

The
Scottish Society
of the
History of Medicine

(Founded April, 1948)

REPORT OF
PROCEEDINGS

SESSION 1967 - 68; 1968 - 69

SCOTTISH SOCIETY OF THE HISTORY OF MEDICINE

Owing to the increasing costs of production of this Report of Proceedings, future issues will only be sent to non-members of the Society, libraries, societies, etc, who indicate their desire to remain on the mailing list by completing and returning the attached slip as soon as possible.

SCOTTISH SOCIETY OF THE HISTORY OF MEDICINE

I/we desire to remain on the mailing list for receipt of the Annual Report of Proceedings of the Society.

Name.....

Library, society, (where applicable).....

Address.....

Date.....

To:

Dr. H. P. TAIT,
Joint Hon. Secy.,
Scottish Society of the History of Medicine,
"St. Anne's",
59 Woodhall Road,
Edinburgh, EH13 0HF,
Scotland, U.K.

The Scottish Society
of the
History of Medicine

(Founded April, 1948)

Report of Proceedings

CONTENTS

Introduction

Obituary Notices

Personal

Medico-Historical and Other Notes.

Book and Other Notices.

Acknowledgments

Papers

(a) James Blake (1814-1893)—A Pioneering Chemist and Pharmacologist.

(b) Technology and Medicine—The Lessons of History.

(c) Napoleon and the Doctors.

(d) Symposium on the Museum of the Royal College of Surgeons of Edinburgh.

(e) Diseases in Ancient Societies.

(f) An Artist's View of early 18th Century Medicine.

Appendix A—List of Members of the Society.

SESSION 1967-68; 1968-69

The Scottish Society of the History of Medicine.

- Honorary President* Dr. DOUGLAS GUTHRIE
- President* - - Dr. M. H. ARMSTRONG DAVISON
- Vice-Presidents* - Mr. THOMAS GIBSON
Professor NORMAN M. DOTT
- Hon. Secretaries* - Dr. H. P. TAIT, 59 Woodhall Road, Edinburgh, EH13 0HF.
Tel.: Edin. 031 - 441 1539
Dr A. H. B. MASSON, 13 Osborne Terrace, Edin., EH12 5HG.
Tel.: 031 - 337 5686
- Hon. Treasurer* - Dr. W. A. ALEXANDER, 9 Randolph Crescent,
Edinburgh, 3
- Council* - - Dr. J. M. A. LENIHAN retiresby rotation, 1969
Dr. E. R. C. WALKER ,, 1969
Dr. A. ALLAN BELL ,, 1969
Professor J. BOYES ,, 1970
Dr. G. D. FORWELL ,, 1970
Dr. A. T. SANDISON ,, 1971
Dr. IAN A. PORTER ,, 1971
Mr. CHARLES G. DRUMMOND ,, 1971
- THE SENIOR PRESIDENT,
ROYAL MEDICAL SOCIETY (ex officio).



Dr. W. A. Alexander, F.R.C.P. Edin.
Honorary Treasurer

The Scottish Society of the History of Medicine

REPORT OF PROCEEDINGS

Sessions 1967-68, 68-69

An apology is due to members for the non-appearance of the Report of Proceedings of the Society for session 1967-68. This failure to put on record the activities of the Society during that session was due to the absence abroad of the Honorary Secretary responsible for compiling the Report and it is earnestly hoped that members will accept this explanation and apology. An attempt will be made, however, in this Report to complete an account of the appropriate events as they took place that year.

The Fifty-sixth Meeting of the Society was held in Edinburgh on 26th August, 1967, when an address was given by Dr. Chauncey D. Leake of San Francisco. It was unfortunate that this meeting was held during a holiday month which accounted for the lower than usual attendance but the opportunity to hear Dr. Leake was too good to be missed and those who were able to be present were amply rewarded by a racy account of Dr. James Blake, a "Gold Rush Doc".

The Fifty-seventh meeting and Nineteenth Annual General Meeting was held in Glasgow on 23rd February, 1968, when Dr. J. M. A. Lenihan read a paper on Technology and Medicine. The Fifty-eighth Meeting was held in Stirling on 29th June, 1968, when Major-General F. M. Richardson gave an account of Napoleon and his Doctors which held his audience spellbound. The Fifty-ninth Meeting and Twentieth Annual General Meeting was held in Edinburgh on 2nd November, 1968, when Professor D. E. C. Mekie, Messrs J. A. Ross and A. A. Gunn, and Dr. A. A. Shivas presented papers on different aspects of the Museum of the Royal College of Surgeons of Edinburgh. The Sixtieth Meeting took place in Glasgow on 28th February, 1969, when Dr. A. T. Sandison spoke on Diseases in Ancient Societies and illustrated his remarks with many slides. The Sixty-first Meeting was held in Newcastle-upon-Tyne on 28th June, 1969, when Dr. Armstrong Davison spoke on An Artist's View of early 18th Century Medicine, a characteristic contribution on William Hogarth by our recently elected President.

Dr. L. F. Howitt, joint Honorary Secretary, resigned at the Annual General Meeting in February, 1968, and after a short interregnum, Dr. A. H. B. Masson was elected to succeed Dr. Howitt. Our thanks are accorded to Dr. Howitt for his work for the Society during the relatively short period he was in office, and a warm welcome is extended to Dr. Masson who, we hope, will have a long and successful secretaryship.

OBITUARY NOTICES

It is with deep regret that we have to record the deaths of two of our members during the period under review. Lieut-Colonel John Cunningham died at his home in Edinburgh on 6th August, 1968, at the age of 87 years. He was the eldest son of the distinguished anatomist, Professor D. J. Cunningham, and was born in Edinburgh in 1881. Col. Cunningham was a former Director of the Pasteur Institute of India and medical superintendent of the Astley Ainslie Hospital, Edinburgh, in which institution he had an abiding interest. One of the earliest members of the Society, he was a warm

supporter of its activities and a regular attender at meetings until advancing years prevented his coming.

Dr. R. Gordon Walker died in the Royal Infirmary, Edinburgh, on 10th April, 1969, at the early age of 38 years. One of the younger members of our Society, he was a keen and regular supporter of our meetings and a young man with a most promising future.

To the families of these two gentlemen we extend warm and sincere sympathy.

It is appropriate that reference should be made here to the death of Sir Arthur Salusbury MacNalty, former Chief Medical Officer to the Ministry of Health and successor to Sir George Newman in that position. As a medical historian Sir Arthur was well known and published many books, lectures and articles as well as being editor of the official Medical History of the War (1939-45) series. Sir Arthur took a real interest in our activities and many of us remember his presence among us as our guest when we visited Linlithgow some years ago and listened to Dr. Armstrong Davison's paper on Mary Queen of Scots and her husbands, a subject in which Sir Arthur had been long interested.

PERSONAL

Our Honorary President, Dr. Douglas Guthrie, has had a busy two years. As President of the British Society for the History of Medicine he delivered an inaugural address at the Sixth British Congress on the History of Medicine and Pharmacy at the University of Sussex in the autumn of 1967. On the occasion of the Boerhaave Commemoration of 1968, he received from the University of Leiden a Boerhaave Bronze Medal, "as a reward for outstanding merits in the field of the history of medicine." The medal, so Dr. Guthrie tells us, shows the Good Samaritan and his ass on one side and the head of Herman Boerhaave on the other. His pen, too, has not been inactive for he has contributed a brief review of the life of Dr. John Leyden of Denholm, described by Sir Walter Scott, as "a star of the first magnitude", (*University of Edinburgh Journal*, 1967, 23, 161), and a paper on the Aesculapian Club of Edinburgh (*Ibid*, 245). Dr. Guthrie was also, of course, elected an Honorary Fellow of the Royal Society of Medicine and awarded the honorary degree of D.Litt. by his Alma Mater during 1967-68.

Professor Adam Patrick was unanimously elected an Honorary Member of the Society at its Annual General Meeting in November, 1968, in recognition of his eminence as a physician and as a most distinguished and erudite President of the Society for three years, as well as serving the Society well as member of Council over many years. Professor Patrick has now gone to live at Rugby but maintains an active correspondence with us and retains a deep personal interest in the Society.

Professor Norman M. Dott, President of the Society from 1966 demitted office at the Annual General Meeting in November, 1968. He was elected an Honorary Fellow of the Royal Society of Medicine in July, 1968, an Honorary Fellow of the American College of Surgeons in October of the same year and during his North American trip was invited by the Congress of Neurological Surgeons to be their "Honoured Guest" at its Annual Meeting in Toronto. In July, 1969, he received the Honorary M.D. Degree from his Alma Mater. In May 1966, he delivered the third Hugh Cairns Memorial Lecture and in December, 1967, gave an oration on the life and work of Egas Moniz in Lisbon.

Another senior member of the Society, Dr. J. Menzies Campbell was also honoured during the period under review. In December, 1968, he completed fifty years as a Fellow of the Royal Society of Edinburgh and

felicitations were extended to him on his jubilee by the President, Council and Fellows of the Royal Society. His pen never seems to be at rest and the following are but a few of his literary contributions to the literature on the history of dental surgery: They thought of it first (*Dental Delineator*, 1967, Spring and Summer numbers, pp. 13-15; 11-13); Stamping dentures (*Dental Practitioner*, 1967, December, p. 133); Interchangeable dental forceps (*British Dental Journal*, 1967, December, p. 596); The making of a dentist (*Dental Delineator*, 1968, Spring and Autumn numbers, 14-20; 18-21); Dentists notable in other spheres (*British Dental Journal*, 1968, August, p. 122); General Dental Council (*Ibid*, 1968, December, p. 479); and Evading dentists' bills (*Journal of the Canadian Dental Association*, 1968, October, p. 543).

Professor John Craig, Professor Emeritus of Child Health at Aberdeen University wrote a charming short history of the Royal Aberdeen Hospital for Sick Children (1968), which was published by the Board of Management for the Aberdeen Special Hospitals.

Professor Emeritus W. J. Brownlow Riddell wrote a brief history of the Glasgow Ophthalmic Institution, 1868-1968 (1968), a booklet which contains some excellent photographs.

Dr. W. N. Boog Watson contributed several essays during the two sessions and these included: Sir John Murray—a chronic student (*University of Edinburgh Journal*, 1967, Autumn number, p. 123); The first eight ladies (*Ibid*, 1968, Spring number, p. 227); Alexander Brodie and his fire-hearths for ships (*The Mariner's Mirror*, 1968, 54, 409); The Scottish Marine Station for scientific research, Granton, 1884-1903 (*Book of Old Edinburgh Club*); The Guinea Trade and some of its surgeons: with special reference to the Royal College of Surgeons of Edinburgh (*Journal of the Royal College of Surgeons of Edinburgh*, 1969, 14, 203); Two British Naval Surgeons of the French Wars (*Medical History*, 1969, 13, 213).

Dr. R. M. McGregor, a former councillor, and one of our Border members, was honoured by his patients and friends when he retired from practice at Hawick in May, 1969, after 34 years of service to that community. He is also the author of a book, *The Work of a Family Doctor* (1969), which records in meticulous fashion his work in general practice. Dr. McGregor deserves to be congratulated not only on the public recognition of his work as a doctor but as the author of a book which has been so widely acclaimed in the medical press.

Our only pharmaceutical chemist member, Mr. C. G. Drummond has published his delightful address to an Evening Meeting of the Pharmaceutical Society, Scottish Branch, on Pharmacy and Medicine in Victorian Edinburgh (*Pharmaceutical Journal*, 1968, February, p. 178).

Dr. W. P. D. Wightman has tendered his resignation from the Society on his retiral from Aberdeen and his departure to England. We will miss him very much and especially when we go to Aberdeen where his friendly greetings were much appreciated. We wish him a long and healthful retirement.

Dr. A. T. Sandison, in addition to being joint editor of a monumental and profusely illustrated *Disease in Antiquity* (1967), has also contributed several essays, viz., Sir Marc Armand Ruffer, 1859-1917, pioneer of paleopathology (*Medical History*, 1967, 11, 150); The last illness of Herod the Great, King of Judea (*Ibid*, 1967, 11, 381); Pathological changes in the skeletons of earlier populations due to acquired disease, and difficulties in their interpretations (*Skeletal Biology of Earlier Human Populations*, 1968, vol. 8, *Society for the Study of Human Biology*, p. 205).

Dr. Martin M. Whittet, our sole member in Inverness, the capital of the north, has written in characteristic vein a paper on Medical Resources of the Forty-five (*Transactions of the Gaelic Society of Inverness*, Vol. 44).

Congratulations are extended to Dr. J. M. A. Lenihan who was awarded the O.B.E. in the 1969 New Year's Honours List. We wish him a speedy recovery from his recent illness.

Dr. A. H. B. Masson has, like our President, a particular interest in the history of anaesthesia and his Facts and Fancies from the early days of anaesthesia (*British Journal of Anaesthesia*, 1967, 39, 827), written with his colleague, Dr. B. C. Hovell, was revealing! Of special interest to members of the Society, particularly those from Edinburgh, is The History of Anaesthesia in Edinburgh by two colleagues of Dr. Masson, Drs. Hovell and James Wilson (*Journal of the Royal College of Surgeons of Edinburgh*, 1969, 14, 107-116; 165-179).

Dr. Kenneth D. Keele, the first Douglas Guthrie Lecturer on the History of Medicine had his paper, Cybernetic aspects of medical history, based on that lecture, subsequently published (*Scottish Medical Journal*, 1967, 12, 256).

Dr. H. P. Tait, Joint Honorary Secretary, contributed a short article to *Health* (1969, 6, 25) on his experiences in Baroda, Gujarat, India, where he spent almost a year on a W.H.O. medical educational project.

MEDICO-HISTORICAL AND OTHER NOTES

During the winter of 1966 an architectural exhibition was open at the Scottish Hospital Centre, Edinburgh, where some 40 projects were displayed. These projects were confined to those hospitals actually being built or in the late stages of planning and in total represented a capital expenditure of around £80 million. The exhibition revealed that Scotland was well in the forefront of the development of hospital design. An illustrated article dealing with some of the projects on view appeared in the *British Hospital Journal and Social Service Review* (1966, 76, 2083) and should prove helpful to those who wish to keep abreast of modern hospital developments in Scotland.

One hundred years ago, on 23rd June, 1867, the death occurred of the great French clinician and teacher of therapeutics, Armand Trousseau. He is best remembered for his three-volume work, *Clinique medicale de l'Hotel-Dieu de Paris* published in 1856, and subsequently translated into several languages including an English edition. He died from a gastric carcinoma and was buried at Pere-Lachaise where a simple stone over the grave bears the inscription:

"TROUSSEAU
23 Juin 1867."

Two hundred years ago on 10th July, 1767, Alexander Monro, *primus*, professor of physic and anatomy at Edinburgh University died at his home in his seventieth year. He was described by Struthers as "a great and good man, he well earned the title of father of the Edinburgh Medical School." It was reported that at his first lecture as professor of anatomy at Edinburgh the Lord Provost and magistrates, leading physicians and surgeons of the city and numerous medical students were present and so disconcerted the young professor that he entirely forgot his discourse but recovering his composure rapidly he delivered an extemporaneous lecture with great success (Guthrie).

From 16th August to 28th August, 1867, the first International Medical Congress was held in Paris. The British Medical Association and the Medical Society of London were apparently the only official British organisa-

tions to be represented at this first Congress although several individuals attended from Britain in a private capacity.

One of the early men-midwives of Scotland, Dr. Andrew Skene of Aberdeen died there on 24th August, 1767, aged 65 years. It will be recalled that kirk sessions in the north-east of Scotland were wont to send women to Dr. Skene for instruction in midwifery on condition that they remained in the parish after receiving their courses of training and attended to the women of the parish when in childbirth.

In September, 1967, the World Medical Association held its twenty-first General Assembly in Madrid when delegations from 32 national member associations attended. Among the many subjects discussed were the population explosion and family planning, medical ethics, and medical education.

A great epidemiologist, William Budd, was remembered on 16th October, 1967, when the President of the British Medical Association unveiled a plaque to his memory at George's Bookshop, Bristol, the house where Budd lived from 1853 to 1855. The inscription on the memorial tablet reads:

William
Budd
1811-1880.
Physician &
Epidemiologist.
Pioneer in the
isolation of
Infectious Diseases
Lived here
1853-1855.

“On the 26th October, 1767, the foundation stone of the first house in the New Town of Edinburgh was laid by Mr. James Craig, architect, the gentleman to whom the premium was given for designing the best plan of the town, and the building of that and other houses is going on.” So ran the notice in a local Edinburgh newspaper, and to celebrate the bicentenary of the building of the New Town, an exhibition was held in the Waverley Market, Edinburgh, from 16th August to 16th September, 1967. A beautifully illustrated souvenir publication—Two Hundred Summers in a City: Edinburgh 1767-1967—was produced for the occasion illustrating the landmarks in the city's development over the past two hundred years. Several more specialised exhibitions dealing with particular aspects of the city's expansion over the two centuries were held in other premises simultaneously with the main exhibition.

In October, 1767, Sir George Baker's *An essay concerning the cause of the endemial colic of Devonshire* was published by Dodsley, London. This essay had previously been read in the theatre of the College of Physicians in London on the 29th June, 1767, by Baker. It will be recalled that this *Essay* showed that the colic was due to lead poisoning arising from the lead pipes of the cider presses.

The first legislative measure of its kind in Britain, the much debated and controversial Abortion Act, received the royal assent on 27th October, 1967, and became operative from 27th April, 1968.

The Lister Institute of Postgraduate Medical Education and Research was opened in Edinburgh in mid-November, 1967. The Institute provides teaching accommodation and completes the development of the post-graduate education centre in the city, the first stage having been the building of the Pfizer Foundation building in July, 1965.

With the departure of the Aberdeen Medico-Chirurgical Society from its hall in the heart of the city to Foresterhill where the hospitals and medical school are situated, it became necessary, however regretfully, to sell part of the library of this honourable society. Consequently, on 13th and 14th November, 1967, a valuable collection of medical books, including Jenner's *Variolae Vaccinae* (1798), James Lind's *Treatise of the Scurvy* (1753), to mention but two books, landmarks in the history of medicine, came under the auctioneer's hammer at Messrs Sotheby, London.

On 7th November, 1867, Marie Curie-Sklodowska was born in Warsaw, Poland. She was twice a winner of the Nobel Prize, for physics in 1903 and for chemistry in 1911. The biography by her daughter will remain a classic of its kind, revealing as it did the difficulties which were surmounted by this talented and gifted woman and her husband.

A bacteriologist and hygienist, Gustav Giemsa, was born a hundred years ago, on 20th November, 1867. Not only did he invent the stain known by his name but he was also a distinguished worker in the field of chemotherapy, and studied methods of deratting of ships, extermination of mosquitoes, etc.

To celebrate the 350th anniversary of the foundation of the Worshipful Society of Apothecaries of London, a symposium was held by the Faculty of the History of Medicine and Pharmacy of the Society at St. Bartholomew's Hospital on 5th December, 1967. Coinciding with the anniversary, Dr. W. S. C. Copeman, a past Master of the Apothecaries, published his *History of the Worshipful Society of Apothecaries*.

