes da Costa served as President of the Society in the session 1815-6, immediately preceding in office Charles Hastings, later the founder of the British Medical Association.<sup>(32)</sup> da Costa was a member of a large family prominent in the affairs of the Sephardi Jewish community in London. He returned after his studies to practise in London but died only a few months later having already shown much promise in his chosen career. Unfortunately, his dissertation is one of the very few missing from the archives of the Royal Medical Society and it has not been possible to trace it.

Another form of student activity was membership of the Freemasons and it is recorded in "Jews in Regular Freemasonry" that Benjamin de Wolfe (Frazer) was active in the Masons while still an undergraduate in Edinburgh.<sup>(34)</sup>

While many of the students and physicians were highly regarded in their professional life only George Charles Wallich (1815-99) appears in the Dictionary of National Biography. George Wallich was the son of Nathaniel Wallich, or Woolff, the physician and outstanding botanist of Indian flora, who was born and qualified as a doctor in Copenhagen. George Wallich followed his father into service in the Indian Medical Service, receiving Army medals for his services in the Sutlej and Punjab campaigns of 1842 and 1847 and was field-surgeon during the Sonthal Rebellion of 1855-6.<sup>(35)</sup> The Wallich family has produced many other notable physicians over the past 5 centuries, especially in Europe, including the Nobel Prize winner Otto Wallich as well as Moshe Wallich, founder of the Shaarei Tzedek Hospital in Jerusalem.<sup>(36)</sup>

Prominent amongst overseas physicians who studied and graduated in Edinburgh was Aaron Hart David who had commenced his medical studies in his native city of Montreal.

He came to Edinburgh for his final year of medical studies graduating M.D. with a thesis 'on infanticide' in 1835. In the following year he became a licentiate of the Royal College of Surgeons of Edinburgh returning to Canada serving first as assistant surgeon in the Montreal Rifles from 1837 to 1839. He was a medical writer of distinction and in academic life rose to be Dean of the Faculty of Medicine at the University of Bishop College, later absorbed into McGill University. David was one of the founder members of the Canadian Medical Association and was elected its general secretary in 1869. He is said to have retained an affection for the time he spent in Scotland and was proud to have been a member of the Royal Medical Society.<sup>(37)</sup> The Edinburgh medical school exerted a considerable influence overseas through the activities of its graduates and Aaron Hart David carried its traditions to Montreal, a city where medical standards from the inception of medical education were based on those achieved in Edinburgh.<sup>(38)</sup>

**Table 1. Place of Graduation of British Medical Graduates 1701-1850**

Date	Oxford/Cambridge	Continental Universities	Scottish Universities	Total
1701-1750	617	385	406	1408
1751-1800	246	194	2594	3034
1801-1850	273	29	7989	8291

Figures derived from Table VI of A.M.T. Robb-Smith's chapter on Medical Education at Oxford and Cambridge prior to 1850 in "The Evolution of Medical Education in Britain" ed. F.N.L. Poynter, London 1966.

**Table 2. Medical Graduands at Glasgow University 1746-1800**

Date	number	average number per annum
1746-1774	73	2.6
1774-1800	177	6.8

Figures from J. Coultts "A History of the University of Glasgow" (1451-1909) Glasgow 1909

### Jewish Medical Graduates in Aberdeen 1739-1859

#### Marischal College

	Attested by
1739 Jacob de Castro Sarmiento _____	Sir Hans Sloane, Dr. Alexander Stewart, Dr. Cromwell Mortimer.
1745 Ralph Schomberg _____	D. J. Colec, Dr. Leon Welsted, Dr. M. Schomberg, Dr. John Phillipson.
1755 David Cohen _____	"good attestations from London and Edinburgh"
1775 Gumpertz Lewisohn _____	Dr. Smith, Dr. Wilson
1783 Benjamin Lyon _____	
1791 William Brodum _____	Dr. Saunders and Dr. Luis Leo
1796 Samuel Solomon _____	Dr. Joseph Moore and Dr. Isaac Fisher of Liverpool.
1802 Benjamin Lara _____	Dr. Jamieson of London and Dr. Thomson of Haslar Hosital.
1814 Joseph da Cunha _____	Dr. George Pearson, Dr. Richard Harrison, Dr. P. M. Roget.
1816 Jacob Adolphus _____	Sir James M'Gregor, Dr. Edmond Sommers of London.
1819 Nathaniel Wallich _____	Dr. Hamilton, Dr. Fleming

## Jewish Medical Graduates in Aberdeen 1739-1859 — contd

### King's College

1816 Daniel Baruh		Dr. J. Sequira, Dr. Joseph Hart Myers
1817 Emmanuel Pacifico		Dr. Joseph Hart Myers, Dr. Sutherland, Dr. Babington
1824 Judah Israel Montefiore		Dr. Algernon Frampton, Dr. John Meyer
1824 Daniel Garcia		Dr. John Meyer, Dr. John Ramsbotham
1859 Samuel Cardoza		

### Jewish Medical Students at Edinburgh University 1767-1859

1. A. R. Mendes da Costa	1767-8		
2. Joseph Hart Myers	1775-9	M.D. Edinburgh	"de diabete"
3. Levi Myers	1785-8	M.D. Glasgow	
4. Solomon de Leon	1786-8	M.D. Leyden	"de inflammatione"
5. Moses Nunes Henriques	1789-0		
6. Joao Pereira de Castro	1790-3	M.D. Edinburgh	"variola"
7. Heyman Lion	1790-5		
8. Moses Bravo	1800-1		
9. Joel Hart	1804-5	L.R.C.S. England	
10. Abraham Solomon	1804-10	M.D. Edinburgh	"de cerebri tumoribus"
11. David Bravo	1808-9		
12. Miguel Caetano de Castro	1808-11	M.D. Edinburgh	"de aquae frigidae usu"
13. Alexander Zeigler	1813-6	M.D. St. Andrews	
14. Hananel Mendes da Costa	1815-8		
15. Hananel de Leon	1816-8	M.D. Edinburgh	"de hydrocephalo"
16. Joseph Gutierrez Henriques	1818-9		
17. Douglas Cohen	1825-8	M.D. Edinburgh	"de gangrene"
18. Benjamin de Wolfe Frazer	1832-5	L.R.C.S. Edinburgh	
19. George Charles Wallich	1832-6	M.D. Edinburgh	"on pneumonia"
20. Aaron Hart David	1834-5	M.D. Edinburgh	"on infanticide"
21. Louis Ashenheim	1834-7	M.D. St. Andrews	
22. Edwin Adolphus	1834-8	M.D. Edinburgh	"on the pathological characters of urine as indicating the presence & extent of disease"
23. Benjamin Lara	1839-49		
24. Charles Ashenheim	1843-52	M.D. Edinburgh	"delirium tremens"
25. Michael Levy	1851-2		
26. Moritz Stern	1854-9	M.R.C.S. England	L.R.C.P. London

**Jewish Medical Graduates  
at the University of Glasgow**

1. Levi Myers	1787	
2. Laurence Alfred Joseph	1831	
3. Joseph Marcus Joseph	1852	(L.I.D. 1866)
4. Asher Asher	1855	
5. Samuel Levenston	1859	
6. Reuben Gross	1862	

**Jewish Medical Graduates  
at the University of St.  
Andrews**

1. Louis Ashenheim	1839
2. Alexander Zeigler	1845
3. Maurice Davis	1852
4. Leonard Emanuel	1859
5. Simon Belinfante	1862

**Jewish Physicians Providing Affidavits for Aberdeen M.D.'s**

a) **Marischal College**

Jacob Adolphus	1	Philip de la Cour	1
Luis Leo	1	Meyer Schomberg	5
John Meyer	2	Benjamin Mosely	1
Hart Wessels	5		

b) **King's College**

Benjamin Lara	1	Joseph Hart Myers	2
John Meyer	7	Ralph Schomberg	1
Joseph Sequira	1		

**REFERENCES**

- (1) Harry Friedenwald "The Jews and Medicine" (Baltimore, 1944) Vol. 1, p. 221
- (2) *ibid.* p. 226
- (3) *ibid.* p. 227
- (4) *ibid.* pp. 235-6
- (5) Jewish Encyclopaedia (New York, 1925) entry on 'medicine' Vol. VIII, p. 419
- (6) Richard Barnett "Dr. Jacob de Castro Sarmiento and Sephardim in medical practice in eighteenth century London" Transactions of the Jewish Historical Society of England, Vol. XXVII (1982), p. 113
- (7) J. B. Morrell "Medicine and Science in the Eighteenth Century" in "Four Centuries Edinburgh University Life 1583-1983" ed. Gordon Donaldson (Edinburgh, 1985) p. 40
- (8) Dictionary of National Biography, (London, 1896) Vol. 45, pp. 1-2
- (9) David Hamilton "The Healers" (Edinburgh, 1981) p. 151
- (10) J. B. Morrell *op. cit.* p. 42
- (11) T. C. Smout "A History of the Scottish People 1560-1830" (London, 1969) p. 478
- (12) David Hamilton *op. cit.* p. 142
- (13) Harry Friedenwald "The Jews and Medicine" (Baltimore, 1944) Vol. 2, pp. 744-5
- (14) John Z. Bowens "The Influence of Edinburgh on American Medicine" in "Medical Education and Medical Care: A Scottish-American Symposium" (Oxford, 1975) p. 9
- (15) Harry Friedenwald *op. cit.* Vol. 2, p. 745
- (16) Thomas Hunt (ed.) "The Medical Society of London 1773-1973" (London, 1972) p. 29

- (17) Harry Friedenwald *op. cit.* Vol. 2, p. 745
- (18) Jewish Encyclopaedia (New York, 1925) Vol. VI, p. 240
- (19) J. A. P. M. Andrade "A Record of the Jews in Jamaica" (Kingston, 1941), p. 175
- (20) Jewish Encyclopaedia (New York, 1925) Vol. II, p. 178
- (21) "Jewish Chronicle" (London), issue of 11th September 1885, p. 14
- (22) R. W. Innes Smith "English Speaking Students of Medicine at the University of Leyden" (Edinburgh, 1932) p. 65
- (23) William Munk "Roll of the Royal College of Physicians of London" (London, 1878) Vol. 2, p. 82
- (24) Richard Barnett *op. cit.* p. 112
- (25) Cecil Roth "The Rise of Provincial Jewry" (London, 1950), p. 110
- (26) A. Levy "The Origins of Scottish Jewry" (London, 1958), p. 11
- (27) A. Levy *op. cit.* p. 12
- (28) Edinburgh Medical Journal, Vol. XXXVI, ii, pp. 973-6 (Edinburgh, 1891)
- (29) J. D. Comrie "History of Scottish Medicine" Vol. 2 (London, 1932) p. 606
- (30) Bill Williams "The Making of Manchester Jewry" (Manchester Univ. Press) p. 1
- (31) Jewish Encyclopaedia (New York, 1925) Vol. 2, p. 644
- (32) James Gray "History of the Royal Medical Society 1737-1937" (Edinburgh, 195) p. 318
- (33) "Gentleman's Magazine and Historical Chronicle", Vol. LXXXVIII, i, p. 468 (London, 1818)
- (34) John M. Shaftesley "Jews in Regular Freemasonry" Transactions of the Jew Historical Society of England, Vol. XXV (1973-5) p. 179
- (35) Dictionary of National Biography (Oxford Univ. Press, 1917) Vol. 20, p. 593
- (36) Encyclopaedia Judaica (Jerusalem, 1971) Vol. 16, col. 253
- (37) B. G. Sack "History of the Jews in Canada" (Montreal, 1945) pp. 129-130
- (38) W. S. Craig "History of the Royal College of Physicians of Edinburgh" (Oxford, 1976) p. 377
- (39) "List of the Graduates in Medicine in the University of Edinburgh from 1705 to 1866" (Edinburgh, 1867)

## THE ONE HUNDRED AND THIRTEENTH ORDINARY MEETING OF THE SOCIETY

The One Hundred and Thirteenth Ordinary Meeting of the Society was held in the new meeting room of Leith Hospital on 23rd February 1985 and was attended by 51 members or guests. Dr. Alastair Masson took the chair and acquainted members with some details of the will of Mrs Jean Guthrie who sadly had died early in the month.