The diamond jubilee of the Medical Insurance Agency was commemorated by a dinner held in the Great Hall at B.M.A. House, London, on 14th December, 1967. It was surprising to read that the Agency had contributed over £600,000 to various charities over the sixty years of its existence.

In December, 1967, it was announced that the Universities of St. Andrews and Manchester had agreed to co-operate in medical education, the scheme being operated through the agency of a liaison committee with representatives from the two universities. From 1973 onwards the enlarged clinical school at Manchester will draw its students from the preclinical schools of both St. Andrews and Manchester. Students at St. Andrews will study for three years in the Faculty of Science there on an extended preclinical course and will take a B.Sc. degree or B.Sc. (Hons.) after four years. Those wishing to qualify in medicine will then be able to go on to Manchester for three further years leading to the M.B., Ch.B. degree.

History was made on 3rd December, 1967, when at the Groote Schuur Hospital, Cape Town, South Africa, a human heart was transplanted, apparently successfully, into another human being. The patient, Louis Washkansky received the heart of a car-accident victim Denise Darvell, and survived until 21st December when he died from pneumonia. In the same hospital, on 2nd January, 1968, Dr. Philip Blaiberg, a Cape Town dentist, received the heart of Clive Haupt, a 24-year-old coloured machine operator. Blaiberg's subsequent history has been widely reported in the lay press and he himself has written of his experiences in a book, *Looking at my Heart* (1969). On 3rd May, 1968, the first British heart transplant took place at the National Heart Hospital, London, but the patient succumbed on 17th June. The second British heart transplant was performed at the same hospital on 26th July, 1968, but the patient died two days later. The first European lung transplant performed at the Royal Infirmary, Edinburgh took place on a 15-year-old boy, Alexander Smith, on 15th May, 1968, the patient surviving for 13 days after the operation. On 4th April, 1969, the first implantation of an artificial heart into a human being was carried out at

Houston, Texas. The patient was kept alive with this heart for 64 hours before he received a natural heart transplant but he died the day following the second transplant.

Two hundred years ago, in December, 1767, the works of Dr. Robert Whytt, professor of medicine at Edinburgh University, were published posthumously by his son. This was a complete edition of the distinguished physician's works and included his Observations on the dropsy in the brain, the first published description of tuberculous meningitis.

In the first number of the *British Medical Journal* for 1968, Drs. Macalpine, Hunter and Rimington presented a study of porphyria in the royal houses of Stuart, Hanover and Prussia in which proof is brought forward that George III's illness was porphyria and not primarily a mental disease which had been accepted till the appearance of this paper, although Macalpine and Hunter had suggested such a diagnosis in a previous paper in 1966. Since porphyria is a hereditary disease, the three authors have traced it back to Mary Queen of Scots right through to the present day, covering a period of some four hundred years. These articles, together with essays by John Brooke and Abe Goldberg, were subsequently published in book form by the *British Medical Journal*, and entitled *Porphyria—A Royal Malady* (1968).

In January, 1768, in a memorial relating to the University of Edinburgh, with a proposal "to rebuild the fabrick of the University, according to a regular plan, and in a decent manner . . ." the following reference to the teaching of medicine at the University occurred:

"The complete course of Medical education which it affords, more complete, it is believed, than is to be found in any other university in Europe, aided too by a great Infirmary just adjacent to it, where clinical lectures are given by the Professors of Medicine upon the cases of the patients, is one great cause of the concourse of so many students from all the parts of Great Britain, from Ireland, America, the West Indies, and even from distant parts of Europe, to this seat of learning." A subscription list was opened in March, 1768, and in due course the present Old University College was built.

On 31st January, 1968, the Nuffield Transplantation Surgery Unit was opened at the Western General Hospital, Edinburgh. The unit, with accommodation for six patients, was designed for patients receiving organ transplants, those suffering from malignant disease and receiving treatment which rendered them susceptible to infection, and for patients with certain types of autoimmune disease. The unit is linked with the radiotherapy department of the hospital.

A well known Edinburgh physician, Dr. Alexander Wood prepared a report on the condition of the Poorer Classes in Edinburgh which so stimulated public opinion that a large and influential meeting was held in the city on 30th March, 1868, to establish an association whose object should be the amelioration of the condition of the poor of the city. Thus came into being the Edinburgh Association for Improving the Condition of the Poor, later the Charity Organisation Society, and finally in 1919 the Edinburgh Council of Social Service. To celebrate a hundred years of fine work in the city a brief history of the Council's activities was published in 1968.

The Royal Air Force was founded on 1st April, 1918, and seventeen days later an Air Ministry Order decreed that medical officers employed exclusively with R.A.F. establishments would in future become the responsibility of the Air Force Medical Department. Thus came into being the Royal Air Force Medical Branch whose chief medical officer today is a Scot. The Princess Mary's Royal Air Force Nursing Service was founded shortly after the Medical Department. So April, 1968, was jubilee year not only for the R.A.F. itself but for its medical and nursing services.

The official "birthday" of the World Health Organisation was 7th April, 1948, when the constitution of the new organisation, worked out in 1946, was ratified by 26 member states of the United Nations. The first World Health Assembly in 1948 was attended by representatives from 62 countries, although only 53 were actually members. In 1968 the Assembly had delegates from 130 countries and dealt with a budget of 50 million dollars compared with 5 million dollars in 1948. For its twentieth anniversary year the theme of W.H.O.'s publicity material was "Health in the World of Tomorrow". Professor Fraser Brockington's *World Health* was published as a second edition just prior to the twentieth anniversary of the foundation of the World Health Organisation, and a book, published by W.H.O. itself, *The second ten years of the World Health Organization, 1958-1967*, appeared in 1968.

A landmark in the history of medical education in this country was brought about by the publication in April 1968 of the Royal Commission on Medical Education, 1965-68, Report, commonly referred to as the Todd Report after its distinguished chairman, Lord Todd. This report proposed far-reaching changes in the pattern of medical education and practice in Great Britain.

Warm congratulations are extended to *The Practitioner* on its hundredth birthday celebrated in July, 1968. The Centenary Number of this well-loved journal, entitled "Retrospect and Prospect", has a strong appeal to medical and other historians with its excellently illustrated articles make first class reading. It is a number of the journal which will be prized by those fortunate to possess a copy.

The twentieth anniversary of the introduction of the National Health Service into Britain was celebrated by a conference held by the Minister of Health at Church House, Westminster, London, on 4th and 5th July, 1968, and opened by the widow of the Minister responsible for the introduction of the service in 1948—Mr. Aneurin Bevan. Two Green Papers, one for Scotland, the other for England and Wales were soon afterwards introduced outlining possible administrative changes in the service in the light of the twenty years' experience. In November, 1968, the Ministry of Health disappeared as a separate entity and became incorporated into a new Department of Health and Social Services, with a Secretary of State in charge. One of the early actions of the new Secretary was to withdraw the Green Paper for England and Wales and a new one is awaited by our colleagues over the Border. The Scottish Green Paper has been more warmly accepted by the profession in the north and decisions may be expected in the light of the constructive criticisms made concerning it. The Scottish Home and Health Department still remains the central government department responsible for the overall administration of the service in Scotland.

Among the many distinguished pupils of John Hunter was Philip Syng Physick of Pennsylvania, North America, the bicentenary of whose birth fell on 7th July, 1968. Hunter pressed Physick to remain in London as his assistant but he preferred to return home where he soon became surgeon to the Pennsylvania Hospital and Professor of Surgery at the University. Physick, was in fact, often referred to as the Father of American surgery, and Edinburgh is proud to claim him as one of her alumni, since he took his M.D. degree there.

With increasing attention being now paid to health education, it is of interest to note that on 11th July, 1968, the Scottish Health Education Unit was set up in Edinburgh, in association with the Scottish Home and Health Department. The aim of the unit is to spread the gospel of health among the people and to hold courses for health educationists, put out health education material in the form of posters, newspaper articles, and short television and

film sequences. The Scottish Council for Health Education joined the new unit at Edinburgh.

Ties between Canada and Scotland are close ones, and memories of the combined BMA/CMA Meeting in Edinburgh in 1958 are still vivid for many of us. It may not be generally known, however, that the first Prime Minister of Canada and Father of the Confederation was a Scot, John A. Macdonald, who was born in the little Sutherland village of Rogart. A cairn was erected to the memory of Macdonald at Rogart and unveiled on 13th July, 1968 by a former Prime Minister of Canada, Mr. John Diefenbaker. The dedication of the plaque on the cairn reads: "Sir John A. Macdonald, G.C.B., P.C.M.P., first Prime Minister of Canada. His monument is a nation. This cairn is but a footnote to his greatness. Dedicated on July 13, 1968, by Rt. Hon. John G. Diefenbaker, P.C., Q.C., M.P., 13th Prime Minister of Canada."

Proposals were made by Glasgow Corporation to turn some six disused cemeteries in the city into parks and rest gardens at a meeting held in the city chambers there in July, 1968. While certain legal and other difficulties will first have to be overcome before these proposals can be put into operation, it is of some interest to note that some of the cemeteries have the graves of individuals with some medical associations. Thus, in one cemetery, there is the grave of Emile L'Angelier, the lover and alleged poison victim of Madeline Smith who had a verdict of "not proven" returned in the subsequent celebrated murder trial in 1857. Mention of Madeleine Smith brings to mind the fact that her grave has recently been discovered in a cemetery about twenty miles from New York City, on the banks of the Hudson River. She was buried under her married name of Mrs. Lena Sheeny in 1928. Another Glasgow cemetery included under the Corporation's scheme is Tullis Street burial ground, Bridgeton, where many of the victims of the Glasgow cholera outbreak of 1832 were buried.

William Heberden, the elder, read before the College of Physicians of London, on 21st July, 1768, a brief paper on a hitherto unrecognised disorder which he named angina pectoris. The paper was later published in the *Transactions* under the title, *Some Account of a Disorder of the Breast*. To celebrate the bicentenary of this event, the Royal College of Physicians of London mounted an exhibition illustrating the history of angina pectoris and published a most informative catalogue of the exhibits.

On 26th July, 1968, another controversial piece of legislation was placed on the statute book with the passing of the Social Work (Scotland) Act, which will become operative in large measure on 17th November, 1969. This Act, divorcing social work from medicine, will have far-reaching effects and its operation will be watched with keen interest by the medical profession not only in Scotland but elsewhere for similar proposals have been made for England and Wales by the Seebohm Committee's Report (1968).

Colonel William Butler, Britain's oldest physician at that time, celebrated his hundredth birthday at his home in Peterhead on 30th July, 1968. A medical graduate of Glasgow University, Butler had a noteworthy career subsequently in the public health service, especially with the former London County Council. Unfortunately, Dr. Butler died shortly after achieving his century in age. In an interview which he gave to the press he praised Peterhead for its healthy situation and this recalls to mind that from about the mid-eighteenth century, chalybeate springs were wont to attract wealthy, former Jacobites, and General James Wolfe is said to have spent several weeks there in 1751 for his health. Peterhead indeed became what might be called the Scarborough of the North having facilities both for sea-bathing and for mineral baths. There were six distinct mineral springs as well as bath-houses which offered the visitor a choice of "vapour, hot air, projecting

or shower baths". Its famous Wine Well was once described: "The water of this is so strongly impregnated with carbonic acid as to sparkle like champagne." Alas, the wells and the rock-hewn baths have long since vanished.

During the summer months of 1968, a small exhibition showing documents relating to the history of the Royal Infirmary of Edinburgh was held in the National Library of Scotland. The exhibition was arranged by the Archivist of the Royal Infirmary, Mrs. P. M. Eaves-Walton, from whom doubtless copies of the interesting little brochure produced for the exhibition may be obtained.

The centenary of the founding of Crieff Hydropathic, a well-known Scottish hotel, was held on 7th August, 1968. The hydropathic was founded by Thomas Henry Meikle, M.D. Aberdeen, who had previously been in charge of the Loch-Head Hydropathic in Aberdeen. Hydropathic treatment has now given place to physiotherapy, available on certain days of each week. A book, "Crieff Hydro, 1868-1968" by Guy Christie was published for the centenary celebrations.

Dr. Charles Newman, Harveian Librarian of the Royal College of Physicians of London, contributed an interesting and succinct account of the Royal College, what it was founded for, what it has done, and what it does today (*Brit. med. J.*, 1968, 4, 108) to commemorate the foundation of the College 450 years ago.

Admirers of the late Sir William Osler would be much gratified that the first Oslerian Oration to be delivered was given by Sir Geoffrey Keynes on 16th October, 1968, at the Royal College of Physicians of London. The subject chosen by Sir Geoffrey was "The Oslerian Tradition" and a worthy memorial it is to the Great Physician. On 23rd June, 1969, the fiftieth anniversary year of Osler's death, the Canadian Post Office issued a memorial portrait stamp of its illustrious countryman. The release coincided with the opening of the 14th Quadrennial Congress of the International Council of Nurses which was then being held in Montreal. It is understood that some 35 million copies of the stamp are being issued and many of us will prize an envelope with the Osler stamp upon it.

Medical philatelists will be eager to obtain two other stamps issued featuring physicians. One of these stamps issued in May, 1969 to publicise the first Caribbean Trade Exhibition, CARIFTA EXPO 69 features the portrait of Dame Hilda Bynoe, Governor of Grenada, who is a qualified medical woman. The other stamp issued to celebrate the first anniversary of independence for the island of Barbados depicts Sir Winston Scott, Governor-General of Barbados in ceremonial dress. Sir Winston is a holder of the Scottish Triple Qualification which he obtained in 1926.

In October, 1968, it was announced that the newly-created Chair of Forensic Psychiatry at Edinburgh University, the first such chair in Scotland, was to be filled by a psychiatrist who would also act as physician-superintendent at the State Hospital, Carstairs. The aim of this dual appointment is to make use of the unique facilities for forensic-psychiatry research and teaching, covering both mental illness and mental deficiency, at the hospital and to form a link with the university.

Also in October, a new journal on the history of medicine, *History of Medicine*, made its appearance. The first number contained a series of articles of much interest and three historical works dealing with medicine were reviewed. The journal is published by History of Medicine Limited, 78 Queen Victoria Street, London, E.C.4, and the annual subscription for four issues is quoted as £1, 10s.

A specialist journal of great merit for those working in the field of preventive and social medicine, *The Medical Officer*, celebrated its diamond jubilee with an enlarged issue on 29th November, 1968. A series of articles covering the past decade since the journal commemorated its fiftieth birthday gives succinct accounts of developments in public health, school health service, health education and highlights from contributed articles.

The centenary of the Western General Hospital, Edinburgh, was celebrated by a series of symposia and by a reception given by the Board of Management of the Edinburgh Northern Group of Hospitals on 22nd November, 1968. The hospital, to which many new and exciting additions are being made both in the recent past and in the future, began its career as a Poor Law Institution built by the Parochial Board of St. Cuthbert's. The formal opening of the hospital took place on 21st December, 1868, when 433 inmates were accommodated. It served as a poor law hospital until the outbreak of World War I, when it was taken over by the 2nd (Scottish) General Hospital (T.A.) and remained under military control until 1919, then became a Ministry of Pensions Hospital for war-wounded servicemen, reverting to its purpose as a poor law hospital in the mid-twenties. Under the Local Government (Scotland) Act, 1929, the hospital became a municipal one under the jurisdiction of the Public Health Committee of the Corporation of Edinburgh under whose aegis it became a teaching hospital for medical students by arrangement with the Medical Faculty of the University of Edinburgh. Finally, the hospital, on 5th July, 1948, came under the control of the South-East of Scotland Regional Hospital Board. The hospital was, of course, intimately associated with the Polish School of Medicine in Edinburgh during World War II.

The following notice appeared in the *Scots Magazine* for December, 1768: "Encyclopaedia Britannica; or, a new and complete Dictionary of the Arts and Sciences. Composed in the form of distinct treatises or systems. With accurate definitions and explanations of all terms; full descriptions of the various machines, instruments, tools, figures, etc.; and an account of the kingdoms, provinces, cities, towns, etc. throughout the world. By a Society of gentlemen in Scotland. 4to. No. 1 and 2. 6d. each, or 8d. on a fine paper. Macfarquhar, printer, and Bell, engraver, Edinburgh. This work is to be completed in 100 numbers, to be published weekly, making three volumes and to be illustrated with above 150 copper plates." Thus was the first appearance of the Encyclopaedia Britannica announced, and so the two hundredth anniversary of this great work fell within the period covered by this report.

The year 1908 stands as one of the outstanding years in the history of child health and welfare in Scotland and we would do well to remember the events of that memorable year. On 21st December, two great legislative measures received the Royal Assent and brought into operation health and social benefits for the children of the country. The first of these measures, the Children Act, often referred to as the Children's Charter, was the first all-embracing law introduced into the United Kingdom for the protection of children and, amongst many other benefits which that Act established was the institution of juvenile courts. Forty years later, in 1948, another Children Act was passed designed to streamline previous legislation and to make provision for the care and welfare of children deprived for one reason or another, temporarily or permanently, of parental care. This Act established children's departments of local authorities, with executive officials called children's officers assisted by child care officers for the necessary field work. Now, in 1968, under the Social Work (Scotland) Act, local authorities are required to set up social work departments into which will be absorbed existing children's departments which will then cease to exist as such. These changes

are scheduled to take place on 17th November, 1969. The Social Work Act also alters the procedure for dealing with children in need of compulsory measures of care, and included among these provisions, is the abolition of juvenile courts. These further provisions will come into operation on a date yet to be fixed. These various legislative measures show how the social services for children and young people in Scotland are in a continuing state of change to meet ever altering needs.

The second great Act of that year was the Education (Scotland) Act which empowered school boards to organise school medical services for the children attending board schools. Thus the school medical service officially came into being in Scotland, a step recommended in the Report of the Royal Commission on Physical Training (Scotland) (1903). At first, the school medical service was instituted for the purpose of carrying out medical inspections of school children and undertaking their supervision, but experience soon showed that inspection and supervision were insufficient in themselves and so, by a subsequent Education (Scotland) Act (1913) treatment, medical, surgical and dental, was added to the school medical service's responsibilities. The First Report on the Medical Inspection of School Children in Scotland, written by Sir Leslie Mackenzie, appeared in 1913 and is one of the great social documents of our times. The school medical service of yesterday is the school health service of today and, it should be noted, it remains outwith the structure of the National Health Service.

The influence of the Medical School of Leiden on the early Medical Faculty of Edinburgh was profound and it is fitting that the Society should remember the birth three hundred years ago of the greatest figure of the Leiden School, Herman Boerhaave, who was born in the parsonage at Voorhout, near Leiden on 31st December, 1668. So many of the members of the newly founded medical faculty in Edinburgh in 1726 were pupils of this great man and carried on the tradition of the Dutch medical school in their teachings.