The first speaker was the Reverend James Marshall who gave a talk on the history of Leith Hospital entitled:

### LEITH'S GREATEST CHARITY

Leith Hospital was opened in January 1851. In the census returns for that year the population of Leith was given as 30,670 — compared with the present-day population of around 40,000. At that time the only provision for the care of the sick or injured in the port consisted of a hot bath maintained by the Humane Society in the Broad Wynd; a public Dispensary (originally a separate institution, but now sharing the premises with the Humane Society); and the Casualty Hospital, which had been opened in 1837 at 34 Quality Street.

The hot bath was instituted in 1788 for the resuscitation of the apparently drowned, and it was useful first-aid when the bath was hot. Unfortunately this was not always the case. The Humane Society depended for income on public subscriptions, and when money dwindled the attendant at the bath had to be dismissed. Then when bodies were dragged from the harbour and rushed to the Broad Wynd, only to discover the bath was cold, letters were written to the newspapers, and the scandal brought a temporary inrush of funds to the Humane Society, and the bath was kept hot until public concern again waned.

The Dispensary was one of those established in various towns in Scotland by Dr. Andrew Duncan. It opened in 1816, and gave free medical advice and medicine to the poor. There were two rooms at the Dispensary; one was a laboratory and consulting room, and in the back shop there was a bed — one single bed. This was meant for any patient found to be so far gone that he could not be expected to go home again. If another critical case arrived while the bed was still occupied, he had to lie on the floor.

The Casualty Hospital had an impressive title, and Leithers indeed were very much impressed by it when it opened. There was more than a hint of local pride in it too. The port had achieved independent status as a Parliamentary Burgh in 1833, and the townsfolk were eager to demonstrate that independence by increased self-sufficiency. Opening the Casualty Hospital meant that accidents in the docks and shipyards need no longer be transported slowly and painfully to the Edinburgh Infirmary. But the Casualty Hospital was just a house in Quality Street (now Maritime Street). There was no sanitation, for Leith was then far behind Edinburgh in that respect: and there was no nursing, in the modern sense, for this was twenty years before the appearance of Florence Nightingale.

In the 1840s these three facilities for the care of the sick worked closely together in the port. They had a joint annual meeting in Trinity House, and at these meetings ideas were canvassed for the extension of their work. Some years earlier the Humane Society had started a second bath in their premises which was offered for public use at a charge. The income from this helped to ensure that the hot bath was always available for emergencies. In 1844, at the Trinity House meeting a proposal was made to provide public baths in a building properly equipped and almost 3,000 subscribers were quickly found, but the town council refused to contribute and the scheme failed. Within a few months, however, the town council received information that John Stewart of Laverock Bank, recently dead, had bequeathed £1,000 towards the provision of a Fever Hospital in Leith, on condition that a similar sum was raised by the inhabitants. This was very soon forthcoming: public subscriptions, indeed, amounting to £2,338, and to this sum Alexander Cowan added another £500.

After a long search, what was described as a 'beautiful grassy park' was acquired for the new hospital, immediately adjacent to the South Leith Poorhouse, just then being erected. Officially known as 'Leith Hospital', the new building was invariably referred to locally as 'The Fever Hospital', and this was not a hospital in the modern sense of the word. It was not a public service, and it was not meant to deal with all the sick and casualties in the town. Leith Hospital was a charity: it was meant for 'them', not for 'us'. Subscribers to the hospital had no expectation of any personal return. In the insanitary and overcrowded state of Leith, epidemics were frequent, and the death-rate was high in the wynds and closes. The hospital would provide some relief for families forced to live with infectious disease, and it might do something to prevent infection spreading.

In effect the new hospital was a rationalisation of the work of the Humane Society, the Dispensary and the Casualty Hospital, and the building was planned simply to give these services better accommodation. The beautiful grassy park that had been feued extended only to a quarter of an acre, and a two-storey building was erected. Upstairs were four small wards for fever patients, and a store-room. On the ground floor the work of the Humane Society continued in a large room with baths; another room provided for the Dispensary, and there were two wards for accident cases.

From the start this accommodation was seen to be quite inadequate. Before the opening subscribers met at the Assembly Rooms and agreed that the hospital should be governed by a Patron, a President, two vice-Presidents and fifteen directors. Subscribers of not less than ten shillings annually, and donors of at least ten guineas would be entitled to recommend patients. A house surgeon was appointed at £40 a year, and a housekeeper at £24. Sixteen years after opening, an annexe was added providing two more wards on the ground floor — six beds in each — for accident cases. At the same time the Directors bought a group of old houses in Well Close, adjoining the hospital, with an eye to future extension. For this they had to get an overdraft of £500 from the Clydesdale Bank.

Any vacant beds were allocated to 'pauper patients' on the distinct understanding that they could be turned out if the beds were needed for what was called 'the more special purposes of the Hospital, or if their treatment interfered with that of other patients'. Patients were classed either as fever cases or casualties. Typhus was so common that it was simply called 'the Fever', and accepted as a fact of life. Smallpox was taken seriously, but many people responded to treatment and recovered. Cholera was different; the proper treatment was speculative and was argued about in letters to the press. The suffering of cholera patients were horrible to witness, and people were terrified of it. At the meeting of subscribers before the hospital was opened there was a fierce argument over the admission of cholera cases. It was finally agreed that 'in cases of emergency cholera patients would not be excluded', but a strong body of opinion wanted to see a separate cholera hospital set up.

The first District Nurse attached to the Hospital was appointed in 1866. Mrs Brown's arrival was a milestone, for she was the first trained nurse connected with the hospital. Her duties were to visit the sick poor in their own homes after discharge from hospital 'to carry out faithfully and judiciously the doctor's orders, to instruct the relations or friends of the patient in the art of good nursing, and to inculcate, and if necessary enforce attention to cleanliness.'

Miss Liddell, the Lady Superintendent, reported to the Directors on Mrs Brown's first year's work:

'The enforcing of cleanliness is often a great difficulty, the obstacles being, the life-long habits of people, the dilapidated condition of their houses, want of a sufficient supply of clothes and bedding, bad accommodation for washing and drying the clothes they have, and sometimes too little light to enable one to see whether things are clean or dirty. Through the kindness



of friends, a stock of warm clothing has been supplied, from which, I furnish what is necessary to those destitute of a change of linen; by this means we are enabled in every instance to secure a great improvement in the personal cleanliness of the patients . . .

Mrs Brown proved to be a compulsive worker. For many years she made the astonishing total of between 12,000 and 13,000 visits in each twelve months — an average of about 37 visits daily, including Sundays. Even so she appears to have been, not only efficient, but popular.

Mrs Brown completed her first year in 1867, the year when the first extension to the hospital was made. That was also the year in which was passed the Public Health (Scotland) Act, which gave local authorities power to build hospitals for the inhabitants. Hospitals, in other words, were to become a public service rather than a charity. The act empowered local authorities to enter into agreements with the managers of already existing hospitals, to pay for the treatment of patients. Also the local authority was empowered 'to provide and maintain a Carriage or Carriages suitable for the conveyance of Persons suffering under contagious or infectious disease.' The point of all this, of course, was that expenses incurred under the provisions of the act would be chargeable on the rates.

Leith Town Council ignored the Public Health Act. It was remitted to the Provost's Committee, which never reported. However, the secretary to the Hospital Directors was Alexander Mann, a local solicitor. He realised what the act could mean for Leith, and he began a correspondence with the town council urging an increase in the town's subscription to the Hospital, for all that the Council contributed for support of the town's sick was £70 a year. A struggle now began between the hospital directors and the town council which continued for over twenty years.

The medical staff at the hospital were becoming increasingly uneasy over the very restricted accommodation there. In times of epidemic the scenes in the hospital were quite chaotic. But the town council, while ignoring the Public Health Act, were aware that they were now coming under increasing criticism, for their inaction in this matter. In 1869 a building in King Street came on the market which, it was thought, might be able to serve as a kind of overflow to Leith Hospital in an emergency. This place had originally been the Leith Boys Charity School, but latterly it had housed the Leith Ragged Industrial School, which had now got itself purpose-built premises in Lochend Road (which later was St. Anthony's R.C. School). The King Street building was offered at £675, and the town council hummed and hawed for several weeks. Finally they decided to buy in a hurry, for a cholera epidemic now threatened the town.

The building was old, dark and insanitary. Councillor Garland said he did not think it right to take the ratepayers' money to buy the place, especially as the doctors were now saying that hospitals should be light and airy. Bailie Chalmers said that might be so, but that the place was good enough for cholera patients. 'Yes' replied Garland, 'if you wish to kill them off.' But with cholera threatening the money was paid, although the premises were not properly inspected, repairs made were perfunctory, everything was done in a hurry, and the council were to rue this in time to come.

Fortunately the cholera outbreak did not materialise, but the town council did well to be nervous. In that year of 1870 the Registrar-General listed Leith as having the highest infant mortality rate in Scotland. Provost Watt visited some of the slums with Dr Struthers, and reported to the council that many of the houses were not fit for the lower animals, although extortionate rents were being charged by some landlords. He declared his determination to have all underground dwellings compulsorily closed. Ironically in that same year the hospital directors were congratulating themselves that there had only been one case of smallpox in the preceding twelve months. But two years later, in the King Street building alone, there were 52 smallpox cases.

The King Street premises were known as the Burgh Hospital, and far from taking any pride in it the town council constantly complained about the expense. The Provost told the hospital directors that the Burgh Hospital was so expensive that the rates would have to be increased, and this would be sure to affect the flow of voluntary subscriptions to Leith Hospital. The directors had for years been trying to make the town council face the fact that no hospital could exist on voluntary subscriptions alone, and that a proper assessment on ratepayers was the only answer. Now that they had their own Burgh Hospital the town council began for the first time to realise the truth of what the directors had been saying. But now they did what Leith Hospital had never done. To save themselves expense, they closed the Burgh Hospital after every epidemic until such time as Leith Hospital might be overflowing again. This saved running costs, but made great difficulties over staffing every time the building had to be opened in a hurry in the midst of the next epidemic.

Faced with the expense of maintaining the Burgh Hospital, even though it only opened intermittently, the town council, far from increasing their support for the Leith Hospital, now told the directors they ought to find the finance for Leith Hospital from their own resources, since it was their charity. The populace apparently took their cue from their civic representatives, for from a population of 40,000 in 1872 the total subscriptions from the public amounted to £408 — about two pence per head!

What saved the day for Leith Hospital was a remarkable succession of wealthy, public-spirited individuals. Shortly after the Burgh Hospital opened, Leith Hospital received from the estate of Thomas Williamson Ramsay of Lixmount gifts which finally totalled £25,000 — a munificent sum for those days. With this money an extension was built to the east of the original building, providing seven new wards for casualties. This was opened in 1873, but public apathy was such that for several years following, only four of the seven wards could be used, for lack of funds to meet running costs. This meant that due to public indifference, about 300 patients had to be refused. There were reasons for this lack of public response, apart from the bad example of the town council. There was then a very small middle class in Leith. The bulk of the people were poor to a degree that has been forgotten nowadays in this country; and public life was dominated by a relatively small number of very wealthy professional people. Even the minister of an average-sized U.P. congregation had a stipend which was eight times as much the wage of a working man. It is hardly surprising that the man in the street assumed that supporting charities was a responsibility for the well-off. There was also the fact that Leith Hospital had a bad reputation.