Members of the Society would be interested in the announcement in *Medical History* (1969, 13, 90) that the University of Melbourne has appointed to a personal chair of the History of Medicine, Professor Kenneth F. Russell, already head of the department of History of Medicine since 1967. This is the first Australian chair in Medical History and we offer our warm congratulations to Professor Russell, one of our many friends overseas, on his new appointment and the recognition of his endeavours over the years in the History of Medicine.

1969 was the fiftieth anniversary year of the passing of the Nurses Acts and the setting up of General Nursing Councils for Scotland and England and Wales. These two bodies were the first statutory ones to govern nursing education and practice.

Dr. Margery G. Blackie was appointed Physician to the Queen, it was announced in the *London Gazette* on 31st January, 1969. She succeeded Sir John Weir, and is the first woman to hold this post, although honorary appointments of women doctors have been made in the past. Like Weir, Dr. Blackie is a homeopathic physician. An Australian physician, Dr. Lorna Lloyd-Green, the first woman from that country, was elected President of the Association Internationale des Femmes Medecins. This international organisation was the first international medical association in the world when it was founded in 1919. It all began at a dinner in New York in honour of women doctors who had served in World War I.

On 10th and 11th February, 1969, at Messrs. Sotheby & Co's auction rooms in London, many important volumes from the library of the Royal Medical Society came under the auctioneer's hammer. These volumes,

described by Sotheby in their catalogue as "the largest collection of early medical books to be offered for public sale in recent times" will be dispersed in a series of sales during the year, the sale of 10th-11th February being the first. Nevertheless, the Society has retained a number of books of which there are no other copies in Edinburgh. The former Hall of the Society in Melbourne Place, has now completely been demolished and a new building of offices has been erected on the site and is nearing completion.

The Worshipful Society of Apothecaries of London has decided to establish a diploma in the history of medicine and to organise a course of instruction leading to examination for such a diploma. This is a noteworthy step since Britain is one of the few countries where such courses are not already held.

From 3rd March, 1969, medicines throughout Great Britain were required, by regulations (S.I. 1969, No. 101) to be dispensed in metric units, thus displacing the old Apothecaries/Imperial systems of weights and volumes. The British National Formulary (1968 edition), British Pharmacopoeia and British Pharmaceutical Codex are now all-metric. For those doctors who do not use the metric system in prescribing, the pharmacists are required to reformulate the medicine, as regards both total quantity and dose volume, into metric measure.

Local history clubs and associations flourish throughout the length and breadth of the land and many contributions to medical history have been made by these societies. It was gratifying, therefore, that a Scottish Local History Congress was held in Edinburgh in March, 1969. This congress was sponsored by the University and the Scottish Council of Social Service and was a considerable success, and it is hoped that it may be but the first of many.

One hundred and sixty years ago, in 1809, a meeting was held at the instigation of Dr. Andrew Duncan, senior, of Edinburgh, to found a horticultural society. This meeting, held in the hall of the Royal College of Physicians of Edinburgh, resulted in the foundation of what later became known as the Royal Caledonian Horticultural Society. This society was one of several non-medical organisations in the foundation of which Andrew Duncan, senior, had a hand. On this occasion he was ably assisted by Thomas Dickson, a prominent Edinburgh nurseryman, and a Mr. Walter Nicol.

McGill University, Montreal, was the scene earlier in 1969 of a demonstration in favour of its conversion into a French-language institution. This university, it will be recalled, was founded under the term of the will of James McGill, a Glaswegian, who had emigrated to Canada and settled in Montreal when it was but a small town of about 9,000 inhabitants. The medical faculty of McGill University was founded as its organisation and teaching methods on the Edinburgh Medical School, and it was from the McGill Medical School that the young William Osler graduated.

The Pfizer Group announced in the spring of 1969 that they would make a grant of £50,000 to the University of Dundee to assist its Faculty of Medicine to establish a Pfizer Chair of General Practice. Pfizer will provide £5,000 annually for ten years. The University decided to establish a Department of General Practice to work in close association with local medical practitioners some of whom will be granted part-time teaching appointments on the University staff. This development will permit the University authorities to introduce the teaching of medicine in its domiciliary aspects into the undergraduate curriculum.

With so many friends in Scandinavian countries it is but right that we should remember with them and pay tribute to a distinguished medical

journal from these countries. *Acta Medica Scandinavica* celebrated its centenary in March, 1969. It was founded by Professor Axel Key, of the department of pathological anatomy at the Karolinska Institute, Stockholm. Originally the articles were in Latin but now most are in English.

The centenary of the birth of Harvey Cushing fell on 8th April, 1969. Harvey Williams Cushing was born at 10 Euclid Avenue, Cleveland, Ohio, the son of Henry Kirke Cushing and his wife Betsey Maria Williams, and became in time, one of the first full-time neurological surgeons. The Society can claim an association with Cushing for our immediate past President, Professor Norman Dott, was one of his most distinguished pupils. Cushing's biography by the late John F. Fulton (1946) is a worthy memorial to the man and is well worth a re-reading now, not only for what it tells of the master but for the many other gems of medical history contained in the work.

In April, 1969, it was announced that the David Livingstone Memorial at Blantyre, Lanarkshire, was facing a financial crisis and, although there was no question of closing down the memorial, the situation was serious and fund-raising efforts were to be made. The memorial was opened in 1929 and since that year over two and a half million people have visited it. A Friends of the David Livingstone Memorial has been launched to augment finances.

Concern has been expressed over the condition of the cottage at Foulshiels, near Selkirk, the birthplace of Mungo Park. The cottage has become ruinous and will require to be taken down. A final decision as to the future line of action has yet to be taken.

On 24th April, 1769, the Dispensary for the Infant Poor, "the first charitable institution of the kind" was opened, through the efforts of Dr. George Armstrong and his brother, John, the poet-physician, and other well-known men, at 7 Red Lion Square, London. The two brothers Armstrong were far-sighted men and fought hard as pioneers in child health in this country. John, it will be recalled, has been identified as the author of *A Full View of all the Diseases Incident to Children* (1742), and George wrote *An Essay on the Diseases Most Fatal to Infants* (1767).

Another Scottish physician should be remembered at this time too. He is William Buchan, M.D., author of *Domestic Medicine* the first edition of which appeared in 1769. The announcement in the *Scots Magazine* for June of that year read as follows: *Domestic Medicine; or, The Family Physician*. Being an attempt to render the medical art more generally useful by shewing people what is in their own power, both with respect to the prevention and cure of diseases. Chiefly calculated to recommend a proper attention to regimen and simple medicines. By William Buchan, M.D. 6s. Balfour, Edinburgh." Buchan was a pioneer in health education.

The Heriot-Watt University, Edinburgh (1966) will introduce the first Master's degree course in Britain specifically aimed at further education of hospital pharmacists in October, 1969. Formal instruction will be combined with a research project in the course, leading to the degree of M.Sc. in hospital pharmacy by full-time or part-time study. The new course has been described as "one of the most important developments in recent years in the practice of pharmacy in hospitals."

How many members of the Society pack a tin of Andrew's Liver Salt in their cases when they go on holiday? The story of this Newcastle-upon-Tyne homely remedy goes back seventy-five years. In 1894, a Mr. Scott, provision importer for grocery and drysaltery wares in that city joined forces with his commission agent, Mr. Turner, and compounded an effervescent salt of tartaric and citric acids, sugar, epsom salt, and sodium bicarbonate, and put it on the market as a "blood purifier and cure for indigestion". It seems that

the first press advertisement appeared in a Newcastle paper in 1904 when Andrew's Liver Salt was available in 4d. and 8d. tins and 1s. and 2s. 6d. bottles. During World War I the salt was a common item among the contents of parcels for the troops.

In anticipation of the Annual Meeting of the British Medical Association in Aberdeen in early July, 1969, the *British Medical Journal* (1969, 2, 816) featured an illustrated article on the Aberdeen Medical School which is worthy of attention of Society members. An interesting sidelight on grants for medical research purposes was revealed by Sir Ronald Tunbridge, chairman of the Board of Science and Education of the British Medical Association when he addressed the Annual Representative Meeting of the Association in Aberdeen in July. He informed his audience that in 1869 the B.M.A. made its first grant to a scientific project and the recipient of the grant was Professor Hughes Bennett of Edinburgh who received £200 to enable him to pursue his search for antidotes to strychnine and opium (*British Medical Journal*, 1969, 3, Supplement, p. 30).

John Keats was a truant from medicine and medical admirers of the poet will be especially interested in the foundation of a Keats Memorial Lecture through the joint sponsorship of the Society of Apothecaries of London, the Royal College of Surgeons of England and Guy's Hospital. The first lecture, delivered at the Royal College of Surgeons in February 1969, by Lord Evans of Hungershall, was published in the *British Medical Journal* (1969, 3, 7) and well repays close study.

It is good to learn that a museum of the history of medicine has been established at the University of the Witwatersrand, Johannesburg, Republic of South Africa. It is the first of its kind and has, as its prime object the collection and preservation of material illustrating the history of medicine and its allied sciences, dentistry, pharmacy, etc., in general and of South Africa in particular. The University of Witwatersrand, its Medical Graduate Association and the South African Institute for Medical Research have all given the project their blessing and active co-operation. The director is Dr. Cyril Adler, who, with his wife, have been instrumental in founding this museum. It was a pleasure to welcome them to Edinburgh during 1968, and to hear at first hand from them about the museum, its origins and subsequent development.

History is rapidly being made not only in the fields of science and technology but in medicine by developments in space exploration. The epoch-making Moon Flight in July, 1969, depended on an understanding of, provision for, and prevention of major disasters which might have occurred when a human being was exposed to a completely new environment. The investigation of these hazards is progressively producing more and more useful knowledge about human adaptation, about physiological processes, to mention but two aspects. For example, there is the problem of selection of astronauts which is throwing light on the value of different forms of personality assessment. The physiological changes consequent upon weightlessness and the bacteriological problems involved in the Moon Flight were all subjects of the closest study. It can, with some confidence, be predicted that space medical research will lead, admittedly only time, to benefits for the sick and even for the healthy on Mother Earth.

The commemorative plaque marking the birthplace of Sir Arthur Conan Doyle at 11 Picardy Place, Edinburgh, was removed when the property was demolished. Until a suitable, permanent place for its re-erection can be found, the plaque will be accommodated in Huntly House, Museum.

The Society extends cordial greetings and hearty congratulations to the Stockholm Museum of Medical History on the attainment of its jubilee.

Dr. Wolfram Kock, its director, has brought about many changes which have enhanced the reputation of the Museum. Greetings and congratulations, too, are sent to the Danish Society of the History of Medicine on the occasion of its jubilee celebrated in December, 1967. Dr. Egill Snorrason, its honorary secretary for many years, is one of our Society's regular correspondents.

BOOK AND OTHER NOTICES

It must be reiterated that these notes on books made in this section of the Report concern only those which we have personally read or perused or to which our attention has been drawn by members of the Society.

Among autobiographical books one had a particular appeal. *Doctor Sahib* (1967) by Stephen Kerr, is a fascinating, factual account of his experiences in India, first at a Gurkha battalion headquarters among the hills, then as civil surgeon, which he disliked as a duty, in Bihar where famine and epidemics stalked the region and recall all too vividly the tragedy of that Indian state during 1965-67. The late Henry E. Sigerist was a giant among men and his *Autobiographical Writings* (1966), selected and edited by N. S. Beeson reveal the man and help to show why his projected great multi-volume history of medicine never materialised. A bibliography of his writings (1966) edited by Genevieve Miller is a permanent memorial to this remarkable man. Of some special interest to members is the *Diary of Richard Kay, a Lancashire Doctor, 1716-51* (1968), edited by W. Brockbank and F. Kenworthy. Kay, a student of Guy's Hospital, was also a pupil of our own countryman, the celebrated William Smellie under whom Kay studied midwifery. Residing near Bury, Kay paid his visits on horseback and it is evident that he was a conscientious country doctor. *A Country Doctor* (1960) by R. J. Mitchell, is one of the "Then and There" series of Longmans, and briefly and simply describes the work of a doctor Claver Morris who practised in the days of Queen Anne. *Caduceus in Saigon: A Medical Mission to South Viet-Nam* (1968) by Barbara Evans describes the experiences of a paediatric team from England and of which the authoress was a member in this unhappy and war-torn country. *Surgeon in the Crimea* (1968) edited by V. Bonham-Carter and M. Lawson, are some of the letters sent to his family by a young assistant staff surgeon, George Lawson, and show, once again, the extraordinary stupidity and incompetence of the authorities, both civil and military, during the Crimean campaign.

Biographies noticed include: *Dr. Thomas Sydenham (1624-1689)* (1966) by K. Dewhurst gives an account of the life of the English Hippocrates and includes some of his writings from the Locke MS in the Bodleian Library, Oxford. *Anton Mesmer* (1967) by D. M. Walmsley is a sympathetic portrait of the author of the *Treatise on Animal Magnetism* (1779). *Nelson and His Surgeons* (1968) by P. D. G. Pugh, is a readable, finely illustrated work and pays tribute to the energies and foresight of the naval surgeons of the period. W. S. M. Craig's *John Thomson: Pioneer and Father of Scottish Paediatrics* (1968) attempts to portray a great but humble and retiring physician whose *Opening Doors*, a pamphlet "for the mothers of babies who are long in learning to behave like other children of their age", tells in simple, compassionate language of blind, deaf, crippled and backward children and how their parents can help them. The pamphlet should be required reading for all medical students during their study of child health and the paediatrician and family doctor would also do well to ponder over Thomson's sage advice.

A book with a direct appeal to members of the Society, especially those with connections with Edinburgh, is *Edinburgh University and Poland: An Historical Review* (1968) edited by W. Tomazewski. Not only is this book a tribute to the University for its part in helping to establish the wartime Polish School of Medicine in the city, but it also contains other pieces of

information such as Scotland's contribution to the household of the King of Poland in the seventeenth century when a Scotsman, William Davidson, became senior surgeon to the King. During the present century, of course, the University of Edinburgh honoured a great Polish lady, the late Marie Curie, on whom it conferred its LL.D. degree. Another book with Scottish associations is *Medical Tales from "Blackwood"* (1968) containing sixteen stories previously published in past numbers of Blackwood's Magazine. This is a bedside book of the first order. *Public Health in Glasgow, 1905-1946* (1967), by the late Sir Alexander S. M. Macgregor, is a sound contribution to the medical history of Scotland's commercial capital.

Special histories abound, indeed mushroom. Professor Brownlow Riddell's *History of the Glasgow Ophthalmic Institution* has already been noted. Another voluntary Glasgow hospital, the Victoria Infirmary, has been described by Ian Murray (1967). This little volume has thumbnail sketches of the physicians, surgeons and specialists who served the hospital from its foundation in 1890 till it was absorbed into the National Health Service in 1948. *Cheadle Royal Hospital: A Bicentenary History* (1967) by N. Roberts tells the story, not only of the hospital from its inception in 1766, but of the evolution of care for the mentally ill. Among its medical superintendents was Henry Maudsley. *The Royal Apothecaries* (1967) by L. G. Matthews fittingly ties up with W. S. C. Copeman's *Apothecaries of London: A History, 1617-1967* (1967). *Milestones in midwifery* (1967) by W. Radcliffe refers to several Scots, including William Smellie, William Hunter, and James Hamilton, their personalities and influence on the progress and development of the subject.

The twentieth anniversary of the National Health Service was heralded by the appearance of the *Origins of the National Health Service: The Medical Services of the New Poor Law, 1834-1871* (1967) by R. G. Hodgkinson, an economic historian. This vast volume is a veritable storehouse of information and must be used as a source-book by workers in sociology, etc. A series of articles from *New Society* (1968) on the origins of the social services have been gathered together in pamphlet form and present succinct accounts of housing, public health, social security, education and factory legislation.

On Wings of Healing (1968) by H. N. Cole, relates the history of the Airborne Medical Services, 1940-1960, and of the foundation in 1942 of the Airborne Medical Society for officers serving in the airborne medical services. M. L. Burr presented *A Concise History of Ambulance Services in Britain in the Medical Officer* (1969, 121, 228).

Victory with vaccines (1968) by H. J. Parish is a more popular version of the author's *History of Immunisation* (1965) referred to in a previous report. *The Black Death* (1969) by P. Ziegler and *The Day of St. Anthony's Fire* (1969) by J. G. Fuller are worth mentioning, especially the latter volume which describes a mysterious disease affecting the little French hamlet of Pont-Saint-Esprit in 1951. The author argues that the disease was not due to mercury poisoning as recorded after an official enquiry but was, in fact, due to LSD poisoning from fermentation of ergot.

Great Ideas in the History of Surgery (1967) by L. M. Zimmerman and I. Veith is a second edition of a really excellent book reasonably priced and reviewing progress in surgery from early times to the early twentieth century. *The History and Function of Plaster-of-Paris in Surgery* (1967) is a brief account issued by the firm of Smith and Nephew Ltd.

In the philosophical aspects of medicine, *The African Witch* (1967) and *Philosophy and Ethics of Medicine* (1968), both by Michael Gelfand are worthy of attention and the former book shows clearly how slowly change can be brought about among peoples with deep-rooted cultures and beliefs and the folly of trying to bring about rapid changes in the life of peoples.

In the field of the history of dental surgery, *The Strange Story of False Teeth* (1968) is a quite delightful book, profusely illustrated and full of amusing anecdotes. In the world of nursing the *History of the International Council of Nurses, 1899-1964* (1967) by Miss D. C. Bridges relates the development of this remarkable international organisation.

From the United States several works of note have appeared. *Medical Licensing in America, 1650-1965* (1968) by Professor R. H. Shyrock is a comparatively brief introduction to an enormously complex subject. In early colonial times there was no licensing of doctors, the first licences to practice being granted in the eighteenth century by state and local medical societies. The Flexner Report (1910) brought about radical changes and following upon the formation of a National Board of Medical Examiners (1915) a more uniform system has been evolved. It is good to know that Professor Shyrock still is active with his pen during his retirement and following his recent serious illness. Older members of the Society will recall with pleasure meeting him in Edinburgh in 1950 when he addressed us on the history of the Johns Hopkins University, Baltimore. *Madness in Society: Chapters in the Sociology of Mental Illness* (1968) by George Rosen is an engrossing account of the place of the mentally ill in society at different historical periods and the factors that determined these attitudes. Professor Rosen has recently been appointed to the chair of epidemiology and public health at Yale University after eighteen years in a similar post at Columbia University, New York. A noted medical historian, Dr. Rosen will continue to lecture and to direct postgraduate study on medical history when at Yale. *The Medical Messiahs* (1968) by J. H. Young, deals comprehensively with the social history of medical quackery in the United States during the present century and spotlights the gullibility of even intelligent people.

The indefatigable Dr. F. Marti-Ibanez has launched another companion magazine to his already well-known *MD Medical Newsmagazine* in the United States. This new venture, called *MD Pacific* is produced along similar lines to its parent and is intended for medical men and women in the Pacific area. Three of his essays from *MD* (U.S. edition) have been reprinted in booklet form because of the great demand by readers for them. The essays, entitled, "To be a doctor", "The young princes" (a reference to medical students), and "The race and the runner" (referring to choice and pursuit of a career whether in medicine or other fields), make attractive reading. *The Patient's Progress* (1967), edited by Dr. Marti-Ibanez is a well written historical account of the patient through the ages and the changing attitudes of his doctor and his community both to the patient himself and to his illness, in the light of advancing medical and cultural development.

Dr. Egill Snorrason of Copenhagen has favoured us with two of his recent books. The first, on *Johann Friedrich Struensee* (1968) is a biographical sketch of this physician who became prime minister of Denmark between 1770-1772 during the mental illness of King Christian VII. During Struensee's premiership he issued over 600 cabinet orders many of which had an important bearing on medical and social progress in that country. *L'Anatomiste J.-B. Winslow, 1669-1760* (1969) is a French translation of the original Danish work by Dr. Snorrason published in April 1969 on the occasion of the inauguration of the Anatomical Institute at the University of Odense, Denmark. The Institute was named the Winslow Institute Winslow, a relative of Niels Stensen, was a pupil of Duverney and later professor of anatomy at the Jardin Royal in Paris. He is remembered for the foramen named after him, for his description of the lesser peritoneal sac, and for descriptions of other anatomical structures. Winslow's book was authoritative and the model for many English and French nineteenth century texts on anatomy.

ACKNOWLEDGEMENTS

Once again our warm thanks are extended to numerous individuals and scientific bodies who have sent us reprints, catalogues, journals, reports of proceedings, etc. during the past two seasons. To the Harveian Librarian, Royal College of Physicians of London, a further series of publications dealing with exhibitions held within the College, including the important one held to celebrate the 450th anniversary of the granting of a charter to the College on 23rd September, 1518; The Association of the British Pharmaceutical Industry for its annual report and yearbook for 1968-69; The Editor, *Catalyst*, Industrial Journal of the Shell Chemical Company; Dr. Genevieve Miller, editor, per Dr. R. G. Cheshier, director, Cleveland Medical Library for its *Bulletin*; Janet B. Kudelka, editor, for the *Bibliography of the History of Medicine of the United States and Canada*, 1965—the last issue of this valuable publication since the material covered by it is now being included in the *Bibliography of the History of Medicine* compiled by the National Library of Medicine; Dr. Wolfram Kock for *Medicinshistorisk Arsbok* for 1967 and 1968; Professor V. Moller-Christensen, keeper of the University of Copenhagen Medico-Historical Museum for its *Arsberetning* 1966-68; Dr. Bengt I. Lindskog for *Sydsvenska medicinshistoriska sällskapet*, 1968; Professor A. Pazzini for *Pagine di storia della medicina*; the Director, Medical Division, Selvi & Co., Milan, for *La Medicina, nella storia, nell'arte, nel costume*, a beautifully illustrated monthly journal of high quality; Professor L. Premuda, Padua, for *Acta medicae historiae Patavina*, 1965-66, 1966-67, comprising volumes 12 and 13; the Editor, *Orvostorteneti Közlemenyek/Communications de historia artis medicinae*, Budapest, Hungary; Dr. Tomaszewski of the Institute for the History of Science and Technology of the Polish Academy of Sciences for *Kwartalnik historii nauki i techniki*, *Organon*, *Rtudes d'histoire de la science et de la technique*, and Dr. Sokol's *Historia chirurgii w Polsce*; the Editor, *Archivum historiae medicynae*, organ of the Polish Society of the History of Medicine, Warsaw; the Editor, *Boletín bibliográfico*, Madrid, Spain; Dr. Focion F. Cordero of Caracas, Venezuela, for his finely illustrated *Origines de la odontología* (1966); Dr. Enrique Laval, of the Chilean Society of the History of Medicine, for the *Anales Chilenos de historia de la medicina*, 1964, 1965, 1966; Professor-Emeritus J. Joaquin Izquierdo, Mexico, for numerous reprints of his writings; Sr. Historiador, Ministry of Public Health, Havana, Cuba, for *Cuadernos de historia de la salud publica*, nos 40-44.

These various publications are accommodated in the Library of the Royal College of Physicians of Edinburgh for safe keeping.

THE FIFTY-SIXTH ORDINARY MEETING

The Fifty-sixth Ordinary Meeting of the Society was held in the Royal College of Surgeons of Edinburgh on 26th August, 1967, Professor N. M. Dott, President, in the chair. Owing to the fact that the meeting was held during a holiday month and that it was hurriedly arranged following Dr. Chauncey D. Leake's arrival in Britain, the attendance was unfortunately somewhat smaller than usual. Professor Dott, in introducing Dr. Leake, said that he was well-known in Britain, and was presently Senior Lecturer in the History and Philosophy of Medicine in the University of California School of Medicine, San Francisco. He then called upon Dr. Leake to deliver his paper on:

JAMES BLAKE (1814-1893)—A PIONEERING CHEMIST AND PHARMACOLOGIST

A characteristic feature of the California Gold Rush was the large number of "remittance men", who took the long journey around the Horn or across

the plains to seek a new life in the Far West. Usually, these men were from good families, but had done something scandalous, with the result that their folks would send them as far away as possible, giving them a monthly remittance in order to live, and in order to stay away from their home communities. This phenomenon is currently being repeated among the "Hippies" of the Haight-Asbury district.

California's first great scientist, pioneer pharmacologist, geologist, spectroscopist, surgeon and internist, was that extraordinary Gold Rush character, James Blake (1815-1893). Born in Gosport, England, the son of a well-known brewing family, he was sent as a Non-Conformist to University College, London, after his early schooling near Gosport. At University College he undertook medical training, and had as teachers Thomas Graham (1805-1869) and William Sharpey (1802-1880), pioneers in colloid chemistry and histology respectively. He also came under the influence of the great pioneer physical chemist Michael Faraday (1791-1867).

During the summer he went to Paris to work in the cramped laboratory of the handsome and brilliant Francois Magendie (1783-1855), the pioneering physiologist and pharmacologist, whose favourite pupil was Claude Bernard (1813-1878). Blake brought the haemodynamometer to England, and when still a medical student, studied the physiological effects on blood pressure, pulse, respiration and muscular activity, of various materials injected into the veins and arteries of dogs. He used such recently isolated alkaloids as strychnine, coniine, and morphine and then preparations of digitalis and other crude drugs. By determining accurately the time period from the moment of injection until effects were noticed, he made the first estimations of circulation time, and developed the concept of the target organ.

This work was published in 1839 in the *Edinburgh Medical Journal*. Writing later in French, Blake proposed that there must be a relationship between chemical constitution and biological action. He pointed out that it is foolish to use chemicals whose constitution is not understood. He therefore began a series of experiments, injecting solutions of inorganic salts into dogs, and noting the effects.

Blake's studies were supported by yearly grants of £60 (a tidy sum in those days) by the young *British Association for the Advancement of Science*, and his reports appeared in its *Transactions*. By 1846 he had come to some remarkable conclusions: (1) that the characteristic physiological effect of an inorganic compound in solution when injected into mammals is produced by the electro-positive element; (2) that with increase in atomic weight of the elements, using the same salt throughout, there is an increase in the intensity of activity; (3) that the characteristic physiological effects of the elements, using the same salt throughout, reappear with increasing atomic weight, so that the elements can be grouped into families on the basis of their biological activity, and (4) that the effects of various inorganic compounds on the mammalian body are related chiefly to the isomorphous properties of the compounds.

These are amazing observations to have been made at the time, and then apparently to have been forgotten. Blake's families of elements comprise the earliest approach to what we call the Periodic Table of the elements, and it anticipated by 20 years the development of the Periodic Table on the basis of the physico-chemical properties of the elements, as achieved by the Russian chemist, Mendelejeff (1834-1901).

Meanwhile, Blake had become a charter member of the Chemical Society, and had received his medical degree in 1841. He became a member and later a Fellow of the Royal College of Surgeons of England, and apparently developed a lucrative practice. His first office was modest in Gower Street,

but he moved presently to Conduit Street, and then to Pall Mall. In a letter to the *Lancet*, March 9, 1839, Blake proposed that it is not necessary to use corrosive chemicals to obtain obliteration of varicose veins, but simply to use a slight suture and by applying gentle pressure to produce enough irritation "to cause such an effusion of lymph and serum in the sheath of the vessel as to lead to its permanent obliteration."

One would have thought that Blake's early success would have led to fame and fortune. But in 1847 he showed up in St. Louis, and, amid much public acclaim, became Professor of Anatomy and Surgery in the St. Louis Medical College. From there he reported on filaria in the hearts of dogs, and on anomalies of the thyroid arteries. More importantly, he published in the January, 1848, issue of the *American Journal of the Medical Sciences* a summary of his studies on the relation between the structure of inorganic salts and their physiological action on mammalian bodies. Then, when he seemed about to enter into another successful career, he entered the Gold Rush to California, taking the long and tough overland trip. There were no public expressions of regret at his departure.

Blake settled in Sacramento. He undertook the assay of ores, and also vigorously pursued clinical practice. In 1852 he published an essay on the climate and diseases of California in the *American Journal of the Medical Sciences*. When the first California medical periodical, the *California State Medical Journal*, appeared (for one volume only) in 1857, Blake reported on ophthalmia, on gunshot wounds, and on tumours. In the *Pacific Medical and Surgical Journal*, which began publication in the following year, Blake wrote on the treatment of gonorrhoea and diphtheria. He made pertinent remarks on a case of an alleged spontaneous rupture of the vagina during delivery. In this Blake seems to have been the first to use the theory of probability in an American medical publication.

Following the great Sacramento flood of 1862, Blake moved to San Francisco and set up offices on Bush Street. It was there that he published an important clinical report on the influence of living in the open air in the treatment of phthisis (*Am. J. Med. Sci.*, 1863, 46:323-330). This seems to have anticipated by several years the conventional open-air rest treatment for tuberculosis, usually credited to E. L. Trudeau (1868-1915), or to Peter Dettweiler (1837-1904).

Meanwhile, Blake became editor of the *Pacific Medical and Surgical Journal*, and wrote vigorously on the establishment of a Board of Health for the control of epidemics, and of the nonsensical evils of civil warfare. He soon resigned his position upon the grounds that the quality of the contributions submitted to him were such as to make his efforts not worthwhile.

In 1864, H. H. Toland (1809-1900), the prominent San Francisco surgeon, who had made a fortune selling "anti-scruf" and "anti-syph" in the mines, established a medical school on Stockton Street in San Francisco. James Blake appears as Professor of Obstetrics and Diseases of Women and Children. In 1873 the Toland Medical College became the Medical Department of the University of California, and Blake retained his position in spite of the usual medical politics. One of his introductory lectures was on "The Cause of Excessive Mortality in Infants". He reported clinically on typhoid fever in children, and on foreign bodies in the uterus. However, his address to one of the graduating classes was vapid, and gave no indication of his intellectual interests or of his scientific skill.

Dr. Joseph D. Whitney, of the class of 1865, and respected as a leader of medical affairs in Los Angeles, has stated that Blake was one of his finest teachers, not at all "scientific", in his lectures, but that he was very practical, and that his example of gentleness and dignity made a great impression on the students.

Meanwhile, Blake became interested in the California Academy of Sciences, and he served as its president for four years. His scientific genius flourished in all directions. He made chemical analyses of spring and drinking water, of new ores and minerals, of biological fluids in new species of fishes, of soils for fitness for growing wine grapes, and of grapes themselves for their fitness for making various kinds of wines. Blake became a pioneer geologist in the Sierra and in the Great Basin of Nevada, reporting evidences of glacial action, of land and earth movements, and of topographical features. He made anthropological reports and attempted analyses of earthquakes. Becoming interested in meteorology, he established observation stations in various parts of California, and with data from these stations and from other parts of the world, he proposed a general theory of weather change based on the relation of atmospheric pressure variations in polar regions and in the tropics. He reported on new species of marine life and on the reproductive physiology of viviparous fishes. Most of his general scientific work was reported in the *Transactions and Proceedings* of the California Academy of Sciences. At the time this institution had modest quarters, but these were extended greatly through the generosity of the California pioneer, James Lick (1796-1876). Subsequently this resulted in the magnificent quarters now in Golden Gate Park.

Again, one would have thought that Blake was certainly settled to a productive and lucrative career. However, abruptly in 1876 he left San Francisco with a broken leg. He moved to Monte Sol, east of Mount St. Helena, at the head of the Napa Valley. Here with the aid of an energetic woman, Emaline Woods, he cleared an area for a tuberculosis sanatorium.

In 1879, Robert Louis Stevenson (1850-1894) had become the *Silverado Squatter* with his new wife, Fanny Osborne, and his stepson, Lloyd Osborne. The three were miserably sick and the only physician anywhere around was James Blake. It is reasonable to assume that Blake took care of his already distinguished neighbour, and that maybe Stevenson's high regard for physicians was based in part on his experience with Blake. But there is no evidence to support this idea.

In 1880 Blake sold the sanatorium to the Livermore family, one of whom had been a patient. The Livermore family still owns the estate, and has beautifully developed it. One of the distinguished members of the family later became President of the California Academy of Sciences. Blake and Mrs. Woods moved to Middletown, a little community north of the Napa Valley. There Blake built a remarkable stone home with wooden clapboards, and set up part of it for use as a chemical laboratory. A covered runway connected it with a cottage in the rear, occupied by Mrs. Woods.

Blake returned to his early studies on the relationship between chemical constitution and biological action. Now he was receiving samples of the salts of newly discovered elements and rare earths sent to him by his friend, Sir William Crookes (1832-1919). With spectroscopic control Blake found that with the increase in valence of an element in inorganic combination, there is an increase in the complexity of biological activity. He was the first to report on the rates of excretion from the body of salts of such chemical elements as cadmium, cobalt, nickel and thallium.

Blake's studies now were printed again in European periodicals and appeared in French, English and German. Blake made at least three journeys to Europe, after settling in Middletown. The journey, beginning with a rough stagecoach ride and then with a long train ride and steamship voyage, must have been arduous. Blake, however, appeared always with equanimity, and he was honoured in England, being asked on one occasion to take the chair of the Chemical Society.

An amusing incident occurred at one of the meetings of the newly founded Physiological Society, when a young man reported that digitalis caused arteriolar constriction. Blake rose and said that it was indeed remarkable to hear reported as a new discovery something which he himself had reported in the same room 50 years before. Apparently, Blake was now accepted by his English colleagues, in spite of whatever scandal had caused him to leave England in 1847. Yet it is rather remarkable that his scientific contributions seem rather pointedly to remain ignored in historical accounts of the development of modern pharmacology.

Blake died in 1893, and was buried in the little cemetery of Middletown, California. Nearby is the grave of Mrs. Woods, who died 13 years later. Blake's house still stands, but the flower garden which once surrounded it has disappeared. Blake was respected by his neighbours as a very fine physician, who never submitted a bill. None suspected his scientific interests and indeed thought that he was merely concerned in taking care of his flower beds. On the other hand, his reputation as a "chaser" was apparently not restricted to the local community.

On the motion of Dr. Douglas Guthrie, a warm vote of thanks was accorded Dr. Leake for his unique paper on a colourful character.

Following Dr. Leake's paper the members and their guests were conducted round the College Museum by the curator, Professor D. E. C. Mekié, who talked about some of the more notable exhibits during the tour. Included among these exhibits was the Menzies Campbell Dental Historical Collection.

THE FIFTY-SEVENTH MEETING AND NINETEENTH ANNUAL GENERAL MEETING

The Fifty-seventh Meeting and Nineteenth Annual General Meeting was held at the Regional Physics Department of the Western Regional Hospital Board, Graham Street, Glasgow, on 23rd February, 1968, Professor N. M. Dott, President, in the chair. The Report of Proceedings of the Society was presented and approved. The Honorary Treasurer, Dr. W. A. Alexander reviewed the Society's finances and appealed to members to use banker's orders for payment of their annual subscriptions as a surer means of payment. It was all too easy to forget one's subscription if one did not attend meetings. The Society then proceeded to the election of its office-bearers for the ensuing session. The President, Vice-Presidents, Honorary Treasurer and Members of Council eligible for re-election were all unanimously re-elected and Professor John Boyes and Dr. G. D. Forwell were elected Members of Council to fill the vacancies caused by the retirement of Mr. Phillip Harris and Mr. John S. G. Blair. Dr. L. F. Howitt, Joint Honorary Secretary tendered his resignation which was regretfully accepted but no nominations were made at the meeting for a successor. The other Joint Honorary Secretary was currently overseas. The President then called upon Dr. J. M. A. Lenihan, Regional Physicist to the Regional Hospital Board to give his paper on:

TECHNOLOGY AND MEDICINE—THE LESSONS OF HISTORY

James Bridie was not a member of our society—but he had firm and characteristically mischievous views on the history of medicine. In a little-known paper published in 1949 he wrote: "Every doctor who is worth his salt publishes, at or about his 90th year, a memoir of some dead-and-gone practitioner of his own trade. It rounds off his life. It makes him a possible subject of a memoir himself." He displayed his respect for this tradition in a hilarious—and partly truthful—account of the career of Andrew Wotherpoon, a seventeenth century surgeon of Glasgow. Before this learned company, I shall not be so presumptuous as to attempt a demonstration of

biographical skill, whether anecdotal or analytical. My purpose is rather to suggest that study of the history of medicine is valuable not only in illuminating the past but in interpreting the contemporary situation and in planning the achievements of the future.

We may begin by asking (as generations of physicians and patients have done) whether medicine is an art or a science. The answer given by Sir George Pickering (when he addressed the medical students of Leeds in 1964) dismissed both alternatives and declared that medicine is a technology—a conclusion reached a century earlier by Melvil Dewey when he made his decimal classification of knowledge.

To appreciate the significance of this classification, we should consider what we mean by technology—and by science. Science is concerned with abstractions such as forces, fields, atoms and species. Technology deals with concrete realities. Science, strictly defined, can be pursued with no apparatus or other external aids; some of the most significant advances which opened the door to modern science were made by Galileo in the form of thought experiments and the process continues to this day. But the capacity of the brain for abstract thought is limited. After a short spell of abstraction, the scientist usually resorts to technology to verify his hypotheses or to provide the inspiration for a further spell of scientific thought. From the patient's viewpoint, medicine is certainly a technology. To the practitioner, the practice of medicine also has some scientific content. Sick people are real and concrete, but diseases are abstractions invented by physicians.

In studying these definitions, we are not merely playing with words. Medicine will not flourish unless its relations with other sciences and technologies are identified and developed. In this quest, we may be guided by some of the lessons of history.

The first lesson is that, contrary to the belief widely held today, technology is not to be regarded as the product of science. It is easy to pretend that atomic bombs and nuclear power stations are the rewards of conscientious devotion to fundamental studies in nuclear physics during the first half of the present century—and to justify great expenditure in this area of science by suggesting that rich material rewards will follow.