It came about in this way. So far, Mrs Brown, the District Nurse, was the only person in the hospital with any training. She had come to Leith from King's College, London, but the rest of the nursing staff were simply women who made up in compassion, reliability and dedication, what they lacked in technical knowledge. And this was a period of medical and surgical advance. Joseph Lister was experimenting, and Simpson's use of chloroform was generally accepted. Training was now being offered to nurses, and the opening of the extension in 1873 seemed a good opportunity to begin introducing trained staff. The older generation of nurses was not dismissed, but were gradually replaced by younger, trained girls. But as late as 1890, in a report to the town council, the M.O.H. said Mrs Goudie was found to be the most reliable member of the nursing staff. Able to work phenomenal hours without a rest, willing to rise at any hour of the day or night, Mrs Goudie had given a lifetime of service to the hospital. She had come as a young girl in the early days 'but she belonged so essentially to the old school, that a clinical thermometer was to her a sacred mystery; and when temperatures had to be taken at night, she invariably had to awake the day nurse to read the thermometer.' Poor Mrs Goudie had been demoted from nurse to ward attendant or scrubber, but when the staff was stretched, she was still called in to help.

Even outside the medical profession it was gradually being realised that infectious disease ought to be nursed in isolation. The opening of the 1873 extension enabled

accident cases to be separated from infectious patients; but the same staff still worked in all the wards, and the sad fact is that many a patient, admitted for surgery after an accident, caught typhus in the hospital and sometimes died from it. Nursing a mixture of typhus, diphtheria, scarlet fever, typhoid, cholera and smallpox was a dangerous occupation. This was pointed out to a town council committee on one occasion, but the doctor giving this warning was put in his place by being told that everyone knew infection was a risk any woman took when she elected to become a nurse. That was the common, callous view of the matter in mid-Victorian times. Not surprisingly, the hospital was unpopular with the public.

There was a strong conviction that cholera was most likely to enter Leith through infected sailors arriving from foreign ports. A wooden hut was erected at the end of the West pier where suspects could be taken for assessment, but Gilbert Archer, the sanitary inspector, reported in 1885 that this hut was quite unsuitable for its purpose. He demanded that the town council provide better accommodation at once. So No. 18 Coalhill was purchased and kept for a cholera emergency. It was known as the Cholera Hospital.

Even with the 1873 extension the accommodation at Leith Hospital was quite inadequate to serve the population, but funds were very hard to come by. Then in 1886 an important development took place. Dr Sophia Jex-Blake was then in the throes of her struggle to have some women accepted as medical students with the right to graduate. Some of the lecturers at Edinburgh would have nothing to do with her and her ideas, but others were prepared to run separate classes for women students. This was expensive, as there were very few female aspirants at that time. However, at her own expense Dr Jex-Blake arranged for separate lectures. She also bought the old building in Surgeon Square which had housed the medical school where Dr Robert Knox had lectured at the time of Burke and Hare. This now became the Edinburgh Medical School for Women. Just one problem remained, and the Directors of Leith Hospital received a letter from Dr Jex-Blake, pointing out that with the large number of students at Edinburgh it was impossible for women students to be admitted to the Infirmary Wards for clinical instruction. Would it be possible for the women students to be admitted to the wards at Leith? For such permission Dr Jex-Blake would guarantee 200 guineas yearly in fees. A long correspondence followed, but the students received a warm welcome, and Leith became a teaching hospital. A few years later, addressing the annual meeting of directors and subscribers, Dr Jex-Blake said: 'But for the co-operation of this hospital, it would have been impossible to establish a medical school for women in Edinburgh.'

The arrival of the students provided a much needed boost to the morale of the hospital, and kept the medical and nursing staff on their toes. Public support remained luke-warm, but the succession of generous individual donors continued, and in 1888-9 a second storey was added to the 1873 extension, bringing in two more wards, some accommodation for the staff, and an operating theatre.

The town council were at last persuaded to raise their annual subscription from £70 to £100, but they still maintained that the hospital was a charity, and therefore could not be a charge on council funds. In particular one council refused to make good the annual deficit on the hospital accounts. The directors pointed out that since the Public Health Act of 1867 responsibility for building and maintaining local hospitals was laid on the local authority, but the council turned a deaf ear. Three of the hospital directors were nominated by the town council, and these gentlemen were in an embarrassing position. They always claimed to be in sympathy with the directors, but as councillors they had no power to sway the majority in the council. Provost Henderson was most uncomfortable, for he was a doctor, and had worked in the hospital for many years. Finally, at the end of 1888 the council agreed to pay 3s a day for each patient in the hospital. This was fairly realistic, for the cost of food per patient per day was 1s 6d (7½p); hospital wages worked out at 1s (5p) per patient; coal and gas cost 3d per day; and even staff food could be included in the 3s (15p) per

day — £59.13.3 per bed per annum. But it was obvious that the situation would sooner or later reach a crisis unless the town council could be persuaded to change their antediluvian attitude to hospital costs. The agreement for 3s per day per patient was confined to infectious patients, and the agreement was limited to three years. The doctors wanted to see a separate hospital in the town for infectious disease, and pointed out that the Public Health Act laid responsibility for this provision squarely on the shoulders of the local authority.

The dam burst in March 1891. The post of M.O.H. was still a part-time one, and the incumbent then was Dr. J. Allan Gray. The year 1890 had started with an outbreak of scarlet fever, and this was followed by a serious epidemic of typhus. The most disturbing aspect of the situation, however, was that six of the hospital staff went down with typhus. Dr. Gray made his annual report to the meeting of directors and subscribers in March 1891, and what he said came without warning. He had been complaining about conditions in the hospital for a long time, and now he was justified by events. The directors at the annual meeting were very embarrassed, for this was a public meeting, with reporters taking everything down verbatim. Before the advent of radio and television the press had power and influence far beyond what remains to it today. Next day everyone in Leith could read all about it in column after column of close print in the *Leith Herald* and the *Leith Burghs Pilot*. So the directors issued a statement, pointing out that accommodation at the hospital was quite insufficient for the town's needs, and that they had long known that what was needed was a separate hospital for infectious disease in Leith.

The town rang with the scandal, and the town council at last realised that public opinion was casting them as the villains. Dr. Gray prepared a detailed report on the epidemics of the winter of 1889-90 and presented it to the Public Health committee of the town council. The council was already on the lookout for a suitable site on which to build a fever hospital, but events would not wait for them. Four months after the embarrassing report from the M.O.H. they paid £1,000 for a building in South Fort Street which had been erected in 1870 as a small school. With the 1872 Education Act introducing compulsory education, several new schools had been built in the town, and the South Fort Street building had become redundant. It was now rapidly converted to receive infectious cases, but it was quite inadequate for a town of 70,000 inhabitants.

Leith hospital directors now announced that they would refuse to admit any more infectious cases, but after a desperate plea from the town council they postponed the decision for a year — and a year later they relented again; but from 30th September 1893 all infectious cases were banned from Leith Hospital. By that time, far from having built a new hospital, all that the council had done was to make an extension to the South Fort Street building. And then, only a few weeks after the directors had finally put their foot down, a smallpox epidemic broke out in the port, and in something like panic a temporary wooden hospital was erected at the east end of the Links. Ironically this was the very site where wooden huts had been set up during the last and worst visitation of bubonic plague in 1645, for the accommodation of infected families while their homes were being fumigated. This wooden hospital remained on the Links for several years.

Not only was the town council at fault in having ignored the Public Health Act of 1867; there had much more recently been an Infectious Diseases (Notification) Act passed in 1889. This act was not mandatory, but it was badly needed in Leith. The act made it compulsory for all cases of infectious disease to be notified to the M.O.H. As things were, local doctors could only move on such cases as were made known to them. Again Leith Town Council did nothing. As one councillor naively put it: 'What could be done with all the cases that might be notified, since they did not even know how to cope with the cases they knew about already?' But there was now a new and very powerful voice in the town known as the School Board. Under pressure from that quarter the town council adopted the Infectious Diseases Act in 1894, and the first consequence was that a full-time M.O.H. had to be appointed and paid. Dr. (later Sir) Leslie Mackenzie was the first to hold this post in Leith.

The town was now in the ridiculous position of having accommodation for cases of infectious disease in the Burgh Hospital at King Street, at the Cholera Hospital on Coalhill, at South Fort Street, and on Leith Links, with all the consequent problems of finding and maintaining staff, catering, cleaning, heating, administering and funding — four times over: and the accommodation was nowhere near what was needed. At length a suitable site was found at East Pilton. On 11th September 1896 the East Pilton Fever Hospital was opened, and for the first time in its history Leith had facilities for the treatment of the sick that met the needs of the science and practice of the time.

The original hospital — Old House, or West House as it was indifferently called — was now closed for reconstruction. One unfortunate effect of the upheaval was that the arrangement with the Edinburgh School of Medicine for Women could not be continued; but the directors appointed Dr. Alice McLaren House Physician, and she was succeeded after six months by Dr. Alice Moorhead, so that the principle Sophia Jex-Blake had fought for was accepted in Leith.

The total capacity of the Hospital had been 93 beds. Under reconstruction this would be reduced to 86, but these would all be non-infectious cases. For the size of the population it was considered 153 beds were needed, but as the Infirmary was not so far away, 100 beds at Leith would probably be sufficient. The reconstruction provided for a third storey to be added to the West House for nurses' accommodation. The fever wards on the second floor would be converted to form two large wards. One curious anomaly about the hospital hitherto was that only seventeen beds had been available for women; this would now be increased to twenty-six beds.

The Humane Society's hot baths had disappeared by this time, but the Dispensary was very active, and very modern by the standards of the time. It was in the Dispensary that the charitable foundation of the whole enterprise was still emphasised, for the G.Ps in the town took turns to sit in the Dispensary for two hours every day, where they were assisted by two of the resident medical officers, and advised and prescribed for poor patients. Another medical officer visited patients at their homes and directed the district nurse. It was now that the old suspicion of the hospital passed away. Now that there was no danger of being infected while in hospital, there was a revolution in public feeling. The old suspicion was replaced by a new suspicion that some people who could well afford to pay for their own treatment were cadging free advice and treatment in hospital.

Money was more of a headache than ever. Modern equipment and facilities were expensive to maintain, and while the list of subscribers was far longer than formerly, the receipts were still too small. Workers in many firms now supported the hospital, but their weekly pennies and threepenny bits never amounted to enough. There was still a stream of donations for specific purposes — to endow beds, provide pieces of equipment, or earmarked for future building extensions. This was unspendable money — useless to pay bills for wages, fuel and food.

Queen Victoria's Diamond Jubilee was celebrated in 1897, and every town and city in the country seemed to have its own special celebration and memorial. A public meeting in Leith opted for an extension to the hospital. A target of £10,000 was mentioned, and in little more than six months more than half that sum had been subscribed. What form would the extension take? The doctors were clamouring for an anaesthetising room and for the introduction of Rontgen rays. Kitchen and laundry arrangements were inadequate, and the nurses' accommodation on the new third floor of the Old House left much to be desired. The town council were asked to sell the Burgh Hospital in King Street, now no longer needed, and the directors bought two tenements in that street adjacent to the hospital building, and also a strip of land on the other side of the street.

So many ideas were now mooted that the estimated cost was doubled to £20,000. Hospital services were now to be moved to the new ground on the east side of King Street, and here also were built the new nurses' and maids' quarters, together with a kitchen and laundry. A subway beneath King Street connected the two sides of the hospital.

The Jubilee extension was opened on 22nd May 1903, and this marked the beginning of the modern hospital. The telephone was introduced at a reduced annual rental of £5 by courtesy of the National Telephone Company. Electric light was installed. There were now fifty surgical beds, thirty-nine medical beds, seven gynaecological beds and four ophthalmic beds. The nursing staff stood at twenty-three, and the Lady Superintendent was relieved by the appointment of a night superintendent. There were five resident doctors, two of them women. There were also six visiting medical officers — practitioners from the town who gave their services gratis, visiting in the wards. Three more G.Ps served in the Dispensary, as already mentioned. Operations averaged over 360 in a year.

The cost of an extension worked out at £24,000, but this was paid without any trouble. The stream of wealthy local supporters flowed as strongly as ever, and the directors now had almost £50,000 invested. The day-to-day costs were the real worry. It took £6,500 a year to keep the hospital going, and contributions, added to income from investments, only reached about £2,000. It was a treasurer's nightmare. Everything was done to economise. Bed costs were still around £50 a year, compared with £60 at Edinburgh Infirmary, and £80 to £120 in the London hospitals.

In 1901 a very important gift was made to the hospital from the estate of the late James Currie the shipowner. The Currie family owned a convalescent home at Corstorphine, and six beds there were donated to Leith Hospital. Mrs Currie also announced that more beds would be made available as the needs of the hospital increased. This was a most welcome addition to the amenities of the hospital. Hitherto it had been very difficult making any arrangements for convalescent patients. When Mrs Currie died in 1919 she bequeathed the home to the hospital, together with £5,000 for maintenance. The demand for convalescent beds rose rapidly between the wars and in 1935 Miss Campbell Currie of Trinity Cottage donated a second house at Corstorphine, and Mrs James Currie of Larkfield bought and equipped 'Bellevue' as a convalescent home for children at North Berwick.

The directors called a public meeting in 1906 to try to correct the still prevailing view in the town that the hospital was a private charity run by the directors. G.Ps in the town were now able to use the hospital facilities for their patients at a reasonable charge, but it was high time the public understood that the hospital was now to develop as a public service. In the following year, 1907, Leith Hospital was reconstituted as an Incorporation under the provisions of the Companies Act, A Board of Managers now replaced the Directors, and on the Board were representatives of the Dock Commission, the Parish Council, the Town Council and the Clergy of Leith.

Hospital facilities were now such that local doctors were anxious to make use of them for their patients, paying for the privilege, and this brought in £200 for the hospital in 1908. But the most prolific source of new income was the 'Hospital Saturday Demonstration Committee' which organised a Saturday afternoon's sport on behalf of the hospital once a year. This was the precursor of the great Leith Hospital Pageants of the inter-war years. In 1908 also the South Leith Poorhouse, originally erected in 1850 only months before the hospital, moved to Seafield (the present Eastern General Hospital), and the hospital bought the vacant site at the instigation of the Very Rev. Dr. James Mitchell of South Leith Church. Dr. Mitchell had been chairman of the Board of Directors, and still presided over the Managers. He undertook to raise the necessary money himself, and he did so. The ground was simply bought to improve the immediate surroundings of the hospital, and this is now Taylor Gardens. 1908 also saw the formation of the Samaritan Society, which was largely composed of the wives of local doctors, hospital managers, businessmen and merchants who for generations had formed the loyal, supporting element in the population. The Samaritan Society pioneered an immense amount of work later undertaken by the almoners, and now by the medical social workers.

Lloyd George's National Insurance Bill came before Parliament in 1911, and caused the utmost consternation among the hospital managers. They foresaw disaster. As soon as the working man was compelled to pay insurance contributions he would stop giving to the hospital. Edmund Berry, chairman of the managers, thought differently. Men who were assured of sickness benefit would make no difficulty over supporting the hospital. He was right — and in any case the outbreak of the 1914 war soon transformed the scene.

The war years brought many problems, which there is no need to detail, as they were not peculiar to Leith Hospital. With immense pressure on hospitals around Edinburgh to take naval and military patients, the local authority in 1917 asked Leith Hospital to take over the care of children under the age of five. Leith's agreement to do this work was a decision of great and far-reaching importance, for the attention of both staff and management was drawn to the need for and scope for work with children. As soon as the war was over there was a movement to provide a Children's Ward at the hospital to continue the work begun in 1917, and in 1919 a donation of £110.10/- formed the nucleus of a proposed 'Children's Ward Scheme'. The idea of combining this Scheme with a war memorial for Leith seems to have been the inspiration of ex-Provost John A. Lindsay, the last Provost of Leith before the amalgamation with Edinburgh. The Scheme grew from providing a ward, to building a Children's Wing, and at the same time to reconstruct the Out-patient Department. At the same time the older parts of the building were seen to be in need of repair, and this was also attended to.

As always with Leith Hospital, collecting the capital was no problem at all. John Hope, a Leith business man who had gone to London, contributed £20,000 for the Children's Wing, and Thomas Cowan added to several previous liberal contributions by giving over £20,000 for the reconstruction of the out-patient department. The new Wing came into use in May 1926, and was officially opened the following January by Sir John Gilmour, the Scottish Secretary.

No hospital can afford to stand still, and when in the winter of 1928-29 Edinburgh Corporation began demolishing King Street, the hospital managers took the opportunity of buying more ground. This was said to be for purposes of amenity, but there was an outgoing argument among the managers over the need for extension. Some urged the need for new building, so that everyone in Leith could have hospital care when needed. King George's Semi-jubilee was celebrated in 1935, and a 'King's Jubilee Fund' was started to raise £60,000. Within a year the Committee had £50,000, but new and better ideas for the nurses' home led to delays while new plans were drawn. Building costs were rising, and the target had to be raised to £100,000. It was decided to complete the new nurses' quarters before going on with the rest of the scheme, but the Second World War broke out while the new building was only half completed. This was finally completed and opened — accommodation for nurses and maids — in 1941, and the rest of the plans were shelved. In 1943, there being no prospect of an early end to the war, the rest of the Scheme was abandoned, and the establishment of the National Health Service in 1947 brought in a new era of caring for the sick.

This was followed by a paper from Mr. Iain Macintyre, Surgeon at Leith Hospital, on a former surgeon at the hospital entitled:

#### SIR DAVID WILKIE (1882-1938)

In describing *the most distinguished* of the "old boys" of Leith Hospital, it is helpful to look firstly at the surgical stage of the time.

The Edinburgh Medical School had reached its zenith of world esteem between 1820-40. The latter half of the 19th century saw Edinburgh's influence eclipsed firstly by London and then by continental schools, particularly those in Germany and Austria.

In the 30 years till the turn of the century Lister was the only surgeon of world distinction associated with Edinburgh (and that for a brief 8 years). The advances of the time were made in the continental clinics of Langenbeck, Eshman, Volkman, Miculicz and of course Billroth.

Billroth has always been one of my surgical heroes. He was the father of abdominal surgery, pioneer of surgical audit, and yet his early ambition was not surgical but musical. Billroth was a gifted cellist whose parents with teutonic authority, instructed him instead to become a doctor. He became, arguably, the greatest surgeon of his generation. He was professor of surgery in Vienna, was a close friend of Johann Brahms . . . . . but I digress. Perhaps you will let me talk about Billroth another day.

With characteristic foresight he saw the immense value of Listerian antiseptics, and under his influence this was widely practised in Germany, whilst British surgeons remained sceptical about Lister's carbolic spray.

One who was not sceptical but was an ardent disciple of Lister and Listerian principles, was Francis Caird who became Professor of Surgery in Edinburgh in 1908. As a student Caird had been greatly impressed by Lister; as a young surgeon he had been equally impressed by the work of Billroth. Under Caird's influence abdominal surgery and antiseptics practice developed in Edinburgh.

Two of his assistants were to make even greater contributions. Both became respected international figures, both were knighted for services to surgery and both had long associations as surgeons of Leith Hospital.

Henry Wade was a son of the manse from Falkirk who graduated M.B. in 1898. After 4 years as Caird's assistant he was appointed assistant surgeon to Leith Hospital in 1908. Wade's great contribution was the establishment of urology as a speciality. Between 1913 and 1939 he published 35 papers on a variety of urological topics particularly on prostatic hyperplasia, on calculus disease, and on malignant disease of the bladder and kidney. He remained however, as our operation book shows, and by his own insistence, a general surgeon. Wade left Leith Hospital in 1925, and retired from the Royal Infirmary in 1939. He was knighted in 1946.

A contemporary and surgical colleague at Leith Hospital at the time was David Wilkie who was appointed to the hospital in 1910. His contribution to surgery was a major one. To appreciate the context and extent of his influence I would like firstly to take a look at surgical practice in Edinburgh at the turn of the century.

The Edinburgh School of Medicine could rightly be proud of its new Medical School opened in 1880. Across this pleasant and much frequented Middle Meadow Walk was the new Royal Infirmary.

By the way of aside it is fascinating to read of the background to the new Royal at a time when a new Royal Infirmary is again under discussion. There is more than a fleeting comparison. Let me quote from Comrie's "History of Scottish Medicine" written over 50 years ago.

"For a number of years it had become increasingly obvious that the old building which had been in use for 120 years was not in conformity with modern views on hospital requirements. In 1864 an architect reported that a new building was the only solution while in 1866 the surgeons complained of the ventilation and sanitary condition of the surgical hospital. Much discussion took place as to whether the new building should be erected on the old site in Infirmary Street or whether a new position on Lauriston Place should be chosen. For several years the battle of the sites went on and by 1869 additional ground had even been bought on the old site. Largely owing to the advocacy of Professor Syme it was decided that the new Infirmary should be built in Lauriston Place".

There are those who regard this as Syme's greatest contribution to Edinburgh Medicine. The parallel stops there because having obtained Parliamentary approval in 1870 the hospital was designed, built and commissioned in 9 years. The first patients were admitted in 1879.



In Edinburgh, as in the rest of the country, private practice was the main interest and goal of the surgeon. Hospital posts were unpaid or meagrely rewarded. Academic surgical research as we know it today simply did not exist. A Chair in Surgery was the embellishment of a successful surgical career rather than a career in itself.

Wilkie's appointment was to change all this. David Percival Dalbreck Wilkie ("D.P.D." to his friends) was born in 1882 in Kirriemuir the son of a wealthy Jute merchant. This tiny village had produced, a few years earlier, another son who was to become a literary great — J. M. Barrie. Barrie, 22 years Wilkie's senior, came from the same small village but from a very different background. Barrie was the ninth of ten children of a Weaver and the entire Barrie family occupied a three bedroom cottage. James Barrie left for subsequent literary fame in London when Wilkie was 3 years of age but in later life they were to become close friends. Barrie describes village life in "A Window in Thrums". For those whose Barrie is confined to "Peter Pan", "The admirable Crichton" or "Dear Brutus", "Thrums" is an uneasy insight into Scottish rural life of the time without the cold biting wind of Lewis Grassick Gibbon.

Wilkie's background was more akin to that of the Darling family in Peter Pan who you will recall lived in Kensington. Solidly and comfortably middle class. Wilkie went to Edinburgh Academy and looked back on his schooldays as happy ones. He graduated M.B. in 1904 and 5 years later had obtained two masters degrees and the Edinburgh F.R.C.S. After the customary continental tour of surgical clinics in Bonn, Berne and Vienna, he became assistant to Professor Caird, and in 1910 was appointed surgeon to Leith Hospital. At that time Leith was a bustling seaport and commercial centre. Fiercely independent — its burghers *did not* (and indeed *do not*) regard themselves as citizens of Edinburgh, but Leithers.