Technology sometimes follows science but, just as often, devotion to humdrum technology provides the inspiration for immensely important scientific studies. The subtle and powerful science of thermodynamics was constructed during the nineteenth century in the attempt to put a scientific foundation under the evidently successful technology of steam. Marconi's demonstration of transatlantic wireless telegraphy was an achievement of technology, apparently violating the known laws of science—but once he had succeeded in demonstrating that radio waves did not necessarily travel in straight lines, the scientists were quick to find an explanation in terms of layers of ionised gas in the upper atmosphere, from which signals could be reflected.

In our own time it is apparent that many of the major problems in biology—genetics, immunity and virology—have been directly inspired by the technology of clinical care. The relation between science and technology is not merely cause and effect. It is an equal partnership in which no one can tell from which side the next major inspiration is likely to come.

The next lesson is that science proceeds by formulating questions and trying to interpret the answers—or, what amounts to the same thing, by making models and testing them against reality. The models are almost always based on the currently fashionable technology—a practice which is particularly evident in relation to intractable clinical or physiological problems. Thirty years ago the brain was commonly described as a telephone

exchange. More recently it was being compared to an electronic computer and, within the last few months, to a holographic system for the storage and recall of temporal sequences.

Richard Mead, who was Queen Anne's physician, was convinced that the technology of mathematics could provide the key to many difficult clinical problems. "It is very evident", he said, "that all other methods of improving medicine have been found ineffectual, by the stand it has been at these three or four thousand years; and that since of late, mathematicians have set themselves to the study of it, men do already begin to talk so intelligibly and comprehensively, even about abstruse matters that it may be hoped in a short time, if those who are designed for this profession are early, while their minds and bodies are patient of labour and toil, initiated in the knowledge of numbers and geometry, that mathematical learning will be the distinguishing mark of a physician from a quack." These sentiments, expressed in the contemporary idiom, are frequently uttered today by distinguished people opening conferences on electronic computers in medicine.

Mead believed that the mechanics of his friend and patient Isaac Newton would, if properly understood, revolutionise the study of toxicology. His book, *A Mechanical Account of Poisons*, published in 1702, did not fulfil this expectation—but the belief that medicine can always be improved by a stiff dose of technology is still with us.

History teaches us also that the emergence of a new technology seldom coincides with the proper moment for its clinical exploitation. Sanctorius, Professor of the Theory of Medicine at Padua from 1611 to 1624, was a pioneer in the application of technology to medicine. He was the first to record a patient's pulse rate, the first to measure a patient's temperature, and the first to appreciate that the body's metabolic processes constituted a balanced system. But his ideas were two centuries ahead of their time. The metabolic studies which Sanctorius made with such remarkable precision, using the crude equipment provided by the steelyard on which he weighed himself, were not significantly improved until Lavoisier and others began their calorimetric experiments with animals towards the end of the eighteenth century. Measurements of the pulse rate and the body temperature did not become a regular part of the physician's examination of his patient until well into the nineteenth century.

On the other hand, Laennec's invention of the stethoscope in 1818 used materials and technology which had been freely available for two thousand years or more. The clinical value of auscultation was known to Hippocrates. The stethoscope would have been accepted and used had it appeared in Greece, Rome or mediaeval Europe.

X-rays provide an illustration of almost exact coincidence between technological feasibility and clinical exploitation. Rontgen's discovery could not have been made much earlier than 1895, since it depended on the technology of vacuum pumps, glass-to-metal seals, photography and fluorescence. When it did appear, the world was ready for it and, within a few weeks, X-ray departments were working in many countries. Paper chromatography and electrophoresis could have been discovered at any time since the beginning of the twentieth century and would certainly have been eagerly accepted.

Today, technology is advancing rapidly on many fronts. The gap between the potential that technology seems to offer and the modest achievement in clinical application is rapidly widening. In this situation, it is not unreasonably supposed that greater investment in science and technology will bring substantial benefits in the realm of medicine. We should remember, however, that many significant advances are likely to be made using old and forgotten or unrecognised technological ideas.

We have seen how medicine sometimes lags in exploiting available technology. It is fair to acknowledge that clinicians have sometimes given a significant lead, by deriving scientific inspiration of great importance from their daily work. The laws and principles governing the flow of fluids in tubes owe much to the insight of Poiseuille who flourished about 1840. Students grappling with the problem of viscosity often suppose that Poiseuille's law was constructed by a physicist. In fact, he was a physician, studying the flow of liquids through narrow tubes in the hope of understanding more about the circulation of the blood. J. R. Mayer, who formulated the principle of the conservation of energy in 1842, was a ship's surgeon. His ideas on the equivalence of heat and work were derived from clinical and physiological observations arising in the course of his duties, sometimes in tropical climates and sometimes in temperate regions.

Science, technology and medicine are the principal agents of progress and the major forces that have shaped the modern world. In studying and developing the relationship among these three activities of the mind and the hand, we have the advantage of access to resources incomparably greater than those available to our predecessors. But knowledge cannot always be equated with wisdom. The history of medicine teaches us that progress is seldom achieved by brilliant people sitting in well-endowed institutes thinking deep thoughts. In medicine, as in so many other activities of concern to the community, progress comes from conscientious involvement in day-to-day technology. Scientists and engineers have important tasks in relation to the relief of suffering and the advancement of learning in the clinical realm—but they must find their inspiration in the wards, clinics and theatres, where the battle against disease is being fought.

On the motion of Dr. T. R. R. Todd, a cordial vote of thanks was accorded Dr. Lenihan for his paper and for arranging an exhibition illustrating the work of his department. It is worthy of note that the Regional Physics Department is accommodated in a building which was erected as a result of voluntary subscription and had served for some time as a children's outpatient department.

THE FIFTY-EIGHTH ORDINARY MEETING

The Fifty-eighth Ordinary Meeting of the Society took place at the Royal Infirmary, Stirling, on 29th June, 1968. Thirty-eight members and guests were welcomed by Dr. W. G. Harrington, the physician-superintendent of the Infirmary, and were the guests of the Hospital Board of Management to lunch prior to the meeting. The Provost of Stirling was among the guests since he is a physician. Following lunch the Society was constituted for business, the President, Professor Dott, in the chair. Major-General F. M. Richardson delivered a paper on:

NAPOLEON AND THE DOCTORS

The main object of this lecture is to suggest that the American author, Korngold (10), may have been right when he wrote that modern pathologists consider it almost certain that Napoleon did not die of cancer of the stomach, though this belief is an article of faith to the British. First, however, some of Napoleon's dealings, both public and private, with our profession must be briefly surveyed. A great many doctors have written books, and articles in medical journals, about various aspects of Napoleon's medical history, and at least three full-scale medical biographies exist—those of Brice (4), of Sokoloff (13), and, most recently, of James Kemble (9), a British surgeon. Only a few aspects of his medical history can be touched on here.

Napoleon was always very interested in science. As a youth he studied anatomy, the precision of which appealed to him, but he was too squeamish

for the dissecting room, although he was to grow into a monster who was believed by many to derive genuine pleasure from gloating over scenes of carnage. "Soldiers! I need your lives—You must give them to me," he is reputed to have said, and such was his magnetic power that they did.

Although he treated many of his doctors very well, rewarding and honouring them, he expected them to be the tools of his policy, and to the credit of the profession many of them resisted him, when it was not safe to do so. Desgenettes, his chief army doctor in the Egyptian campaign, violently opposed Napoleon in the affair of the poisoning of French soldiers too ill with plague to be moved on his withdrawal. Napoleon had preferred to leave them with poison to take rather than accept Sir Sydney Smith's offer of safe-conduct, for this would have made Napoleon's failure obvious to the world. Napoleon may have respected Desgenette's courage, but Desgenettes faded out of the scene leaving the field clear for the ambitious and efficient Dominique Larrey, the famous Baron Larrey, "The Soldiers' Friend", and called by Napoleon himself "the most virtuous man I ever knew". A recent laudatory biography of Larrey, by Soubiran (14) shows even Larrey to have had traits which do not endear him to a British army doctor. He was a master of self-advertisement and frequently actually demanded orders and decorations for himself. He was grasping and never satisfied with the money which officer patients gave him. But he was undoubtedly devoted to his patients and to surgery. He opposed Napoleon when asked to embalm a dead general whilst hundreds of wounded men awaited his attention. Larrey's "flying ambulances" have been adduced as evidence of Napoleon's fancied care for his wounded, compared with Wellington's neglect of his. But Wellington was starved of transport and every other necessity by a short-sighted Government and he did, indeed, care very deeply about casualties. To Napoleon casualties were statistics, and no general was ever more profligate with men's lives, especially with those of his allies. Larrey's ambulances were strictly for the Guard alone, and the sufferings of the wounded in the rest of the army were dreadful, and earned Napoleon the severest of castigations from Sir John Fortescue, with whom only the bravest historian would care to disagree. Napoleon's principal personal and family doctors were Corvisart, Yvan, Boyer, and Hallé. The circumstances in which Hallé left Napoleon's employment in disgust are obscure, but he was asked to do something, or treated in a manner, which he found incompatible with his honour. Halle is said to have written a very frank report about Pauline Bonaparte's hysterical temperament, about the time when rumours were circulating about Napoleon having committed incest with her, gossip to which little credence need be given. This may have had something to do with Hallé leaving Napoleon's service.

Corvisart, the best-known of the four, was a chest physician of international repute. He refused to co-operate in a scheme proposed to him by Napoleon, that he should help to fake a false pregnancy for Josephine, with an adopted child whom Napoleon would announce as his heir. Napoleon's desire not to have to divorce Josephine was great, for as he said, Josephine gave him reassurance. Corvisart refused to participate in this deception but agreed to keep the proposal a secret. Napoleon ought to have known better than to have tried such a trick on a doctor of Corvisart's standing but it may reflect a contempt for the profession.

Yvan, the doctor who accompanied him on all his campaigns from 1796, knew the man intimately, and wrote a good deal about the "nervous" element in his character, a very important aspect of Napoleon's case. All the Bonapartes were apt to be hypochondriac, always going off to spas. Napoleon was a nervous child, and, especially in early life, a volatile, excitable Corsican, subject to violent and quite abnormal outbursts of rage. He was

always fiddling with things, e.g. porcelain figures which he would break. During meetings he would dig chunks of wood and upholstery out of the arm of his chair, with his penknife, so that more than one contemporary discerned in him a mania for destruction. He had a well-documented tic, a sudden violent shrug of the right shoulder, accompanied by a drawing of the right corner of the mouth downwards, which was especially noticeable when his mind was absorbed. Many who knew him well recorded that he was very liable to stomach upsets when things were not going well, and Yvan wrote a report in the presence of De Ségur in 1812 (a year when things certainly did not go well) which is quoted in Volume 2 of Geer (6), and includes these views: "The constitution of the Emperor was highly nervous. He was very susceptible to moral influences, and the spasm was ordinarily divided between the stomach and the bladder. When the irritation affected the stomach he had a nervous cough, which exhausted his moral and physical forces to such an extent that his mind was not normal. The bladder ordinarily shared the spasm and he then found himself under an influence both painful and fatiguing."

It is, of course, well known that Napoleon spent many hours in hot baths, and said himself, "I live by the skin." Here is Yvan's report again: "As soon as his pores were contracted from either a moral or an atmospheric cause the appearance of irritation was manifested, with a result more or less serious, and the cough and ischuria became pronounced. All these manifestations ceased with re-establishment of the function of the skin." (In these extracts a modern translator would substitute the word "emotional" for "moral".)

Napoleon's "ischuria", characterised by great difficulty in starting the act of micturition, was often ascribed to vesical calculi, although at post-mortem there was only some "gravel". The bladder, however, was thickened and contracted, and this could fit the convincing hypothesis recently advanced by Dr. Ayer in the *Journal of the American Medical Association* (3).

Of course, hostile voices have not been lacking to suggest that Napoleon's urinary troubles and a host of other illnesses too, were due to some form of venereal infection. The only shred of "evidence" for this, even amongst the scurrilous anti-Bonaparte pamphleteers, was a statement by the hostile Prussian Count Waldburg Von Truchsess, one of the Allied Commissioners accompanying the fallen Emperor to Elba. He said that Napoleon was suffering from an "amatory complaint" but it is suggested that this is not enough to be convincing. Alfred Adler described Napoleon's kind of urinary trouble as characteristic of sufferers from organ inferiority: *minderwertigkeit von organen*.

Yvan may be thought to have been a bit ahead of his time in diagnosing Napoleon's dermatitis as psychosomatic in origin. It has usually been called "Itch" or scabies, and Napoleon himself believed he acquired it from handling an infected ramrod at the Siege of Toulon where he first came into prominence as a commander of artillery. Kemble (9) considers that all the evidence points to neurodermatitis, described in one textbook as due to chronic scratching of the skin under stress of anxiety or emotional conflict arising particularly from sexual or social problems. In 1799, a very troubled year for Bonaparte until it ended in the Coup de Brumaire, Napoleon was seen to scratch the pimples on his face so fiercely that the blood ran down his clothes, and his soldiers were worried as they thought he had been wounded. Antommarchi relates that in St. Helena he had some sort of sinus or sore on the thigh at which he would tear in moments of stress, and he felt physical and mental relief when the blood flowed (1).

Napoleon's fits, which often ended in unconsciousness, and which usually followed on an outbreak of passionate anger, have been attributed to nervous

stress, and some medical writers have said that similar paroxysms occurred in the cases of Julius Caesar, Alexander, and recently Hitler. Such paroxysms have been linked with endocrine changes following on abuse of power, and such appalling terms have actually been used as "Caesarism" or "Caesaritis". Epilepsy has been diagnosed in Caesar and Alexander, and this was in fact Corvisart's diagnosis in Napoleon's case. He also seems to have suffered from what sound quite like attacks of petit mal. He frequently exhibited twitchings and convulsive movements, in addition to the tic already described. Whether Napoleon's convulsive seizures, or fits had some endocrine origin, as has been suggested, or were epileptic, there is little doubt that he suffered from some form of pituitary dysplasia. (Two pictures were shown, one of the well-known hawklike young general aged 28, at the Bridge at Arcola, and a second less-known sketch of 1812 showing a fat womanly-looking Emperor of 41.) There is ample evidence that a profound change began in about 1805 or 1808, when the Emperor was aged 36 to 38, with increasing obesity, lessened vitality, a tendency to be sleepy, and with much evidence of character and personality changes. It has been deduced that in earlier years he had a hyperplastic pituitary which in later years "burned out" and that his final decline from 1805 onwards was due to the pituitary passing into a hypoplastic state. Dr. L. Guthrie (7) in an article in the *Lancet* in 1913, suggested that Napoleon suffered from hypopituitarism, and there was evidence at post-mortem to support a diagnosis of Frohlich's Syndrome. This is now not regarded as a clinical entity, and a modern diagnosis might be pituitary eunuchism, though it must be admitted I have toyed with the thought of an alternative diagnosis of Klinefelter's Syndrome, not a very rare example of an intersex condition, occurring in about 1 in 400 live male births.

Time does not allow of consideration of Napoleon's other illnesses, his constipation and the prolapsed piles, to which Kemble attributed much of his failure at Waterloo. Piles or not, he had for the first time come up against Wellington and the superb British infantry. He had assured the doubtful Soult, his chief of staff following the suicide of the faithful Berthier, that Wellington was a bad general, and they would be in Brussels that day. His bradycardia too with a pulse rate more or less constant at 40, suggested the diagnosis of Stokes-Adams syndrome.

The postmortem on Napoleon was done, in the presence of seven British doctors, by Antommarchi, who had been sent out by Mme Mère and Cardinal Fesch to be Napoleon's personal physician, after many vicissitudes which will shortly be mentioned. Antommarchi was not a good choice, and they had not bothered to make a good one because they believed, through spiritualistic means, that Napoleon had escaped from St. Helena, though the British would not admit it. Antommarchi was not a physician but an anatomist, so he was at least well enough qualified to perform the post-mortem examination.

He did not give an adequate description of the external appearance of the body, remarking that though the hands and feet were very small "all the other parts of the body were nearly in the ordinary proportions". He indulged in much craniological jargon about organs of love of glory and so on. But Antommarchi did measure Napoleon's height, and made it 5 pieds, 2 pouces, 4 lignes, which have been widely translated in English as adding up to 5 ft. 2½ in., but should be 5 ft. 6 in. (It is a matter of the *pied anglais* being shorter than the *pied du roi*, the French unit of measurement of those days). Napoleon was, therefore, not below the average height of a Frenchman in the 19th century (12). Luckily, Dr. Walter Henry, a British Army surgeon, wrote a report for the Governor in which he gave a detailed description of the body, and, incidentally of the enormous amount of fat with which it was loaded. There was an inch of subcutaneous fat over the sternum, and up to 2 inches

over the abdomen, and a great deal of fat in the omentum and around the heart. Napoleon had, in fact, been described in the year of his death as being "as fat and round as a china pig". Henry also described the effeminate appearance of the body, with gynacomastia; "the pubis much resembled the mons veneris in women"; and the small external genital organs were discreetly described in his memoirs as "partes viriles exiguitatis insignis, sicut pueri, videbantur" (8)—the general appearance which led to suggestions of Fröhlich's syndrome. Napoleon had known all too well about his un-masculine body, which must have been a sad affliction to a man who aspired to dominate men, and he contrived to put a brave face on it. His secretary, Méneval, said "The Emperor loved to joke about the fatness of his breasts", and Napoleon himself once said to Antommarchi, "See, Doctor, what lovely arms, what smooth white skin without a single hair. Breasts plump and rounded—any beauty would be proud of a bosom like mine. And my hand—how many among the fair sex would be jealous of it." Antommarchi seems to have written more than one book, or there has been more than one translation, for this remark can be read in various forms, all adding up to a rather pathetic scene when one considers Napoleon's contempt for Antommarchi, who seems to have been the wrong kind of Corsican, and the suspicion that it may have been an unspoken appeal for understanding of his problem.

But the subject of special interest to the doctors was not Napoleon's physical make-up, but the state of his liver. When this came to be examined the excitement was intense. To understand why, we must take a step back to the earlier years of his captivity, and briefly mention his last illness.