The surgical wing of the hospital — the Queen Victoria Jubilee extension — had been opened in 1903. The bright and airy surgical wards were built to the new "Nightingale" design. Wilkie came to a modern and busy surgical practice in 1910 with Wade and Struthers as his colleagues. Thus began a happy and productive association with the hospital. As Sir Charles Illingworth was later to observe, "Leith introduced him to the pleasures and responsibilities of an independent charge". This time saw the start of his contributions to the surgical literature. He wrote on peritonitis; on intestinal adhesions. He described stomal ulceration after gastroenterostomy; perhaps the most important of all he described clearly for the first time the pathogenesis of appendicitis — the classification into cattarrhal and obstructive types. He was the first to emphasise the dangers of obstructive appendicitis with its sequelae of gangrene and perforation if the disease was allowed to progress. He described with great clarity the various clinical features of the disease — a description still valid today.

Wilkie was not the first to describe the disease or the clinical features — Fritz and Treves had done that. The teaching of Treves, however, was that operation should be delayed until the fifth day of an attack unless the condition was resolving.

The most famous example of this treatment regimen and its potential hazards was that of King Edward VII. His coronation had been arranged for June 26th, 1902. On June 13th he developed abdominal pain, diagnosed by Sir Thomas Barlow and Sir Francis Laking as appendicitis (a fashionable new terminology) and, according to the then current practice, was treated conservatively. The King's condition did not improve and Sir Frederick Treves was summoned to attend on June 18th. By June 21st the abdominal swelling had increased in size and the King developed rigors. On the 24th June, 2 days before the coronation was to take place Lord Lister, then aged 75, was consulted and all agreed, 11 days after the diagnosis had been made, that operation was indicated. Treves drained the appendix abscess, the King recovered and was crowned on August 9th.

Wilkie's first paper on appendicitis, *written only 5 years* after what we would now regard as improper treatment, by the most eminent surgeons on the most eminent patients, set out the first clear account of the diagnosis and treatment which is in tune

with modern practice. His teaching, as set out in 1908, would serve as a model for today's surgical trainee — with the recent addition of antimicrobial prophylaxis, of which Wilkie would, I feel sure, be an ardent advocate.

His writings on appendicitis, as on other subjects, were not so much new thought as a drawing together, a consolidation, a ruthless analysis of confused concepts and their expression with logic and with clarity.

Wilkie differed from the average surgeon of his day in having no love for anatomical minutiae. He was first and foremost a clinician and a scientist — his publications describing the aetiology, pathology, clinical features and management of surgical disease — today accepted logic but then innovative. He wrote on gall stones, on cholecystitis, on carcinoma of the stomach. He described the syndrome of duodenal ileus which bears his eponym, recognising several different pathologies and postulating obstruction to the third part of the duodenum by the superior mesenteric artery.

Wilkie was called up in 1914 and served as a naval surgeon in the Hospital Ship St. Margaret of Scotland during the first World War. He returned after the war to hospital work, writing, and a growing private practice.

Professor Alexis Thomson resigned the Chair of Surgery in the autumn of 1923. Edinburgh saw the need for a full time Chair in surgery, the first in the United Kingdom apart from an unsuccessful London experiment. A grant from the Rockefeller Foundation made this possible and David Wilkie became the first incumbent.

On his arrival the Department of Surgery's facilities consisted only of a large lecture theatre and a tiny histology laboratory in the area above the anatomy department. Wilkie designed and had built laboratories, with animal theatre and x-ray facilities, a student museum, a reading room and demonstration room, a photographic department, and a library where workers met for informal discussion.

Whilst we would regard this today as basic for a university department it represented a very radical and innovative change in 1927. Wilkie's was the first department of surgical research outside the USA.

In 1938 an upper storey was added to the original building and was opened in 1938 by Walter Elliot. Another Scots literary connection was provided by the presence of Lord Tweedsmuir (formerly John Buchan).

"The Wilkie" was intended to create an atmosphere where surgical research and creative thinking would flourish — and it did. Wilkie drew around him a group of young men intensely loyal to him.

As visiting professor at Peter Brent Brigham University, Wilkie saw and liked the attitudes of discipline, criticism and forthrightness — and these he passed on to his pupils.

Wilkie had great personal charm and warmth and was a modest and courteous man. He operated with a calm, unhurried dexterity. He had a horror of bruised tissue and a contempt of mass ligatures and forced retraction — and what he called "carniverous surgery". Private practice brought him considerable wealth. Perhaps the childhood days in Thrums instilled into both Barrie and Wilkie a deep instinctive sympathy for those less fortunate. Barrie left all the Royalties from "Peter Pan" books and play in perpetuity to Great Ormond Street Childrens Hospital — surely one of the most generous acts of philanthropy ever.

David Wilkie was no less generous. In 1933 he bought the old Roxburgh Cinema in Drummond Street and after reconstruction presented it (as an anonymous gift) to the University Settlement as a centre for adult education. Appropriately this was opened by J. M. (now Sir James) Barrie. In 1935 he gifted Craigmillar College to that needy district providing adult education and child welfare.

Wilkie was knighted in 1936. The following year at the height of his career he suffered a haematemesis. No less than four barium meals failed to show a cause and he diagnosed his own gastric carcinoma felt when leaning against the operating table.

The lesion was inoperable and he died in 1938 aged 56.

Wilkie's memory is alive with his research department and Wilkie House. His influence is very much alive in our surgical practice today.

There was a slightly greater than usual feeling of nostalgia after these two papers as the considerable number of members present who had been associated with the hospital shared their reminiscences or wandered around looking at the old and the new.

### THE ONE HUNDRED AND FOURTEENTH ORDINARY MEETING

The One Hundred and Fourteenth Ordinary Meeting of the Society was held at Dingleton Hospital, Melrose on June 8th 1985, with 56 members or guests attending. Dr. Masson, in the chair, introduced Dr. Michael Barfoot who presented a paper on William Cullen, which was entitled:

#### "OLD SPASM" - THE MEDICAL THEORY AND PRACTICE OF WILLIAM CULLEN

William Cullen stands like a colossus across the straits which separate the 18th and the 19th century medical worlds. It is customary to regard him as the last in the line of great systematists stretching from Hoffman and Stahl to Boerhaave and his acolytes Van Swieten and Haller. To his 19th century successors who took the application of science to medicine and the reformation of the medical curriculum for granted, Cullen's views seemed absurdly egocentric and out of touch with later developments. Yet, if we examine the views of his former pupils, many of whom made the transition across the centuries, we find a different perspective upon "Old Spasm", as he was fondly nicknamed. Among them, he was almost universally venerated. Moreover, men such as William Hunter, Joseph Black, George Fordyce, Benjamin Rush, Gilbert Blane, John Bostock, Benjamin Bell, James Gregory and several others maintained this in spite of rejecting many, if not all, of the doctrines he taught and published upon. Instead of the unity of Cullen's thought, they were interested in something else. They were profoundly affected by an attitude towards medical theory and practice which Cullen professed and they strove to adopt. In their eyes, Cullen was really a cautious inductivist, a man who practiced what was called "the slow consenting academic doubt". In modern scholarship, the central question confronting Cullen studies is: how are we to resolve these conflicting historical images of Cullen? Is he to be regarded as a fanciful theorist and wanton systemiser; or cautious inductivist and mitigated sceptic?

To suggest some tentative answers to this question, it is necessary to place Cullen's life and writings in their 18th century Scottish context. Thus in the first part of my paper I will give a brief account of Cullen's life, education and career. This will serve as important background information for those less familiar with the man and his time. However, it also provides a useful introduction to the peculiar relationship found in the 18th century between medical careers, education and practice. Cullen's own circumstances exemplify the complexity of this relationship, about which there is still much to learn.

In the second part of my paper, I shall introduce you to some of the central texts which make up the Cullen archive. Once again instead of abstractly discussing the contents of his writings, I will put them into the pedagogical context, which governed the transmission of medical knowledge in the 18th century University of Edinburgh. In doing so, I will try to show how Cullen's "system", so-called, is actually something of an artefact, constructed in abstract from the corpus of his texts. If we take a

student's perspective upon this, it becomes clear that Cullen's views were actually received in installments, as he progressed through the hierarchy of University professorships. Moreover, the special laissez-faire structure of Edinburgh education meant that instead of an integrated systematic medical curriculum, students were exposed to a variety of subject components, each the academic property of the incumbent professional entrepreneur.

Finally, in the concluding part of my paper, I will try to put a little more flesh upon the special methodology and cognitive attitude by which Cullen persistently undermined and criticised his own stipulations and pronouncements as a medical writer and lecturer. This attitude of sceptical dogmatism, as it might be called, distinguishes Cullen's writings from those of his predecessors.

I begin, then, with a brief synopsis of Cullen's career, education and early medical practice. He was born in 1710, the second son of a small landowning family whose estate was near Hamilton in Lanarkshire. After duly attending the grammar school and the arts course in the University of Glasgow, Cullen became apprentice to John Paisley, a prominent medical practitioner in Glasgow. In this period, it was quite usual to attend college at any time between the ages of 12 and 16; and we find that Cullen had already served his apprenticeship by the time he was 19. In London, he then secured a position as ship's surgeon. After the voyage to the West Indies, Cullen then worked in an apothecary's shop in London. He finally returned to Hamilton around 1731 and, while still only 21, he began practising on the estate of one Captain Clelland, his naval patron in London.

Note that all Cullen's early medical training was eminently practical. Like so many other second sons of the lesser gentry and professional classes, he was trained for a medical career as the 18th century equivalent of a general practitioner, or surgeon apothecary as he was then known. However, fate in the form of his elder brother's death and a small unexpected legacy was to rescue Cullen from provincial obscurity. But once again, it was by a long arduous and remarkably diverse route. First, Cullen lived in the house of a dissenting English clergyman in order to improve his philosophical and literary education. He supplemented this by attending medical classes at Edinburgh University in the winters of 34-35 and 35-36. Then for the next 10 years, Cullen combined private study and public practice at Hamilton until he finally became an extra-mural teacher at Glasgow University.

There is nothing atypical about Cullen's ad hoc and highly unsystematic education. The surgeon-apothecary or 18th century G.P. fulfilled a multiplicity of roles, hence the usefulness of apprenticeship, naval service and drug shop experience. But note that by the time Cullen studied in Edinburgh, he was already over 25 and had very probably acquired an independence of thought on action which gave him a different perspective upon the Boerhaavian-based Edinburgh curriculum. Too little care has been paid to the ways in which university training interacted with more informal means of acquiring medical knowledge and experience. In the 18th century, men very often acquired their university medical education in installments, as and when they could afford it. They studied at quite different times in their careers, were highly selective in the courses they attended, and rarely took a degree from a university in which they had fulfilled all the official curricular requirements. Thus in Cullen's case, the importance of private study, book purchasing power and free access to private medical libraries, such as the one in the possession of his original teacher Paisley, must not be underestimated.

A further point about Cullen's early education and practice is that despite having to be an all-rounder, he showed a clear preference for medicine rather than surgery. This is evident in his relationship with William Hunter. When Hunter became Cullen's partner they divided their labours between medicine and surgery; and when Hunter left for fame and fortune in London, Cullen wasted no time in finding a surgeon substitute. Finally, although Cullen's early medical education was genuinely multifarious the one thing missing was the Continental tour. Whether this was for financial reasons or whatever is impossible to say. Nevertheless a visit to Paris or Leiden

could have given Cullen both practical experience of anatomical dissection and hospital surgery. And although Cullen probably attended Monro primus's anatomy class and possibly the newly founded Infirmary, opportunities for practical experience in these fields were severely limited in Edinburgh. In any event, Cullen's preference for medicine rather than surgery was signalled by taking an M.D. at Glasgow in 1740.

Cullen began his teaching career in 1746. His interests were reflected in the division of labour of medical teaching in Glasgow. He relied upon Mr. Carrick, a surgeon and assistant to the Glasgow Professor of Medicine, to teach anatomy. Cullen offered lectures in physiology and chemistry while both men shared the duties of botany and materia medica. Some of the notes of Cullen's early lectures have survived. From them, and the testimony of those who attended, it would appear that most of Cullen's views on the nervous system, fevers and humoral pathology were already sketched out. Thus we must be cautious about the proprietorial claims of Edinburgh and its Enlightenment to have spawned all Cullen's medical views. All the available evidence suggests he was an independent medical freethinker whom Edinburgh was able to entice and then claim as its own.

Cullen was drawn to Edinburgh by largely financial criteria. Despite making a success of his eventual professorship at Glasgow, and his growing reputation as a practitioner, his fees from both these activities were evidently insufficient. So in 1755, he became a candidate for the Chemistry chair after Plummer suffered a stroke. The politics of University chairs in the 18th century Scottish Universities were of labyrinthine complexity.

The crucial feature of the institutional arrangements in Edinburgh was that chairs were in the patronage of the Town Council who were lobbied by the various parties concerned. These ranged from the acting Secretary of State for Scotland and his local political manager, to the representations of existing members of the medical faculty. Cullen was elected by a whisker despite strong opposition from the professors themselves. In his first year Cullen had 17 students; in his second 59, rising to a maximum of 145, making chemistry second only in popularity to the Monro's anatomy class.

Whereas Cullen's professional colleagues feared he would be only too successful in acquiring a good slice of lucrative Edinburgh practice, privately Cullen had his doubts about this. Consequently, he almost immediately embarked upon shared courses of clinical lectures at the Infirmary. Professors enjoyed a unique economic relationship with the university and its students. The university provided little or no salary but the professors were entitled to charge two or usually three guineas per student. If the course was shared, so was the loot. Thus it was very much a per capita business and it encouraged professors to cast themselves as academic entrepreneurs, competing in the educational market place for students. Cullen's natural gifts as a teacher ensured his success. His range of competences meant he could act as substitute lecturer for materia medica in the 1760-61 session. All these factors coupled with his success as a clinician in the Infirmary made Cullen the ideal candidate for the vacant senior chair of the practice of medicine when Rutherford retired in 1766.

Once again, through the vagaries and vicissitudes of local incorporation politics, John Gregory from Aberdeen was elected, despite public student protests. It was only through the fortuitous death of Robert Whytt in the same year that Cullen was persuaded to accept the vacant Institutes or Theory of Medicine chair. However, persistent pressure from the student body finally encouraged John Gregory to give alternate courses with Cullen in theory and practice from 1768-1773. It was only with Gregory's death that Cullen finally attained sole possession of the practice chair which he held from '73 until his own in 1790. During the time he rose to the height of his reputation both as a medical educator and as a private practitioner in Scotland, and a corresponding consultant elsewhere in Britain. Moreover, the university expanded rapidly to become the foremost medical school in the English speaking world, due in some measure to Cullen's prominent position there.

Now that we have some idea of Cullen's life, education and career, this can provide a helpful orientation to his medical writings. With one exception, the sequence of Cullen's various publications corresponds exactly to the different stages of his career. For present purposes, Cullen's chemical work can be disregarded as he published very little. Unlike 18th century philosophical chemistry, *materia medica* was directly relevant to medicine and Cullen lectured on it in 1761. Despite the fact that he only gave one course, a pirated edition of these lectures appeared in 1771. Cullen took legal action to impound the unsold copies. But it took until 1789, the last year of his life before he produced an uncorrupted text. This was the *Treatise of the materia medica* and it is the only one of his publications which appeared out of sequence with his pedagogical duties as he ascended the professional hierarchy in Edinburgh.

While a clinical professor at the Infirmary, Cullen gave lectures for some 18 or so years. It was customary for students to copy lectures verbatim in conjunction with hospital reports drawn from the Infirmary's record books. Interestingly, during a period when the publication of clear accurate case histories was perceived as an important means of improving medical knowledge, Cullen published nothing on this. The task was left to colleagues such as Francis Home, James Hamilton and Andrew Duncan. This is an indication of Cullen's priorities. He was a pedagogue rather than a researcher and, in fact, made no new medical or scientific discoveries. He did not publish case histories because this aspect of medical education was already well institutionalised in Edinburgh. Students were encouraged to copy clinical reports and lectures and ideally, compare the two. However, the institutes of medicine course was in a quite different predicament. When Cullen began to teach medical theory, he looked around for a suitable text to facilitate pedagogical instruction. Dissatisfied with those then available, he set about writing his own. This resulted in the *Institutes of Medicine. Part 1 Physiology*. Cullen then used this text as a basis for his lectures. If we compare it with surviving lecture notes, it can be seen that the scrupulously numbered paragraphs of the *Physiology* formed the infra-structure of Cullen's lectures. He then gave discursive commentaries upon the contents of each paragraph, going into more or less detail as the need arose. Cullen was well aware that his pace during a course of lectures was a highly contingent matter. The text served to introduce the student to those subjects which, in his session, had to be compressed, abridged or omitted entirely. If we compare published text with the more discursive lecture notes, it's possible to see that Cullen was continually revising and qualifying his views.

The institutes of medicine comprised pathology and therapeutics as well as physiology. However, Cullen never produced what were to have been parts 2 and 3 of his theoretical compendium, although copies of student lecture notes have survived. Instead, Cullen published his *Synopsis Nosologiae Methodicae*. The work, originally published in Latin, emerged directly out of Cullen's perception of the need for clinical students to have an accessible classification of disease types. Once again, this was directly related to Cullen's activities as a clinical teacher. He was in effect making his own diagnostic classifications more publically available to students, giving as it were a natural history of disease types; or a sort of "I spy book" by which students could order the complex phenomena of disease they met with in the Infirmary. So equipped, students could relate their professor's typology and consequent practice as a model of exemplary diagnosis.

As I have already said, Cullen began giving courses in the Practice of Physic in 1768. After the *Nosology* in 1769, there was a gap of 7 years until Cullen began his classic, *First Lines of the Practice of Physic*. This went through several editions, the last being in 1784. In it, Cullen followed the ordering of disease first laid down in the *Nosology*. But whereas the *Nosology* was simply a series of short definitions of pathognomic symptoms, this text dealt with the whys and wherefores of practice. It was in effect, a theory of the practice of physic and, once again, its chief role was pedagogical. It formed the basis of Cullen's course which he gave from John Gregory's

death in 1773 until his own in 1790. Diseases were treated in the sequence of the *Nosology* and, once again, the text repaired any shortcomings of particular courses.

Of course it is perfectly possible to treat Cullen's texts in a more holistic and systematic way. If we abstract them from the sequence and pedagogical context of their production, it is possible to identify certain common themes. Foremost among these would be Cullen's overriding concern with the nervous system. Cullen is regarded as instrumental in directing medical theory away from a haemocentric Boerhaavian approach towards one that was cephalocentric. Cullen gave a central role to the brain and nervous system in physiological and pathological processes. So, for example, Cullen dismissed humoural physiology in its modernised and systemised Boerhaavian form. In its place he gave an account of the action of the nervous system and its role in the maintenance of life, sensation and motion. In pathology, he rejected the notion of disease as a process of concoction of morbid matters, followed by their elimination from the body by means of a crisis, which was the aim of therapy. Instead, Cullen emphasised the notions of nervous excitability and collapse. He identified the nervous system as the chief site of therapeutic action and developed further the ancient doctrine of the *vis medicatrix naturae*, or the body's natural healing power. This was regarded as a property of the nervous system. On the level of therapy, Cullen paid great attention to the role of stimulants and sedatives. He considered that the operation of remedies such as opium was through direct nervous transmission rather than blood transport to the brain. Finally, as a classifier of diseases, Cullen developed a nosology of pathognomic symptoms which gave pride of place to nervous disorders. By this Cullen understood not only neuroses so called, but all febrile diseases which also he regarded as disorders of the nervous system. Cullen's theory of fever explained the successive cold, hot and crisis stages of a fever according to a model of nervous action in which the *vis medicatrix nature* sought to take off the spasm of the blood vessels which occurred during the cold fits. Cullen conceptualised the debility suffered during fever as an indirect stimulant to the brain. This increased the activity of the heart. The increased blood supply to the peripheral vessels resulted in the hot stage and ultimately, a crisis by which the body eventually overcame the disease.

Thus, with the benefit of historical hindsight, the totality of Cullen's medical views can be understood. Thanks to the biography by John Thomson, a former pupil, and his edition of Cullen's *Works*, this is a feasible task. The latter is a particularly rich document because it interweaves remarks taken from Cullen's lectures with the published texts. Using these unpublished manuscripts of Cullen's lecture notes, it is possible to get some indication of both aspects of Cullen's work. Thus Cullen the text-maker can be revealingly contrasted with another Cullen who inhabited the lecture room. Here it was Cullen the text-breaker, whose critical commentaries upon his own texts supplied the sceptical inductive component of his thought. This went entirely unnoticed when, for example, Cullen's original texts were read and studied on the Continent.

Yet, I suggest, even this task is something of a rational reconstruction because it fails to look more closely at the actual pedagogical context of the production of Cullen's views. This can be illustrated by considering what might be called "the view from the students", or how they would have perceived Cullen's "system" as it unfolded between 1755 and 1790. If the *Treatise of the materia medica* is included, then no student or ex-student could have completed the task of understanding Cullen's complete oeuvre while the latter was actually alive. As students attended at various points in Cullen's professional career, they were exposed to different features of his views accordingly. Thus students before 1775 may have had the benefit of Cullen's diagnostic acumen as a clinical lecturer and learnt the theory of medicine from him in conjunction with the 1772 *Physiology* text. After 1768, when Cullen began to give alternate practice lectures with John Gregory, this was also a valuable addition. But note that Cullen's *First Lines* did not appear until 1776, that is, after he gave up both teaching in the Infirmary and the professorship of the institutes of medicine. So these students would have what their predecessors lacked, that is a text

to orientate themselves to Cullen's practical views. But they would lack what former students had, or the experience of Cullen as a clinical diagnostician and medical theorist in physiology, pathology and therapeutics.

From the viewpoint of the user or student audience then, Cullen's system appeared as a much more arbitrary and truncated body of knowledge. Admittedly, they could, to some degree, supplement the deficiencies by private study based on Cullen's published texts. But it must be emphasised that while attending a course or courses given by Cullen, many of them were also being taught other subjects on the 18th century Edinburgh curriculum by professors who were often hostile to Cullen's approach. Moreover, even when they were not, they nevertheless taught their respective subjects from a perspective quite inimical to Cullen's own. Thus in keeping with the diversity found in 18th century medical practice and careers, education even at a medical university such as Edinburgh, was something of a jungle rather than a Georgian landscaped garden. Students were exposed to a bewildering variety of medical ideas, expounded by professors who competed both with one another and for students' attention. It must always be remembered that Cullen's views, however much we choose to systematise them now, were developed and expounded in this kind of educational environment.

Clearly, this sketch of the 18th century Edinburgh medical context needs filling out. But it does provide an orientation to the problem with which I began. This was whether Cullen is to be regarded as a bold systematist or a cautious inductivist, or in 18th century terms, whether he was a dogmatist or an empiric? When asked about the value of his own doctrines Cullen is reported to have said they were merely "a tub to amuse the whale". In other words, they were something to entertain and occupy the student audience. However, Cullen actually had a very sophisticated view of the logic and methodology of medical inquiry which was, as ever, pedagogically orientated. Moreover, he professed these views throughout his career in Edinburgh, so students would have encountered them at whatever stage they were taught by him.