After Waterloo it became a matter of world concern to decide what to do with the fallen Emperor. Britain, unquestionably now the greatest power after Napoleon's defeat, and probably the richest, was the natural choice for the unenviable task of gaoler. It may be hard to credit, but it is a fact, that Napoleon, and many of his followers, believed that he would be allowed to settle in a comfortable estate in England, possibly be awarded the Garter, and probably buried in Westminster Abbey. He implied as much in his oft-quoted letter to the Prince Regent, for when Lord Keith gave orders that on arrival off our shores in *Bellerophon* he was to be immediately transferred to *Northumberland* to be taken to St. Helena, he said that if Napoleon were allowed to see the Prince Regent, in half an hour they would be the best friends in Europe. Lord Keith knew his man too, for that inexplicably magnetic personality, would have enslaved "Prinny" as he had once enslaved others. On the naval vessel taking him to Elba he had won the hearts of the ship's company, and when he disembarked the bosun presented an address from the company wishing Napoleon long life and prosperity on the island of Elba—"and better luck another time"! Britain had to remember the terrible consequences of the escape from Elba, and the heavy casualties of the Waterloo campaign. The decision therefore to send him to St. Helena was in the circumstances a very reasonable one. But Napoleon was horrified, his horror was echoed by Bonapartists, and by thousands of "kind people" in Britain, including the Parliamentary Opposition. The Government thus found itself assailed on all sides for its allegedly harsh treatment of a beaten enemy, and a great man who deserved better. All these hostile critics, in our own country and in Europe, kept a wary eye on the Government and were ready to denounce any examples of cruelty which could be raked up or even invented. There was in fact no cruelty, but plenty of petty spite, e.g. the refusal to allow Napoleon to be called the Emperor, or even Napoleon. It had to be General Bonaparte, or nothing. Senior officers were expected to obey these rigid instructions that letters addressed otherwise to Napoleon should not be delivered. When it came to breaking up a bust of the captive's beloved son in case it contained contraband goods or letters one can see that

there was room for complaint, though it has to be admitted that Bonapartists were actively plotting to rescue their hero. It was all understandable, and mostly not really wicked but very stupid. The crowning stupidity was the selection for the post of Governor of a man whom Wellington considered quite a good and efficient soldier, but much too stupid for the job. Sir Hudson Lowe, execrated by countless historians, especially of course by Bonapartists, has probably been most unjustly treated by history. Even one of Napoleon's little "court" finally admitted as much, adding "even an angel sent from Heaven could not have satisfied us". Lowe had a cold personality, and one can see from his portraits how it was that to Napoleon he always *looked* like a gaoler. He had commanded Corsican Rangers during the recent war, and of course these men to Napoleon must have been traitors, which may account in part for the instant antipathy which developed between the two men. Napoleon habitually used for Hudson Lowe a term meaning brigand in Corsican—"sbirro". For years Hudson Lowe never saw Napoleon, who refused to leave his room if there was a risk of being seen by the Governor. The latter, therefore, had to resort to arranging for an officer to be constantly about in the hope of catching sight of the prisoner so as to satisfy the need to assure the Government that he had not escaped.

Before very long the criticism became centred on Napoleon's health, with the critics alleging that owing to his isolation on a barren rock in the tropics he was gravely ill, and suffering, moreover, from a condition to which this place of captivity rendered him particularly liable, viz. hepatitis. This disease was endemic amongst the soldiers and civilians living there. The Government replied that this risk was negligible, Napoleon was perfectly well, and hepatitis was not endemic, indeed St. Helena was a charming and salubrious spot. It thus became a matter of Government policy to forbid all mention of hepatitis, and two naval doctors who diagnosed that condition in Napoleon were dismissed from the Navy. The best known of these was O'Meara, who had been recommended by Captain Maitland of *Bellerophon* for the post of personal doctor to Napoleon, an appointment which he accepted with reluctance. However, as he had to take the job, he very properly identified himself with his patient's best interests, as he saw them, and has in consequence had scanty justice from our countrymen. In October, 1817, when Napoleon complained of pain over the liver, and in the right shoulder, O'Meara found that the liver was palpable, firm and tender, and he tentatively diagnosed hepatitis. He stuck to this diagnosis, despite opposition from Hudson Lowe, and Dr. Baxter, Deputy Inspector of Hospitals, and this led to quarrels. O'Meara was removed from St. Helena and later dismissed from the Navy, one of the charges being that he had had "traitorous correspondence with the people at Longwood."

Napoleon was never thereafter quite free from dull right-sided pain, and other symptoms leading other doctors to diagnose hepatitis. After the dismissal of O'Meara, whom he liked, Napoleon refused to see the Governor's nominee, a Doctor Verling, and the Governor allowed him to call in Dr. John Stokoe, another naval doctor, and, incidentally, a friend of O'Meara, by whom he was presented on one occasion to Napoleon on whom he had made a good impression. It is recorded that Stokoe had dreaded being called to see Napoleon, having a good idea from O'Meara's fate what it could lead to. Stokoe confirmed O'Meara's diagnosis, and clearly suspected that the hepatitis had gone on to abscess formation, for he gave this as his prognosis: "If matter formed and it broke into the intestines he might be saved; if it pointed externally he might be saved by an operation; but if it burst into the cavity of the abdomen death must ensue." This was, of course, before the *Entamoeba histolytica* or emetine were known about. We shall see that Stokoe may very well have been right, and there can be no possible

grounds for thinking that he gave his opinion other than honestly, but he was in due course tried by court martial and dismissed from the Navy. The charges against him given in his memoirs, which significantly enough were first published in French by a Frenchman (15), make odd reading, and basically point to the fact that he went against the stated policy of the Government, as transmitted to him by his admiral. He had improperly said that Napoleon was ill and might get worse, he had "stated facts about Napoleon which had been dictated to him by members of the Napoleon suite". We might paraphrase this remark by saying that Stokoe had tried to get a history of his patient's complex case. It will be recalled that a petty annoyance was the refusal to refer to the prisoner as the Emperor, or even, as the entire world did then and has done ever since, as Napoleon. It had to be General Bonaparte, though Napoleon insisted that he had not been known by that title for many years. The improper term used by poor Stokoe had been "the patient". Stokoe has made little mark in history and O'Meara has been harshly dealt with. Perhaps he did write rather too much after leaving St. Helena in trying to justify his actions. Perhaps he did so for hope of money from Napoleon. On the whole, however, it seems that these two doctors did their best for a difficult patient in even more difficult circumstances, and the Royal Naval Medical Service has no cause to feel ashamed of them.

Antommarchi became Napoleon's doctor in September, 1819, and on the way to St. Helena he had been summoned to the Colonial Office, and instructed to disregard all previous medical reports—Napoleon was perfectly well. He was, as already stated, an anatomist rather than a physician, but it was not long before he too diagnosed hepatitis. In July, 1820, he wrote to Mme. Mère's chamberlain informing him that Napoleon had hepatitis, which he said was endemic in St. Helena. On 17th March, 1821, he wrote again to say that Napoleon was daily getting worse, and that "the hepatic functions are no longer performed". Later he was to say that he knew Napoleon had hepatitis, but the English doctors insisted on a diagnosis of cancer. Walter Henry in his memoirs stated that Antommarchi had refused to sign the post-mortem report after being called aside by Bertrand and Montholon—two members of Napoleon's suite—and later in order "not to vitiate the diagnosis of O'Meara" and also to throw "odium indirectly on the British Government, the death of the Emperor was attributed by Antommarchi to gastro-hepatitis, which was said to be an endemic disease of the island." Antommarchi made Napoleon's life happier for a time by recommending him to take up gardening, horse-riding and so on, but made his last weeks hideous by forcing unpleasant and useless medicines on him, making him retch and vomit with tartar emetic. By this time Napoleon was coughing up a lot of matter which looked like coffee grounds of a rather reddish tinge, and was also said to be like chocolate. Bertrand described how towards the end "his vest was covered with red spittle that had not been able to roll further". Could Stokoe's prognosis have been right? Could this have been the detritus from an amoebic liver abscess? On 25th March, 1821, Antommarchi was allowed to call in Dr. Arnott who diagnosed hypochondria, and made light of Napoleon's illness to the Governor. Even in those unenlightened days it was probably inconvenient for an important patient to die less than two months after a diagnosis of hypochondria, and it will be found that Arnott makes a better shot in his memoirs (2). The last word can be left to Napoleon, who usually had this when alive. He said, "Hudson Lowe forbids anyone to suffer from liver complaints on this island. Any type of disease is permitted here except one—hepatitis." The cause of the doctors' interest in the liver at the post-mortem can now be understood.

That so many different versions of extracts from the post-mortem reports

are to be read in various books may be partly due to the fact that three separate reports were prepared, and the English translations of one of them, Antommarchi's, are dissimilar.

Walter Henry in his report stated that the liver was healthy "despite the expectation of Antommarchi to see a flow of pus from the abscess which had been anticipated". We have already noted that Henry commented on Antommarchi's reluctance to sign his report, and made it plain that he wanted to support O'Meara's diagnosis of hepatitis. Of course, if Antommarchi expected to see pus he did not understand the nature of an amoebic abscess, but he was at least an anatomist who knew what a liver looked like, and he said that Napoleon's liver was "affected by chronic hepatitis", and that the adhesions to the diaphragm and stomach were "strong, cellular, and of long duration", and "at every point of contact (with the stomach) the liver was sensibly thickened, swelled and hardened". In the official report by Dr. Shortt, the P.M.O., as it finally stood, "no unhealthy appearance presented itself in the liver"—but it has been said that Hudson Lowe had compelled him to erase the words "the liver was perhaps a little larger than normal". Dr. Shortt meekly submitted, but he kept the original copy annotated "the words obliterated were suppressed by the orders of Sir Hudson Lowe"—signed Thomas Shortt (10). He subsequently reported to Hudson Lowe on 8th May, 1821, that "had the edges of the ulcer which penetrated the coats of stomach near the pylorus not firmly adhered to the liver, death would have been sooner, as part of the stomach contents would have escaped into the abdomen." Henry also described the adhesions and said that the stomach and liver were separated with difficulty, and that the stomach "exhibited a mass of cancerous ulceration and scirrhus thickening, fast advancing to cancer". This without histological examination of course. Thomas Shortt described the same adhesions and said that the stomach was extensively affected by "cancerous disease" Antommarchi's report stated that the stomach "at first appeared healthy", but later he found a small circumscribed induration, in the centre of which was a perforation which would have communicated with the peritoneum but for its close adherence to the liver. He also mentioned a "cancerous ulcer of considerable extent in the stomach". Without microscopic examination doubt about the cancerous nature of the ulcer is at least permissible. Perhaps Korngold overstated his case in saying that "modern pathologists consider it practically certain that Napoleon did not" die of cancer. But enough has been said to sow the seeds of doubt. Of course at the time Bonapartists, and indeed people all over the world loudly expressed doubts. Napoleon, it was said, had been quite young and fit when he went to St. Helena, how could he have died of cancer? At once rumours circulated that he had been poisoned. Quite recently this rumour has been revived in a book by a Swedish dentist, Sten Forshufvud (5) and the theory rests upon the discovery of arsenic in many hairs which were undoubtedly those of Napoleon. The finger is pointed, not at the British, but at some member of Napoleon's suite—probably Montholon. They were all anxious to get home to France, and clung to their jobs at Longwood, largely in the hope of being beneficiaries under Napoleon's will.

Soon after the publication of Forshufvud's book the French consul at St. Helena, M. Gilbert Martineau, wrote to *The Times* (11th December, 1962), belittling the suggestion of poisoning, and averring that Napoleon died of boredom, a theory which was first suggested in 1823 by Las Cases, who was with Napoleon in St. Helena (11). Is death from boredom possible?

Maximilien Vox, in his biography, quotes a Dr. Guy Godlewski, who in a lecture at the Napoleon Institute in 1947, refuted the cancer theory, and stated that "the hole spotted in the autopsy 'at the exit of the stomach' was probably due to the action of bad nourishment on a worn and mentally

depressed subject, as Marcel Dunant has noted" (16). In the report of a Clinicopathological Conference (*Brit. med. J.*, July, 1968), a general practitioner, dissenting from all the experts, won a leading article for himself. After tracing the psychosomatic influences throughout the patient's illness he ended, "I feel that he died because all that he lived for had somehow come to nothing". Could there be a better description of Napoleon's situation? Even those who do not love him cannot fail to be moved by the pathos of a remark which he once made to General Gourgaud, who was always complaining of the intolerable "ennui" of St. Helena. "Do you think that when I lie awake at night I have no bad moments—when I think what I was and what I am?"

Again the last word may be left with Napoleon—in Elba he once said that on a small island, once one had set the mechanism going, nothing was left but to die of boredom, or in some heroic venture to escape from it. The second alternative was impossible in St. Helena—is it possible that he adopted the first?

REFERENCES

- (1) Antommarchi, F. *The Last Days of Napoleon*. London. 1826.
- (2) Arnott, A. *An Account of the Last Illness, Decease, and Post-mortem Appearance of Napoleon Bonaparte*. London. 1822.
- (3) Ayer, W. A. *J.A.M.A.* May, 1966.
- (4) Brice, R. trans. B. Creighton. *The Riddle of Napoleon*. London. 1937.
- (5) Forshufvud, S. *Who Killed Napoleon?* London. 1962.
- (6) Geer, W. *Napoleon and His Family*, Vol. II. London. 1928.
- (7) Guthrie, L. *Did Napoleon Suffer from Hypopituitarism?* *Lancet*. 1913.
- (8) Henry, W. *Events of a Military Life*. London. 1843.
- (9) Kemble, J. *Napoleon Immortal*. London. 1959.
- (10) Korngold, R. *The Last Years of Napoleon*. London. 1960.
- (11) Las Cases, Comte de. *Memorial de Sainte Helene*. Paris. 1823.
- (12) Richardson, F. M. *Stature and Personality*. *B.M.J.*, Vol. 1, p. 516. 1968.
- (13) Sokoloff, B. *Napoleon: A Doctor's Biography*. New York. 1938.
- (14) Soubiran, A. *Le Baron Larrey. Chirurgien de Napoleon*. Librairie Fayard. 1966.
- (15) Stokoe, J. *With Napoleon at St. Helena. Being the Memoirs of John Stokoe, Naval Surgeon*. Translated from the French of Paul Fremeaux by Edith S. Stokoe. London and New York. 1902.
- (16) Vox, M. *Napoleon*. Evergreen Books. London. 1960.

A lively discussion followed General Richardson's delightful paper and Dr. J. M. A. Lenihan referred to the part played by his department in assessing the arsenic content of a lock of Napoleon's hair and which had caused some stir following publication of the results. Dr. W. M. Mitchell proposed a vote of thanks to General Richardson for his paper in the most felicitous terms and thanked Dr. Harrington and his Hospital Board of Management most warmly for their hospitality.

THE FIFTY-NINTH MEETING AND TWENTIETH ANNUAL GENERAL MEETING

The Fifty-ninth Meeting and Twentieth Annual General Meeting of the Society was held in the Hall of the Royal College of Surgeons of Edinburgh

on 2nd November, 1968. The President, Professor Dott, in the chair and there were thirty-eight members and guests present. It was explained that owing to the Honorary Secretary responsible for production of the Report of Proceedings having been overseas, no Report for the previous session was available. It was hoped that a Report would be produced which would cover two sessions of the Society's activities and this would be presented at the Society's next Annual General Meeting in the autumn of 1969.

The Honorary Treasurer presented a financial statement and this was accepted. On the motion of Dr. H. P. Tait, the Society unanimously agreed that Honorary Membership of the Society should be conferred upon Professor Adam Patrick, now living in retirement at Rugby. Dr. Tait also raised the question of corresponding membership of the Society. Opinion was divided between two proposals, viz. (a) that a new category of Corresponding Members be instituted, with or without subscription; and (b) that the situation be left as it was, the Honorary Secretaries to send copies of the Report of Proceedings to anyone who, in their opinion, merited such from their known interest in history of medicine, provided always that available copies of the Report were to hand. On a show of hands proposal (b) was accepted by a narrow majority.

The following Office-bearers were elected for Session 1968-69:

President: Dr. M. H. Armstrong Davison.

Vice-Presidents: Professor N. M. Dott and Mr. Thomas Gibson.

Honorary Treasurer: Dr. W. A. Alexander.

Joint Honorary Secretaries: Dr. H. P. Tait and Dr. A. H. B. Masson.

Council Members: Dr. A. T. Sandison; Dr. Ian A. Porter; Mr. Charles G. Drummond, M.P.S.

Professor J. Boyes and Drs. Lenihan, E. R. C. Walker, A. Allan Bell, and G. D. Forwell, being eligible for re-election, were re-elected Members of Council.

Dr. Armstrong Davison was then installed as President. In his remarks he thanked the Society for electing him as their President, warmly acknowledged the work of Professor Dott for the Society during his occupancy of the chair, and expressed the thanks and appreciation of the Society to the retiring Members of Council. He then called upon Mr. J. A. Ross to speak on:

THE HISTORY OF THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH

The Royal College of Surgeons of Edinburgh was founded in 1505 and the Seal of Cause was confirmed by James IV in 1506.

In the early years, the Craft was small and served only the Burgh. The earliest home was in Dickson's Close off the Cowgate. It is now a crumbling ruin full of broken stone and willow-herb behind St. Cecilia's Hall, which houses the Department of Early Keyboard Instruments of the University of Edinburgh. It is at present a scene of desolation. When the City Fathers have finally cleared up this area, it might be appropriate for the College to see that a suitable plaque is put up commemorating the site of its first meeting-place.

In 1697 the surgeons built their first hall on the site of East Friars Yard. This is still standing, part of the University, and some years ago the College put a bronze plaque on the wall commemorating the building's former importance. It is from this time we can date the commencement of a nucleus of a Museum. A record of donations was made, as described in Mr. Hartley's History of the Museum, and on the list we find:

A case containing ten old German lancets;
A large eel-skin from Cramond Water;
A pair of Scots cock's spurs clecked in Fife, prodigiously long;
An American Wasps' nest; and
An alligator, or young crocodile.

The Museum has expanded somewhat since then but the old tastes are still apparent; we have a wonderful collection of old surgical instruments, and we still seem to hanker after curios—shrunken heads from South America, etc.—dear to the heart of Professor Mekie.

Anatomical teaching was carried out by the College in those days, and in 1720 Alex. Monro, son of John Monro the Army surgeon of William of Orange, was appointed Professor of Anatomy at Surgeon's Hall, till 1726 when he moved to the University and with four physicians founded the Faculty of Medicine at Edinburgh University. Coincident with the rise of the University, the College passed through a period of adversity which lasted for several decades. The Hall was let as private residences and in 1763 it was decided to hand over to the Keepers of the University Library the College's collection of books and Curiosities. Only two preparations were retained, and are still in the Museum on display, skeletons prepared by Pitcairne in 1702 and Monro in 1718. Sole relics of glories which departed, and which never returned.

The Museum therefore, like the College Library, faded out of existence for a good many years.

In the College records, 1804 is the year in which the present Museum had its origin. A Museum Committee was formed consisting of five members of the College along with the President and the Professor of Surgery to manage the Museum, which the College authorities decided to form.

In 1807 nine members of the College were appointed Curators and then ten years later it was reported that the Museum contained upwards of 300 preparations of diseased organs and textures very interesting and instructive, and a catalogue had been made out.

In 1816 a Keeper had been appointed, the first being John William Turner, assistant to Professor John Thomson in his class of surgery which he held till 1821 when he became Professor.

In that year, 1821, when the College was in a much more prosperous state than previously, the Convener of the Curators, Professor John Russell, called for an Extraordinary meeting of the College to consider a proposal to purchase the Museum belonging to Dr. Meckel. This contained 5,000 preparations and the price was £5,000. Negotiations with Meckel, however, did not succeed.

Then in the same years Dr. John Barclay, the well-known anatomy teacher, generously made an offer to the College of his museum, simply on the condition that the College build a hall to receive it, and the Collection be allowed to retain his name. One of Dr. Barclay's exhibits, the elephant's skull, still occupies a prominent place in the Museum and can be seen, as well as Dr. Barclay's bust, in the Barclay Historical Room.