Cullen consistently argued that the claims of empiric and dogmatic medicine were equally unfounded. Experience was unreliable in piecemeal form; while theorising and system-building were senseless without a firm empirical basis. His view of the necessary interaction between experience and theory is one we now take for granted. Yet in its 18th century context it was most unusual. Cullen advocated that the only meaningful way to acquire medical knowledge was to experience medical reality through a writer's system. Only in this manner was it possible to avoid an atomistic acquisition of facts which were often inconsistent with one another. But once acquired, the system must itself be critically examined, supplemented and perhaps even superseded in the advent of new knowledge. In this way Cullen advocated a philosophy of medicine which emphasised a mitigated scepticism. It was mitigated because it acknowledged that men were constitutionally predisposed to classify, theorise and systemise; and to refrain from doing so, would result in a pyrrhonic scepticism of no utility whatever. Instead, men must temper the propensity to theorise with the lessons of experience and so bring their thought into line with the perceived order of nature. It was this dialectical method of theory and experience which underlay Cullen's attitude to medicine, which he reflexively applied to his own views. In this sense, Cullen encouraged his students to regard his opinions as contingently defeasible in the face of new evidence, but also pedagogically and methodologically necessary in order to acquire medical knowledge and experience.

It is clear then that when his 19th century critics perceived him as a systematist, or when his pupils remembered him as a cautious inductivist, they were responding to different aspects of Cullen's teaching. Cullen's system is not to be found in a coherent body of fixed doctrines. Instead it lay in a unified methodology of medical enquiry which was specifically geared to the peculiar teaching system in which Cullen found himself. It was Cullen's commitment to the slow consenting academic doubt which underwrote his personal vision of sceptical dogmatism and bound together his multifarious activities as an 18th century medical educator. Yet, like so many other



formalised medical doctrines, the demise of the author-expositor ossified what was once a living body of doctrine. And, without Cullen's guiding presence, his published views were quickly consigned to historical oblivion.

This paper was followed by one by Mr. Eric Gilmour on

## MUSIC AND MEDICINE

Mr. President, Ladies and Gentleman,

I am greatly honoured by your Society's invitation to address you today on the subject of Music and Medicine. My qualifications for so doing do not bear close scrutiny, but they do stem from a life-long love of music. And since music is the theme, my illustrations will be auditory rather than visual. As a result, the customary showing of slides in the dark will be replaced by musical interludes in the light. It remains to be seen whether the generally soporific effects of the former will be repeated by the latter, although the pre-prandial sherry and the excellent lunch we have had tend to vitiate a truly scientific, double blind comparison.

Music in its various forms is arguably the greatest single source of personal pleasure which can benefit mankind. For more than 3,000 years people have used music as a form of expression . . . . . to celebrate victories, Beethoven's 3rd symphony Eroica. To express sorrow. Here is part of Dido's infinitely sad lament in Purcell's 'Dido and Aeneas.'

Music's call to dance takes many forms. The invitation to the Waltz, the Scots fiddle, the Victor Sylvesters of a bygone age. Here is the modern Greek way so popular in countless tavernas.

And as an expression of worship, music has no equals. From plainsong to the glories of Bach and Handel. Millions sing this Christmas hymn each year.

The relationship between medicine and music is a fairly tenuous one — more a liaison than a marriage, or, to use one of Derrick Dunlop's unforgettable and felicitous phrases, a state of happy symbiosis.

There is a closer relationship between, say, religion and music, while mathematicians, in particular Pythagoras, did much to enunciate the theory of tuning.

But my remit is medicine and music, and I have chosen to examine the relationship of each to the other. With the time at my disposal I cannot but be selective, picking out particular facts which are of most interest to most people.

A mainly medical audience must, by its very nature be interested in the medical histories of notable musicians. It is a curious but unpalatable fact that all the great composers and conductors of the past were men . . . . . an unpardonable assertion in these days of so-called sexual equality. There is not a woman amongst them. Even today, with a few notable exceptions, the position remains the same. There has, however, been no shortage of female singers, dancers and instrumentalists. Indeed an opera without a woman would be a dull affair even if the physical attributes of some prima donnas belie their romantic role, and their stage deaths, invariably associated with a forced expiratory volume greatly in excess of most of us here, betray an awesome ignorance of impending mortality.

To return to composers . . . . . they were a mixed bunch. Many died young, at the height of their powers, Mozart, Chopin, Schumann, Schubert, Mendelssohn, Bizet, Weber all under 50, and to take this septet alone it is interesting, if futile, to speculate on what their output would have been if they had not been cut off in their prime.

At the other end of the scale there were many old men, amongst the most distinguished of whom were Bach, Handel, Scarlatti, Haydn, Palestrina, Rachmaninov, Wagner, Liszt, R. Strauss and the grandad of them all, Verdi, 88.

In between, and before reaching pensionable age, are Beethoven, Tchaikovsky, Donizetti and Mahler.

A detailed account of the illnesses and causes of death is out of place here, but some interesting facts and theories emerge. One of the most bizarre causes of death involved the French composer, Jean Baptiste Lully, (1632-1687) favourite of Louis XIV and founder of the "Academie Royale de Musique," later to become the Paris Opera. He was a prolific composer of ballets, opera and sacred music and introduced female dancers on to the stage.

But the performance of a *Te Deum*, composed to celebrate Louis XIV's recovery from illness led to his death. While beating time on the floor with a heavy stick, as was his wont, he struck his foot. An abscess resulted, and this was followed by fatal septicaemia.

Mozart fought continuously against poverty in spite of a prodigious output of new compositions. The overture to *Don Giovanni* was written the night before the first performance. The *Marriage of Figaro* performed in 1786, *Don Giovanni* 1787, *Così fan Tutti* 1790, the *Magic Flute* 1791. These works, although popular at the time, earned him poor financial gain principally because there was no protected copyright. The cause of his death is unclear. Some authorities suggest chronic pyelonephritis. Some think he was murdered, but he was so overworked that any acute illness could have proved fatal.

Chopin died of T.B. In one of his letters written in Palma he gives a vivid description of his examination by 3 doctors "the most celebrated on this island." "One of them sniffed at my spittle," he wrote. "Another tapped to find out where I spat it from, the third felt me listening how I spat." (Shades of Hutchison and Hunter, the houseman's erstwhile vademecum, where amphoric breathing, cracked pot sound, post tussive suction and myotatic irritability are fully described.)

"The first doctor said I was going to die, the second that I was dying, the third that I was dead already." The therapeutic nihilism of the time prescribed bleedings, vesicatories and pack sheets. In spite of all this he lived for another 11 years. The year before he died he visited Scotland. He had a poor opinion of the Scots and Scotswomen in particular. "They are kind and affectionate," he wrote, "but they bore me to death at times. In the end they will smother me with their amiability and I, also out of amiability, shall let them do it."

Tchaikovsky died of cholera when he was 53. He was shy and withdrawn as a child, sensitive to an abnormal degree and wholly dependent on his mother whose death when he was 4 affected him all his life. By nature a homosexual, he had a disastrous marriage which lasted two weeks after which he fled to Switzerland to recuperate. He was terrified of meeting people and suffered from insomnia and hallucinations one of which was that his head would fall off while he was conducting. That he achieved so much was due in part to the beneficence of a wealthy lady, Madame von Meck, who ardently admired his music and ensured his financial independence by giving him a large yearly allowance. The two of them corresponded regularly in an intimate and relaxed style, but on the two occasions which they met, they passed each other in embarrassed silence.

Schumann died in an asylum two years after throwing himself into the river Rhine in an abortive suicidal attempt. His marriage to Clara inspired some of his greatest works.

Clara was a virtuoso pianist whose skill he could not match. In an attempt to improve his technique he damaged permanently the 3rd finger of his right hand by fixing it with a gadget in a position of extension. He did this to improve the power and movement of the other fingers unaware of the fact that immobility for any length of time causes interphalangeal joints to become stiff and tendons to adhere.

Donizetti (1797-1848) who in a relatively short life of 51 years composed over 60 operas the best known of which are *Lucrezia Borgia*, *Lucia di Lammermoor* and *Don Pasquale*, also died insane. A letter by Verdi to a friend in Milan describes his condition well. "You ask me about Donizetti" he wrote. "Outwardly he looks well, except that he always hangs his head and keeps his eyes shut; he eats and sleeps well and hardly ever utters a word, when he does it is very indistinct. If anyone is

introduced to him he opens his eyes for a moment; if someone says to him, give me your hand, he hold it out, etc; this, it seems, is an indication that his understanding is not completely extinguished; for all that, a doctor who is a devoted friend of his told me that these symptoms are more in the way of mechanical reactions and that it would be better if he were animated, even raving mad. Then there would be some hope, but as things are, only a miracle could help." A year later he was dead.

Another victim of T.B. was Carl Maria von Weber (1786-1826) the composer of *Der Freischutz*, *Euranthe* and *Oberon*. Shortly before his death and already very ill he accepted a fee of £1,000 to produce *Oberon* and *Freischutz* at Covent Garden. In a letter to his wife from London dated 2 June 1826 he wrote "How I envy you all for your good appetites, but unfortunately I am still very much upset and exhausted. Dear God, I cannot wait until I am in the coach. If only Monday's *Freischutz* were behind me. But God will give me strength. Since yesterday I have had a vesicatory as big as one's hand on my chest. They say that it will get rid of the terrible breathlessness.

Beethoven, whose father was an alcoholic, was one of 3 surviving sons of the family. One of these, Karl, died of T.B., as did his mother a few years later. All his life Beethoven was obsessed by the fear that he was consumptive. But it is on his deafness that I wish to comment. Before he was 30 his hearing had deteriorated. In a letter to a friend dated 1 June 1800 he wrote, "You must know that the noblest part of me, my hearing, has greatly declined and is growing steadily worse. Whether it is curable remains to be seen. They say it is caused by the condition of my bowels. In this respect I am almost completely cured. As to whether my hearing will now improve as well, I indeed hope so, but faintly; such diseases are the most persistent."

This deafness affected his ability to conduct. A description given by a friend, a contemporary musician, Louis Spohr, of his conducting his 7th symphony reveals this enormous handicap.

"Beethoven's new composition" he wrote, "the symphony in A major (the 7th) gave exceptional pleasure. The wonderful 2nd movement was encored. The performance was quite masterly despite his hesitant and often comical conducting.

One could see quite clearly that the poor deaf master could no longer hear the piano (soft) passages in his music. This was particularly obvious in the latter half of the first allegro. Here there are two pauses in close succession, the second of them being followed by a pianissimo. Beethoven must have overlooked the fact for he began to beat time again before the orchestra had even come to this second pause. Thus he was already 10 or 12 bars ahead of the orchestra by the time they resumed playing . . . . . pianissimo of course. In order to indicate this pianissimo passage in his own way, Beethoven had crawled right underneath the music stand. During the crescendo that followed he came back into view, gradually straightening up, and at the moment when, by his reckoning, the forte was due to begin, he leapt into the air. As no forte came, he looked around him in alarm, stared at the orchestra in amazement because it was still playing pianissimo, and only found his place again when the long-expected forte began and he could hear it."

I am indebted to my friend, Freddie Birrell for the following comments on Beethoven's deafness. Several opinions, including his own, suggest that he had otosclerosis. "The strength of this reasoning" Dr Birrell states "largely comes from the fact that he placed a wooden drumstick against the piano and held the other end either against his forehead or between his teeth . . . . . thus hearing the notes by bone conduction which, in otosclerosis, is much better than air conduction."

The differential diagnosis includes syphilis and otitis media, but the latter was excluded by autopsy.

For a final comment on Beethoven's deafness I cannot do better than quote from a book by Maurice Sorsby called "Tenements of Clay" the medical biographies of famous people. "When at length Beethoven walked in eternal silence, there came to

him the mightiest of all cataracts of sound, for had not the gods given to him to hear and hand down the . . . . . 9th symphony.”

I will now comment briefly on the therapeutic use of music. For the moment I shall forget the past and come straight to the present and to a hospital environment with which I was not entirely unfamiliar . . . . . the operating theatre. In the Sunday Telegraph of 29 Jan. 1984 there appeared the following short article from which I quote. “The operating styles of surgeons vary a good deal” it said (a truism readily appreciated by your President, secretary and any other anaesthetists present). “It should be like a cathedral,” said one surgeon. Other surgeons chatter while they work to keep the atmosphere relaxed. (There is no reference to chattering anaesthetists). A fair proportion like to operate to music. Magdi Yacoub who performed Britain’s first heart-lung transplant favours Vivaldi’s four seasons, Professor Roy Calne does liver transplants to Schubert quintets. Donald Ross, now a veteran of over 100 open heart operations invariably works to a musical accompaniment. At one operation he started with Mozart’s 29th symphony. Then, as the operation became more difficult, he had Sinatra’s best hits, including “For once in my life I have someone who needs me.” The concert and the operation were brought to a rousing conclusion with ‘Land of Hope and Glory’. Another surgeon, Grant Williams, whose favourite piece is Beethoven’s violin concerto, gave up music in the theatre after his anaesthetist burst out one day during the Allegro “For God’s sake turn it off. I can’t help squeezing the bag in time to it.”

Not far from here, in Peel hospital, one of the orthopaedic surgeons replaces hips to music; classical for hips, jazz for hallux valgus. For myself I preferred silence, although as a raw registrar I could have used ‘Lead Kindly Light’.

In a recent short book on ‘Music and Medicine’ by the Australian surgeon Desmond O’Shaughnessy there is an example of the obverse side of this particular musical coin . . . . . a composition by the French composer Marin Marais (1656-1728). This unique piece, for bass viol harpsichord and continuo illustrates in musical terms, the dramatic operation of lithotomy. It starts with the patient’s panic when he beholds the surgeon’s armamentarium and describes in turn the embarrassed vulnerability in the lithotomy position, the agony of the incision, the forceful introduction of the forceps, the triumphant removal of the stone, the return to bed and the merrymaking that followed for all but the patient. Had I been the composer I would have added an optional cadenza to allow for the patient’s subsequent incontinence.

Much of today’s music, or musak, popular with a large non-sophisticated public seems to answer a craving for reassurance . . . . . the musical equivalent of diazepam, but with fewer side-effects. This syrupy blanc mange of notes is considered to be an essential marketing ploy by the proprietors of supermarkets, air-craft taking off and landing and restaurants of poor quality and less taste. It may have a calming effect on fear and tension and even act as an antacid while eating, but I find it obnoxious, irritating and an intrusion into my privacy. Nevertheless during the last war and subsequently, the use of music in factories, music while you work, proved that output was better with music than without, and it is a fact that cows yield more milk when music is being played. Nursing mothers take note.

In her introduction to a book on music therapy published in 1966 Juliette Alvin, a cellist of distinction and founder of the British Society for Music Therapy, states, “The power of music to heal or to harm, to relate to life or death, to youth or old age, to health or sickness has been recognised from time immemorial. Music therapy is the controlled use of music in the treatment, rehabilitation, education and training of children and adults suffering from physical, mental or emotional disorders.” This sounds like the therapeutic equivalent of the philosopher’s stone, the alchemist’s paregoric, the sovereign remedy for all ills.

Nevertheless in classical mythology the Greek God Apollo, in addition to his numerous affaires de coeur, was a god of music and of medicine. His influence was often invoked in cases of illness, although care had to be taken in the choice of music

for he was, like so many physicians then and now, jealous, vain and susceptible to flattery. Aesculapius prescribed music for emotionally disturbed people, Democritus in the 5th century B.C. recommended the flute as medicine for many illnesses, e.g. sciatica where the sound vibrations had the power to make the flesh palpitate and revive. In the high register the flute was very effective in sexual magic. For some it aroused passions, for others catharsis and for a select and privileged few, both. Music played on the zither was recommended during meals to help digestion, while Aristotle advocated the use of musical rattles as an outlet for the energy of destructive children who might otherwise smash the furniture.

Nearer our own time, 1737 to be exact, the musical equivalent of the bedtime story reached its apotheosis. Farinelli, the distinguished Italian castrato singer was famous for his soprano voice and enjoyed considerable success in his youth. Following a trip to Vienna in 1731, he changed his style of singing from the bravura to one of simplicity, sincerity and pathos. In 1737 he visited Madrid, at which time King Philip V was suffering from acute depression, refusing to take part in the affairs of state and sitting alone, dejected, unshaven, unkempt and withdrawn. The Queen, hearing of Farinelli's presence in the city, invited him to sing before her husband, hoping thereby to exorcise the gloomy spirit. This Farinelli did. And it came to pass that the King was greatly moved and in a spirit of uncharacteristic generosity asked Farinelli to choose his reward. Farinelli, with an eye to his own future and with considerable perspicacity, asked the king to shake off his bitter mood and resume his Royal duties.

To the relief and delight of Queen and singer, he did so, and to prevent a relapse occurring, Farinelli was thereupon employed as his personal singer. For the next ten years he sang the same 4 songs to the king each night. When the king died, his son Ferdinand VI founded an Opera house in Madrid with Farinelli as director. In 1761 he retired, complete with an A+ merit award and a lump sum of prodigious value and lived a life of gracious indulgence in Bologna until his death at the ripe old age of 77.

Christians have replaced the pagan gods by a legion of saints to be invoked in certain illnesses . . . . . St. Sebastian, plague, St. Lazarus, leprosy, St. Vitus, epilepsy, St. Blaisey, throat diseases. Hymns and music carry the sufferer's supplications for healing. This of course, does not prevent the patient from seeking the available human medical treatment, a sort of earthly second opinion, thus making the best of both worlds.

And so we come to our own time with our scientific concept of therapy firmly established, buttressed by the triple foundations of controlled trials, academically approved protocols and ethical committee permission.

To help me in my enquiries I asked Dr. Andrew Zealley, physician superintendent of the Royal Edinburgh Hospital and himself a singer in the Bach choir, for his views. Music therapy he told me is not used in any systematic way in his hospital. In his earlier days, while conducting research into the psychological aspect of bronchial asthma, he found that background music of a tranquil nature was demonstrably able to help patients to relax and so improve their respiratory function. His concluding remark that one man's musical meat is another man's musical poison effectively illustrates the difficulties of employing music therapy on a wider scale. Whereas the 'Art of Fugue' might be bliss to a baroque minded enthusiast, it could induce suicidal tendencies in a disciple of rock.

Perhaps I should leave the last work to that arch music critic with the rapier wit, G.B.S. On hearing for the first time a new work in 5 movements, he commented "on this occasion the conductor omitted 2 of the 5 movements. When he omits the remaining 3, my enjoyment of the work will be complete."

The musical talents of doctors constitute my brief final remarks. Lord Lytton said "genius does what it must, talent does what it can." Many of the composers I have mentioned deserve the title 'genius', but to excel in medicine and music both at the

same time is excessively rare. There are, however, many highly accomplished musical amateurs among doctors and a host of others to whom music is an intellectual relaxation. In a review of the obituary notices of the 1983 B.M.J. no fewer than 56 doctors out of a total of 432 had a recorded interest in music.

Included among these was H. A. Clegg, former Editor and a fine musician from an early age. J. I. Griffiths, E.N.T. surgeon, consultant at Covent Garden and chairman of the Philharmonia orchestra, who devised the Melba throat spray used by Dame Nellie Melba. Dr. O. Garrod, physician, loved listening to the Goldberg variations while wondering if Mrs Goldberg he had seen at the clinic that morning was related.

In Edinburgh, the ophthalmologist, the late Dr. E. H. Cameron was an accomplished organist. Iain Laing, at present a paediatric S.R. is an outstanding violinist. Andrew Shivas, tympanist, Lorna Young pianist, Iain McLaren and John Cook pipers. Dr. Havard, secretary of the B.M.A. and his doctor wife both sing in the London Bach choir. These names are but the tip of a medical musical iceberg, and although the analogy is somewhat chilly, it is the beauty and depth of the iceberg which is important.

As a surgeon I cannot omit one famous name, Theodor Billroth, Austrian surgeon and close friend, admirer and critic of Brahms. Initially he wished to become a musician, but eventually settled for medicine. "Music became my free love," he wrote, "I courted Medicine legitimately."

Billroth was in the same mould as distinguished surgeons of my younger days, men whose personality dominated the theatre, their wards and their hospital. When visiting Billroth's clinic in Vienna, George Crile the American surgeon described the daily ward round. "Promptly at 9 a.m. the wide doors of the clinic swung open and B. and his staff of 20 assistants made a grand entrance. Everything was organised. Each case had been studied. Billroth knew each detail."

It was he who in 1881 performed the first successful gastrectomy for carcinoma of the stomach. Admittedly the patient died four months later from metastases, but 100 years ago such an operation was a considerable achievement. Billroth was a competent pianist on whom Brahms relied for honest criticism and in whose house many of Brahms' compositions were first tried out.

Lastly, the practical side of the musical hobby must legitimately include the construction of a musical instrument. This can be an effective outlet for the digital itch of any doctor and perhaps more particularly for surgeons whose hands are a vital part of their life's work. In recent years the commercial sale of kits has greatly simplified the task. This spinet is made from such a kit, produced by the firm of Zuckermann in America. The spinnet is part of the harpsichord family, keyboard instruments whose strings are plucked rather than hit with a hammer. They reigned supreme from 1550-1750 but were then gradually superseded by the piano.

I do not intend going into the detailed construction save to say that the sound of the first tuneless note resembles the cry of the newborn. The musical obstetrician has delivered a new instrument with a life-span of several hundred years, a monument to its maker who, in time — honoured fashion has his name inscribed, preferably in Latin, above the keys.

And to show that it works, here is a short gavotte from the 5th French suite by J. S. Bach.

This meeting, with excellent contrasting papers, by a professional historian and a talented and enthusiastic amateur, brought to a satisfying end the 1984-85 session of the Society.

# The Scottish Society of the History of Medicine

---

## CONSTITUTION.

1. The Society shall be called "THE SCOTTISH SOCIETY OF THE HISTORY OF MEDICINE," and shall consist of those who desire to promote the study of the History of Medicine.

2. A General Meeting of Members shall be held once a year to receive a report and to elect Office-Bearers.

3. The management of the affairs of the Society shall be vested in the Office-Bearers, who shall include a President, one or more Vice-Presidents, a Secretary, a Treasurer, and not more than ten other Members to form a Council. The Council shall have power to co-opt other Members who, in their opinion, are fitted to render special service to the Society.

4. All Office-Bearers shall be elected annually. The President shall not hold office for more than three successive years, but shall be eligible to serve again after one year. Not more than eight Members of Council, or two-thirds of the total number, shall be eligible for immediate re-election.

5. The Annual Subscription shall be fixed from time to time by the Council and reported to members of the Society.

6. The Secretary shall keep brief Minutes of the proceedings, shall prepare Agenda, and shall conduct the correspondence of the Society.

7. Meetings shall be held at least twice yearly, and the place of meeting shall be in any of the four University centres, or elsewhere, as the Council may decide.

8. This Constitution may be amended at any General Meeting of the Society on twenty-one days' notice of the proposed amendment being given by the Secretary, such amendment to be included in the Agenda circulated for the Meeting.

5