Next, William Cullen, a grand-nephew of the great Dr. Cullen, persuaded the College authorities to provide him with a salary of £300 a year to go to Paris and acquire material for the Museum from the abundant material there; he was allowed £500 in addition to his salary to purchase the preparations.

He must have been a most persuasive person—I can see our present Fabric and Finance Committee allowing any Fellow nowadays to go to Paris at the College's expense in such a venture. Mr. Cullen was not successful however, and he was so chagrined with his failure after his sanguine expecta-

tions that he had a stroke of apoplexy and had to return to Edinburgh after only seven weeks.

Up to this time, the growing Museum was housed in part of the Hall and was, according to Lonsdale, a very poor affair in 1823. But things were to change. In 1824 Dr. Robert Knox, the anatomist, became connected with the College. He wrote a letter to the Convener of the Museum Committee, Dr. James Russell, offering to bestow his whole-time labour and energy towards forming a museum of comparative anatomy and physiology, and in January, 1825 he was appointed Conservator of the Museum.

The College gained greatly from the services of this remarkable and dynamic man, and the affairs of the Museum moved quickly. The details of his career are sufficiently well known. It has formed the subject of biographies and plays—James Bridie's "The Anatomist", Dylan Thomas's "The Doctor and the Devils". These have dealt with the more melodramatic and more lurid aspects of his career; but he was unquestionably a man of genuine scientific attainments. His commonplace book which Dr. H. W. Taylor and I unearthed in the Anatomy Department of Edinburgh University a few years ago gives undoubted evidence of his careful observations in the Anatomy rooms, and it is referred to in Miss Isobel Rae's recent sympathetic biography of Knox.

It is significant that the anatomical references in this commonplace book cease suddenly after 1828, the rest of the book being largely filled with comparative anatomy and pathology entries. It may well be that Knox was unable to obtain human subjects following the exposure of the criminals who had supplied him. The inference may also be drawn that the anatomist, profoundly upset by the Burke and Hare affair, ceased his dissections and note-taking on human anatomy for the time and devoted himself to comparative anatomy.

In February, 1825, Dr. Knox and Mr. Watson went to London and acquired for the College at a cost of £3,000 the Bell Collection of anatomical and pathological preparations. This was really two collections, Bell's own and that of James Wilson. These collections had been made in the Great Windmill Street School, started by the Hunters. There is not time to say much about that celebrated figure Charles Bell, later Sir Charles. Surgeon, professor, artist, scientist, co-discoverer with Majendie of the functions of the nerve roots. His paintings adorn the walls of the Museum today and his preparations have been of such value to us throughout the years. As Sir Gordon Taylor remarks in his "Life of Bell", the £3,000 the College spent on the Bell collection was the best bargain the College ever made.

From London the collection was shipped to Leith; the first half arrived, packed in 65 cases on board the smack *Robert Bruce*, and was conveyed to Surgeon's Square on wagons lent by the Royal Artillery. The remaining half arrived a year later.

Now indeed, as Hartley remarks, the College was greatly exercised about finding accommodation for their extensive collection. At this somewhat critical time Dr. Knox's own affairs received a deadly blow when the body of a murdered woman was found in his dissecting room. The Burke and Hare murders and the ensuing scandal must have greatly hampered his work as Curator. He was subjected to nagging criticism; he was censored by the Curators and incurred the enmity of that powerful and influential man, Professor James Syme. In 1831 he resigned from the Conservatorship and passes out of our present story. The College, however, has not forgotten him; a re-appraisal has been made and recently Professor Mekie, the present Curator, laid a granite tombstone on his grave.

There was keen competition for the position of Conservator, and out of nine candidates Mr. William MacGillvray was appointed. It was he who cleaned, rearranged and labelled 4,000 specimens and supervised the transference to their home in the Museum in the New Hall in 1832, that is, our present building. After ten years of devoted service he became Professor of Natural History at Aberdeen, resigning the Conservatorship in 1841.

During the next century, after its long and stormy and eventful gestation, the Museum continued to flourish as one of the most important parts of the College, under a succession of eminent Conservators, each of whom made his particular contribution to the Museum's historical, research and educative functions.

Curators

1826-1831	Robert Knox
1831-1841	William MacGillvray
1841-1843	John Goodsir
1843-1845	Harry Goodsir
1845	Alex. Goodsir (a few months)
1845-1852	Hamlin Lee
1853-1869	W. R. Sanders
1869-1875	J. B. Pettigrew
1875-1887	R. J. Blair Cunynghame
1887-1900	C. W. Cathcart
1900-1902	T. Shannan
1903	David Waterston (February-October)
1903-1920	Henry Wade
1921-1936	D. M. Greig
1936-1939	C. F. W. Illingworth
1939-1947	J. W. Struthers
1947-1955	J. N. J. Hartley
1955	E. C. Mekie

In the last ten years the Museum has attained its greatest influence during the tenure of office of the present Conservator, Professor Mekie.

I will not discuss the improvements Professor Mekie has made during his routine duties: recataloguing, putting on demonstrations both historical and scientific, remounting and arranging all the specimens in the Museum. But I must report certain great additions he has made to the importance of the Museum:

- (1) He has made the Barclay Historical Room of absorbing interest with cabinets devoted to eminent surgeons of the past.
- (2) The famous Menzies Campbell Dental Collection has been acquired and suitably installed in the College; the College made very little demer to the considerable expense incurred in preparing a suitable hall for it out of old lumbar rooms and attics.
- (3) Extensive workshops have been set up at the extension of the Museum in 10 Hill Square.
- (4) Most important, largely through Professor Mekie's inspiration, the College now has established a Wade Professorship.

The first Wade Professor was Professor Boyd of Toronto, and his tenure of office during which he gave memorable addresses to the Fellows was an unqualified success. Now we have Professor Cappell as the second holder of this office. Wade Demonstratorships have also been instituted, Fellows of any seniority giving demonstrations on the wealth of material in the Museum, and these Demonstratorships are proving very successful.

A Museum, according to the Oxford Dictionary, is "a building in which objects illustrating art or science are kept for show". This definition does not entirely cover this particular Museum, which is indeed an intrinsic part of the vital core of our great College.

This brings my brief account of the story of the Museum up to date.

Professor D. E. C. Mekie then spoke on:

THE FUNCTIONS AND THE CATALOGUES OF THE COLLEGE MUSEUM

Initially the purpose of the Museum was to provide material to assist John Thomson, who had recently been appointed Professor of Surgery by the College of Surgeons and the arrangement, and collection, and preservation of specimens were in his charge. It was only later in 1816 that the first Conservator was appointed.

The catalogue in which the specimens are described and given a serial number is of uncertain date of origin but the first mentioned date is 1807. This—The General Catalogue—was continued unbroken for a hundred years. It was then discontinued although the numerical sequence was maintained. The General Catalogue was revived in 1957 in new form and now contains the complete record of all pathological and anatomical specimens in the Museum.

The Bell Collection was purchased in 1825 and a separate catalogue in the nature of an inventory of material transferred is extant. The Bell Collection included specimens which had been prepared and acquired by his predecessor in the great Windmill School, James Wilson, and the separate catalogue of this collection was acquired by the Museum in 1827, along with a number of additional specimens which had not been in the original sale by Bell. In 1828 the College had transferred to it by deed of gift the Barclay Collection, chiefly concerned with comparative anatomy. This too had a separate catalogue but of this collection of material little now remains. Yet another group of specimens came to the Museum in 1837, from a Dr. McIntosh. This was originally Division XVI of the Bell Collection of obstetrical material and with this came the descriptive printed catalogue which was used in the Windmill School in London.

When the general catalogue was resumed in 1957 specimens, recorded in these several catalogues and which previously had been given a separate index number, were incorporated in the general catalogue.

In 1836 after the transfer of the collection from old Surgeons Hall to the present Museum a printed catalogue was prepared by Macgillivray, the Conservator at that time, in which the arrangement of the specimens in the various sections of the Museum is noted. This was succeeded by the second printed catalogue prepared by Cathcart and Shennan between the years 1896 and 1903. In this catalogue an entirely new indexing system was introduced for identification purposes and the arrangement was in accord with the concept of classification which Cathcart had described in a paper published in the Edinburgh Medical Journal in 1896. In 1904, Henry Wade, who was now Conservator, introduced a new form of recording the new specimens received in the Museum and from that date there has been kept a scroll or day book in which is entered the date, and donor, and description of the specimens. Three years later he discontinued the General Catalogue but in 1923, two years after his appointment as Conservator, David Greig again revised anew the method of recording. He introduced a system using a loose sheet method of arrangement and identifying the specimens by a pathological index which incorporated symbols both for the anatomical site and the pathological character of the specimen. He also resumed the

practice of giving to each specimen a serial number as in the General Catalogue.

The pathological catalogue which Greig had devised, while convenient in some respects, was not entirely free from the risk of error. In 1957, it had become obvious that in certain aspects the Cathcart classification, although logical, presented many practical difficulties and that the pathological index based upon it as devised by Greig had become outmoded. Accordingly, the opportunity was taken to introduce yet another new classification and review the whole system of recording in the Museum. The general catalogue was resumed and has now been completely retyped and is the final source book of information on all specimens. The pathological catalogue with the new classification has been maintained, while the day entries in the scroll book record the material as received but as yet not accepted for inclusion in the collection.

In 1963 a separate catalogue was introduced in which records of historical and other material not suitable for entry in the General Catalogue is recorded and to this in 1966, the Menzies Campbell Collection and catalogue were added.

These catalogues are more than a list of specimens for they afford an interesting study of pathology as it was understood at different times in the past. They afford an opportunity of appreciating the incidence of disease as it was seen and they are a record of the growth and development of recording techniques. The original General Catalogue, the Bell, Wilson and Barclay catalogues are manuscript volumes but while the entries in the General Catalogue and accordingly the number given to the specimen are in chronological order, in the Bell and Wilson collections some attempt at classification has been made. It is only when we come, however, in 1896 in the printed catalogue of Cathcart, that we see an attempt to find a scientific basis for classification reflecting the increasing knowledge of pathological change. The Greig catalogue reflects an appreciation of new techniques, typewriter and the card indexing systems which in their time, were the most modern of methods. Today there are loose-leaf books where Greig used a tin cabinet with drawers and doubtless change will continue, for the Museum continues to grow and to serve its usefulness must be ever changing in its methods so that specimens are available for study, research and for comparison.

Mr. A. A. Gunn, F.R.C.S. and Dr. A. A. Shivas spoke on a selection of the specimens from the Museum. Brief notes of their remarks will be printed in next year's Report of Proceedings.

After the papers, members and guests were afforded the opportunity of visiting the Museum and various exhibits which had been arranged by the various speakers. The President, Dr. Armstrong Davison, thanked Professor Mekie and his colleagues for a most interesting and informative programme.

THE SIXTIETH ORDINARY MEETING

The Sixtieth Ordinary Meeting of the Society was held in the Bloch Lecture Theatre, Royal College of Physicians and Surgeons of Glasgow on 28th February, 1969. The President, Dr. Armstrong Davison, was in the chair and thirty-eight members and guests were present. Dr. A. T. Sandison read a paper on:

DISEASES IN ANCIENT SOCIETIES

Our knowledge of those diseases which occurred in ancient societies is derived in the main from four sources. These are literary and artistic studies and the investigation of skeletal and soft tissue remains.

The medical historian concerns himself mainly with the philosophical content of medical thought in the period which he studies. For students of ancient disease the historian must, however, concentrate on the accurate recognition of diseases described in the current literature. His sources will comprise the Ancient Egyptian Medical Papyri, the pre-Christian *Susruta Samhita* for Ancient India, the vast literature from the Graeco-Roman period including the *Corpus Hippocraticorum*, the works of encyclopaedist Celsus and the physicians Galen, Aretaeus, Soranus of Ephesus, Paulus Aegineta, etc. Further details may be culled from lay writers such as Herodotus and Thucydides: even the comic playwrights such as Aristophanes may be gleaned for snippets of information. Further material comes from the Holy Bible and Talmud, the Code of Hammurabi and other early Near Eastern and American sources.

Unfortunately, with the decline of classical studies in general education and the great labour required to master the Ancient Assyrian, Babylonian, Egyptian, Chinese and other tongues there are few practising physicians who have direct access to original sources. There are occasional exceptions, e.g. Gerald C. Moss (1967), but in general it seems to me that considerable advantage would attach to collaboration between scholars and physicians. The day of Francis Adams of Banchory has gone for ever and the future lies with collaborative studies such as those of Chadwick and Mann (1950) on part of the *Corpus Hippocraticorum*.

I think we must allow, however, that the scholar of ancient languages, even although not medically qualified but with some background knowledge, may play an exceptionally useful role and here I think especially of the works of the Egyptologist Warren R. Dawson and the Assyriologist J. V. Kinnier-Wilson which have great merit.

In some instances firm diagnoses may be made from the original sources e.g. those of mumps with orchitis, lobar pneumonia, black water fever and meningitis from Hippocrates, of diabetes mellitus from Aretaeus, of dermatological disorders from Celsus, of gynaecological conditions of great diversity from Soranus and of traumatic surgical states from the Edwin Smith Surgical Papyrus. Nevertheless, many retrospective diagnoses must be presumptive: the confusion which surrounds the true nature of the plague of Athens described by Thucydides in his *Peloponnesian War* is an excellent example.

Another valuable source of material comes from the study of the visual arts in the widest sense. Here we may think of the pathological adiposity of the *Venus of Willendorf* and other fertility figurines, of the curious contours of the *Queen of Punt* who may have suffered from bilateral congenital dislocation of the hip, of the numerous statuettes of achondroplastic dwarfs from Ancient Egypt, e.g. that of *Seneb* from the Old Kingdom of Egypt, of the obvious endocrinopathy portrayed in the Karnak Colossi of the Pharaoh *Akhenaten* of the New Kingdom Period and of the figurines from Ancient Egypt which suggest the presence of Pott's disease of the spine. Similarly, our knowledge of sexual deviant practices from Pre-Columbian South America is greatly re-inforced by the study of pottery vases from these countries.

Further studies of paintings from the Renaissance period onwards would doubtless produce other examples of pathological conditions exemplified by the faithful portrayal of rhinophyma by Domenico Ghirlandaio (1449-1494).

Despite all this, our best evidence of ancient disease must come from the study of actual human remains, which fall into two groups. Dry skeletal remains only cover a vast range of time, so that we may say that myositis ossificans existed in *Homo erectus* more than 200,000 years ago. Even these,

however, are dwarfed in time by our evidence of disease in the bones of fossil animals such as Permian period reptiles and the immense dinosaurs of the Cretaceous period. While much valuable evidence may be adduced from bones only, the latter are not significantly affected by many killing diseases. Valuable additional information may, therefore, be obtained from soft tissue remains: these include sand-dried Predynastic bodies from Egypt, true Egyptian mummies, sun-dried bodies from South America, the Canary Islands and other locations and the exceptionally well-preserved bog bodies or *Moorleichen* from North Germany and Scandinavia.

All of these may be examined by several techniques which extend from simple macroscopic examination by hand and eye to histological studies by the ordinary light microscope, polarising and electron microscopes. Also employed are sophisticated radiological techniques and even chemical, biochemical and serological methods. All of these may yield valuable information but great care must be taken to exclude pseudo-pathology (Wells, 1967).

Unfortunately, there is a tendency for archaeologists to be embarrassed by the discovery of human remains during an excavation. These often receive scant attention compared with that devoted to cultural artefacts and are meagrely reported. Nevertheless, a bone may be as important a historical document as a pot or piece of jewellery and should receive the same skilled attention. There is little doubt that much of value has been lost because of this bias towards artefacts and archaeologists require to be reminded that if the object of their science is to provide a *total* picture of the life of past people this must be incomplete without a knowledge of their state of health, expectation of life and presence of detectable disease or injuries. Archaeologists should also be trained to recognise such things as gallstones and renal stones. The incidence figures for calculi are almost certainly too low because of failure of archaeologists to recognise their presence in tombs.

Much may be learned of the structure of both dry skeletal material and actual embalmed or dried bodies by radiological examination. Even an unwrapped mummy can, with skilled application of radiographic techniques, show evidence not only of skeletal disease but the presence of such diseases as cholelithiasis and arterial calcification. This is of great importance since most enlightened museum curators will permit such studies since they do not damage specimens and also reveal cultural artefacts such as jewels, pectorals and embalming plates (Dawson and Gray, 1968).

Radiography may also be of value in the study of dried bones which show changes difficult to interpret on macroscopic examination. Calvin Wells (1964) has done much useful work in this field; he has been able to show such diverse changes as polyostotic fibrous dysplasia and osteoid osteoma in Saxon bones and convincing evidence of multiple myelomatosis in a Mediaeval calvarium.

Histological examination of dried bones, while of great academic interest rarely gives useful supplementary information; thick slabs cut with a high speed bandsaw are more informative. They may be examined with a stereoscopic dissecting microscope or subjected to radiography. This technique may also be applied to the examination of portions of preserved bodies (Sandison, 1968).

On the other hand, histological examination of soft tissue remains is of the utmost value and has enabled the recognition of such diseases as arterial degeneration which would otherwise still be unrecognised. This work was initiated largely by Sir Marc Armand Ruffer to whom I have paid tribute elsewhere (Sandison, 1967d). I have also summarised the value of such examinations (Sandison, 1963). More recently, the resources of the electron microscope have been utilised and may or may not prove to be important (Sandison and Macadam, 1969).

Before we turn to some particular examples of diseases existing in Antiquity it may be said that there is no evidence that a Golden Age ever existed in which man was totally healthy and free of disease. Palaeopathological evidence is supported by that extrapolated from studies of contemporary wild apes (Schultz, 1939) and of contemporary Neolithic peoples living in remote areas of New Guinea (Polunin, 1967).

Rowling (1960) has calculated that the expectation of life among the nobility in the New Kingdom Period of Ancient Egypt was about 39.8 years; it must have been considerably lower for the common people. Angel (1947) has suggested from studies of Ancient Greek cemeteries that civilization in Greece may have increased life expectancy by 4 to 5 years to a rate not dissimilar to that in post-mediaeval Europe. Such palaeodemographic studies being pursued in the United States of America should provide data of interest concerning the Ancient Indian inhabitants of that country (Jarcho, 1966).

I believe that, while patterns of disease may change and mutations may affect the pathogenicity of bacteria, protozoa and viruses, probably the only really new diseases are iatrogenic and produced by modern therapeutics.

Under normal conditions (excepting those of overcrowding in experimental rodent populations) violence within a species appears in the main to be confined to man. There is evidence from the earliest periods of violent death in man; Courville (1967) has discussed the evidence for cranial injuries in prehistoric man ranging from *Pithecanthropus* of the Middle Pleistocene in China, *Homo Erectus* from Java, Neanderthal Man, Upper Palaeolithic and Late Stone Age Man in China, and Upper Palaeolithic, Mesolithic, late Prehistoric and Protohistoric Man in Europe. Many of these cranial injuries must have been delivered with malicious intent. Flight arrowheads have been discovered in bones from the Neolithic Period onwards. I have studied a recent example of flint arrow embedded in the remains of a vertebral body excavated by Corcoran (1966) at Tulloch of Assery, Caithness. There are numerous examples of injuries caused by mace, sword, and battle axe from Ancient Egypt to the Mediaeval Period. From Roman Egypt interesting examples of mass judicial execution by hanging, decapitation and spear thrust have been noted by Elliot Smith and Wood Jones (1910). Sacrificial hanging and throat cut, probably for fertility reasons, have been discovered in bog bodies from Grauballe and Tollund.

Infection also appears to have occurred from the earliest period and increased with the gregariousness which followed the Neolithic Revolution. Neanderthal Rhodesian Man showed both dental and aural infection and similar processes are noted in remains from Ancient Egypt and Nubia and in Bronze Age, Anglo-Saxon, Merovingian and Mediaeval peoples (Sandison, 1968).

Tibial periosteitis is particularly common in ancient skeletal remains but this may be due to the vulnerability of the subcutaneous part of the tibia to injury or extension of cutaneous infection (Wells, 1964).

There is evidence of healed appendicitis and pleurisy from Ancient Egypt and possibly, although not certainly, of poliomyelitis. Cholelithiasis and renal lithiasis have been noted in Egyptian mummies but of course these may have been of metabolic rather than infective origin.

Degenerative arthritic disease is also common in skeletal remains from all periods and has, indeed, been noted frequently in fossil reptiles from the Mesozoic period onwards. Probably the great majority of these are examples of simple osteoarthritis (Sandison, 1968). Wells (1965) has, however, described osteochondritis in a Saxon knee joint. I am not aware of convincing evidence of rheumatoid arthritis.

The earliest evidence of leprosy comes from the Coptic period in Egypt (Elliot Smith and Dawson, 1924). I have recently demonstrated in material from this body bacilli which are stainable by the methenamine silver method. Numerous examples of leprosy from Mediaeval Denmark have been described in an excellent monograph by Moller-Christensen (1961). This complements our knowledge of leprosy from the literary and artistic sources of the period. There is little doubt that King Robert the Bruce of Scotland was a leper (Moller-Christensen and Inkster, 1965).

Tuberculosis is also a disease of great antiquity. Morse, Brothwell and Ucko (1964) accepted 31 examples from Ancient Egypt: the case for tuberculosis in pre-Columbian America is less clear and has been ably reviewed by Morse (1961).

The origin of syphilis seems to me to remain obscure. There is no clear evidence of this disease in the vast amount of material examined in Egypt and Nubia and none from Britain before the 16th century. There is some evidence (more scanty than is generally believed) of the disease in pre-Columbian America but the widely-held hypothesis that the disease was introduced to the Old World by the sailors of Christopher Columbus remains unproven. Syphilis may well have become epidemic and venereal in Europe as the result of a mutation of some pre-existing endemic and non-venereal spirochaete.

Neoplasia was probably fairly rare in Ancient peoples because of the short expectation of life (Brothwell, 1967). I am unable to accept the evidence for osteosarcoma in the Pleistocene mandible from Kanam; the earliest acceptable osteosarcoma is of Iron Age date (Sandison, 1968). The alleged case described by Elliot Smith and Dawson (1924) in a 5th Dynasty Egyptian is an osteochondroma. Intra-cranial meningiomas produce hyperostotic changes in the cranium often misdiagnosed as osteosarcomas. Such changes have been noted in skulls from Ancient Egypt, the Roman Period and from Peru (Sandison, 1968).

I accept Wells' cases of Saxon osteoid osteoma of femur and multiple myeloma of a Mediaeval calvarium. Possible examples of secondary carcinoma involving bone come from Ancient Nubia, Tepe Hissar and the Saxon and Mediaeval period (Sandison, 1968). Urteaga and Pack (1966) have convincingly described a massive secondary involvement of the skeleton by malignant melanoma in a Pre-Columbian Inca.

Degenerative arterial disease occurred in ancient times. I have demonstrated atheroma, arteriosclerosis and medial calcification of the arteries in Egyptian Mummy material (Sandison, 1967b) and have discussed in detail the probability that degenerative vascular disease caused the death of King Herod the Great of Judaea (Sandison, 1967c).

I have noted with Brothwell anthracosis of the lungs and hilar lymph nodes in a sun-dried body from the Canary Islands. This has also been seen in Egyptian mummies.

Skin diseases were frequent in the past: for this there is ample literary evidence. Ruffer and Ferguson (1911) described apparent small-pox in a 20th Dynasty mummy and probably the Pharaoh Ramesses V died of this disease. I have demonstrated senile acne and squamous papilloma in Egyptian mummy skin (Sandison, 1967d).

Many other examples could be given if time permitted but I shall end this limited survey by referring to the parasites which have accompanied man's progress through the millennia (Sandison, 1967e). Lice and nits have been noted on the hair of Egyptian and Inca mummies. *Schistosoma* ova were demonstrated by Ruffer (1910) in the kidneys of 20th Dynasty mummies.

Pike (1967) in a brilliant study of ancient cesspool and latrine deposits has demonstrated by flotation methods that inhabitants of Winchester living one thousand years ago were heavily infested by *Ascaris*, *Trichuris* and *Dicrocoelium* worms.

Conclusion. In this necessarily brief look at the problem of disease in ancient societies I have been compelled to limit myself to an account of the methods by which we may determine the presence of such diseases. I have touched upon a few which are of particular interest to me. I have been unable to mention the work of many students in this field. The scope is vast and the interested medical historian may find some guidance to the literature in the appended references.

REFERENCES

- Angel, J. L. (1947). *J. Gerontol.* **2**, 18.
- Brothwell, D. (1967). The Evidence for Neoplasms.*
- Chadwick, J., and Mann, W. N. (1950). The Medical Works of Hippocrates. Oxford.
- Corcoran, J. X. W. P. (1966). *Proc. Soc. Antiq. Scot.* **98**, 1.
- Courville, C. B. (1967). Cranial Injury in Prehistoric Man.*
- Dawson, W. R. and Gray, P. M. K. (1968). Mummies and Human Remains. British Museum, London.
- Elliot Smith, G. E. and Dawson, W. R. (1924). Egyptian Mummies. London.
- Elliot Smith, G. E. and Wood Jones, F. (1910). The Archaeological Survey of Nubia, Vol. II. Cairo.
- Jarcho, S. (1966). Human Palaeopathology. Yale.
- Moller-Christensen, V. (1961). Bone Chnages in Leprosy. Copenhagen.
- Moller-Christensen, V. and Inkster, R. G. (1965). *Dan. Med. Bull.* **12**, 11.
- Morse, D. (1961). *Amer. Rev. Resp. Dis.* **83**, 489.
- Morse, D., Brothwell, D. and Ucko, P. J. (1964). *Amer. Rev. Resp. Dis.* **90**, 524.
- Moss, G. C. (1967). Mental Disorder in Antiquity.*
- Pike, A. W. (1967). The Recovery of Parasite Eggs from Ancient Cesspit and Latrine Deposits; an Approach to the Study of Early Parasite Infections.*
- Polunin, I. V. (1967). Health and Disease in Contemporary Primitive Societies.*
- Rowling, J. T. (1960). Disease in Ancient Egypt. M.D. Thesis, Cambridge.
- Ruffer, M. A. (1910). *Brit. med. J.* **1**, 16.
- Ruffer, M. A. and Ferguson, A. R. (1911). *J. Path. Bact.* **15**, 1.
- Sandison, A. T. (1963). The Study of Mummified and Dried Human Tissues. In D. Brothwell and E. Higgs (eds.) Science in Archaeology. London.
- Sandison, A. T. (1967a). *Med. Hist.* **11**, 150.
- Sandison, A. T. (1967b). Degenerative Vascular Disease.*
- Sandison, A. T. (1967c). *Med. Hist.* **11**, 381.
- Sandison, A. T. (1967d). Diseases of the Skin.*
- Sandison, A. T. (1967e). Parasitic Diseases.*
- Sandison, A. T. (1968). Pathological Changes in the Skeletons of Earlier Populations due to Acquired Disease and Difficulties in their Interpretation. In D. Brothwell (ed.) The Skeletal Biology of Earlier Human Populations. Oxford.
- Sandison, A. T. and Macadam, R. F. (1969). *Med. Hist.* **13**, 81.
- Schultz, A. M. (1939). *Bull. Hist. Med.* **7**, 571.
- Urteaga, O. B. and Pack, G. T. (1966). *Cancer*, **19**, 607.
- Wells, C. (1964). Bones, Bodies and Disease. London.
- Wells, C. (1965). *Med. Biol. Ill.* **15**, 100.
- Wells, C. (1967). Pseudopathology.*

* Those references marked with an asterisk are chapters in Brothwell, D. and Sandison, A. T. Diseases in Antiquity. Springfield, Illinois.

Dr Sandison's excellent paper provoked lively discussion which had to be cut short owing to the exigencies of time. The President expressed the thanks of the Society to Dr. Sandison for an extremely original paper profusely illustrated with some unique slides.

THE SIXTY-FIRST ORDINARY MEETING

The Sixty-first Ordinary Meeting took place at Newcastle upon Tyne on 28th June, 1969. Members and their guests assembled for lunch in the Board Room of the Royal Victoria Infirmary, thereafter proceeding to the Museum of Antiquities under the guidance of Dr. D. J. Smith, Keeper of the Museum. The Society was constituted for business in the New Lecture Theatre at the Royal Victoria Infirmary, where the President, Dr. Armstrong Davison was in the chair and twenty-four members and guests were present. A paper was delivered by the President entitled: *An Artists View of Early 18th Century Medicine.*

This address will be published in next session's Report of Proceedings.

The Society looks forward to the future with confidence for continuing support from its members and the recruitment of many new members. Offers of papers for presentation to future meetings will be warmly received and intending speakers should communicate with Dr. A. H. B. Masson, Joint Honorary Secretary responsible for the organisation of meetings.

M. H. Armstrong Davidson, *President.*

H. P. Tait, *Joint Honorary Secretary.*

APPENDIX

THE SCOTTISH SOCIETY OF THE HISTORY OF MEDICINE

List of Names and Addresses of Members

July, 1969

- Dr. W. A. Alexander, F.R.C.P.Edin., 9 Randolph Crescent, Edinburgh, 3.
Professor Stanley Alstead, 37 Victoria Crescent Road, Glasgow, W.2.
Professor D. Fyfe Anderson, Cairnbank, 29 Roman Road, Bearsden.
- Dr. and Mrs. A. Allan Bell, Belcairn, 6 Birkhall Drive, Bearsden.
John S. G. Blair, Esq., F.R.C.S., 143 Glasgow Road, Perth.
Professor John Boyes, Dental Hospital, 32 Chambers Street, Edinburgh, 1.
Dr. J. H. F. Brotherston, 26 Mortonhall Road, Edinburgh, 9.
Dr. A. A. Brown, 77 Kirk Brae, Liberton, Edinburgh, 9.
Professor Sir John Bruce, St. Bernard's Cottage, Mackenzie Place, Edinburgh, 3.
- Dr. J. Inglis Cameron, Gartmain, Blairhoyle, Kippin, Stirling.
Dr. J. Stanley Cant, 10 Maple Avenue, Newton Mearns, Glasgow.
Dr. and Mrs. J. Menzies Campbell, 70 Great George Street, Glasgow, W.2.
Mr. R. J. Carnon, 64 Grange Loan, Edinburgh, 9.
Dr. W. D. H. Conacher, 17 Braehead Road, Edinburgh, 4.
John Cook, Esq., F.R.C.S., 13 Carlton Street, Edinburgh, 4.
Professor-Emeritus John Craig, 5 Albyn Terrace, Aberdeen.
- Dr. M. H. Armstrong Davison, 186 Wingrove Road, Fenham, Newcastle upon Tyne, 4.
Dr. R. S. Dewar, Strathclyde Hospital, Motherwell.
Professor Norman M. Dott, 3 Chalmers Crescent, Edinburgh, 9.
Mr. Charles G. Drummond, M.P.S., 7 Braehead Grove, Bo'ness, West Lothian.
- Mrs. Eaves-Walton, 55 Manor Place, Edinburgh, 3.
- Dr. J. S. Falconer, Physiology Department, Medical School, University of Newcastle, Newcastle upon Tyne.
Miss P. Ferguson, Librarian, Royal College of Physicians, 9 Queen Street, Edinburgh, 2.
Dr. John Ferrier, Royal Infirmary, Greenock.
Dr. G. D. Forwell, 20 Ravelston House Park, Edinburgh, 4.
- Thomas Gibson, Esq., F.R.C.S., East Brae, 26 Potterhill Avenue, Paisley.
The Revd. Dr. A. M. Gillespie, 135 Craiglea Drive, Edinburgh, 10.
Mrs. E. Goodall, 32 Queen's Gate, Glasgow, W.2.
Dr. N. Gordon, 2 Priestfield Road, Edinburgh, 9.
Dr. and Mrs. Douglas Guthrie, 21 Clarendon Crescent, Edinburgh, 3.
- Dr. Alexander Haddow, 16 Hamilton Drive, Glasgow, W.2.
Dr. W. G. Harrington, 9 Laurelhill Place, Stirling.
Phillip Harris, Esq., F.R.C.S., F.R.C.P., Bellver, 38 Ravelston Dykes, Edinburgh, 4.
Professor John L. Henderson, Department of Child Health, Queen's University, Dundee.
Dr. John Hewitt, Napier Lodge, Strathblane, Glasgow.
Dr. Colin F. Hogg, Southfield Farm House, Dalkeith, Midlothian.
Dr. T. J. Honeyman, 20 Queen's Gate, Dowanhill Street, Glasgow, W.2.
Dr. Lewis F. Howitt, 2 Liberton Drive, Edinburgh, 9.

Dr. I. D. Innes, 10 Park Avenue, Hull.

Dr. Alexander Jamieson, 24 Swanston Gardens, Edinburgh, 10.

Dr. James Kennedy, 45 Woodlands, Gosforth, Newcastle upon Tyne, 3.

Dr. Walter P. Kennedy, 18 Lennox Street, Edinburgh, 4.

Dr. R. A. Krause, 2 Craighleith Hill Grove, Edinburgh, 4.

Dr. James Kyles, Glenisla, Lundin Links, Fife.

Dr. J. M. A. Lenihan, Regional Physics Department, Western Regional Hospital Board, 9-13 Graham Street, Glasgow, C.4.

Dr. Ernst Levin, 2 Portgower Place, Edinburgh, 4.

Dr. S. G. MacArthur, Myrdon House, Strathblane Road, Milngavie.

Dr. Annie McCrorie, 121 Queen's Drive, Glasgow, S.2.

Dr. Robert M. McGregor, O.B.E., 27 Bridge Street, Hawick.

Dr. Angus Macniven, F.R.C.P., 1055 Great Western Road, Glasgow, W.2.

Dr. A. M. Maiden, Chintamata, Southend, Argyllshire.

Professor A. Mair, Department of Preventive and Social Medicine, Queen's University, Dundee.

Dr. Alastair H. B. Masson, 13 Osborne Terrace, Edinburgh, 12.

George Millar, Esq., F.R.C.S., Rosendaal, 15 Frogston Road East, Edinburgh, 9.

D. C. Miln, Esq., F.R.C.S., 88 Stewarton Drive, Cambuslang.

Dr. Robert Mitchell, 18 Ashby Road, Burton-on-Trent, Staffordshire.

Dr. and Mrs. William S. Mitchell, 41 Easedale Avenue, Melton Park, Newcastle upon Tyne, 3.

Dr. Robert Mowbray, F.R.C.P., 220 Gilesgate, Durham.

Professor-Emeritus Adam Patrick, 5 Whitehill Road, Rugby, Warwickshire.

Dr. D. M. Pendreigh, 51 Riccarton Avenue, Currie, Midlothian.

Dr. and Mrs. Robert J. Peters, 67 Braid Avenue, Edinburgh, 10.

Dr. and Mrs. Ian A. Porter, 125 Deggwood Place, Aberdeen.

Dr. E. Neil Reid, Woodcliffe, Bridge of Allan, Stirlingshire.

Dr. D. Reilly, Health and Welfare Department, 23 Montrose Street, Glasgow, C.2.

Professor-Emeritus W. J. Brownlow Riddell, 24 Gladstone Place, Aberdeen.

Dr. R. F. Robertson, F.R.C.P., 15 Wester Coates Terrace, Edinburgh, 12.

James A. Ross, Esq., F.R.C.S., 5 Newbattle Terrace, Edinburgh, 10.

Dr. A. T. Sandison, Department of Pathology, Western Infirmary, Glasgow, W.1.

Dr. Robert A. Shanks, 9 Belmont Crescent, Glasgow, W.2.

Dr. J. Simpson, Department of Preventive and Social Medicine, Queen's University, 9 Dudhope Terrace, Dundee.

Dr. David C. Simpson, 10 Napier Road, Edinburgh, 10.

Dr. Andrew A. Shivas, 40 Granby Road, Edinburgh, 9.

Dr. J. C. M. Sharp, 13 Drumbrae Place, Edinburgh, 12.

Dr. D. Stewart, Appin, Kirriemuir, Angus.

Dr. Alexander Slessor, Knowlton, 12 Racecourse View, Ayr.

Robert I. Stirling, Esq., F.R.C.S., 4 Hermitage Drive, Edinburgh, 10.

Dr. Elaine Stocquart, 33 Balvicar Street, Glasgow, S.2.

Dr. Angus E. Stuart, 30 Spylawbank Road, Edinburgh, 13.

Dr. H. P. Tait, F.R.C.P., St. Anne's, 59 Woodhall Road, Edinburgh,
EH13 0HF.

Dr. Jane Thompson, 1 Montague Avenue, Gosforth, Newcastle upon Tyne,
NE3 4HX.

Dr. and Mrs. T. R. R. Todd, 13 Lansdowne Crescent, Edinburgh, 12.

Professor D. A. G. Waddell, "Glencairn", 4 Westerton Drive, Bridge of
Allan.

Dr. E. R. C. Walker, Arniston Home Farmhouse, Gorebridge, Midlothian.

Dr. and Mrs. W. N. Boog Watson, 145 Bruntsfield Place, Edinburgh, 10.

Dr. J. C. Walker, F.R.C.S., 99 South Street, Greenock.

Dr. Martin Whittet, Physician-Superintendent, Craig Dunain Hospital,
Inverness.

Professor C. W. M. Wilson, Department of Pharmacology, Trinity College,
Dublin, Republic of Ireland.

Dr. James Wilson, 48 Orchard Brae Avenue, Edinburgh, 4.

Mrs. Peter Willis, 31 Nelson Street, Edinburgh, 3.

Professor L. G. Whitby, 57 Fountainhall Road, Edinburgh, 9.

R. B. Wright, Esq., F.R.C.S., 47 Manse Road, Bearsden.

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.

Printed by
Gordon Wilson, 47 Thistle Street, Edinburgh.