MEDICAL EDUCATION DURING THE EIGHTEENTH CENTURY

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It is not only at the present time that uneasiness has been felt about the state of medical education. In 1651 Dr. Robert Wittie published an English translation of a book called 'Popular Errours,' first written in Latin by Dr. James Primrose. This book states: 'And so it may be said of a Physician, onely the exquisite knowledge of his owne art is to be expected. From whence a manifold Errour of the people doth arise. First, that they call him a learned Physician and a great Schollor, who can perhaps speake Latine, or understand a little Greeke, but not him that is well experienced in his owne Art; . . . for well said Celsus chiefe of the Latine Physicians, that Diseases are not cured with Eloquence.' He condemns the Universities for conferring the Degree of Doctor 'for some small matter' on persons of 'meane learning' and commends the College of Physicians of London for ordaining 'at London that no Doctour of the Universities should exercise his Art there, before that after new examination he be approved by the College of Physicians. For in many Universities, although Physick be diligently taught in their publike Lectures, yet in conferring these degrees they are too carelesse, denying them to few or none.' A further error is 'that they that have been Physicians' servants, although meer ignorant fellows, after the death of their Master, or many times before, address themselves to the practice of Physick; of whom I have known many, and they are also thought by the people to have some knowledge, because for many years they have served a Physician. . . . The same may be said of some Apothecaries, whom some Physicians have long employed; but all this is not sufficient to make a Physician, nor can the Medicinall art be so easily learned.'

These quotations from a contemporary book give a broad summary of the state of medical education and an idea of the diversity of people who attended the sick in the 17th century. The 18th century, although not so generous with its spectacular discoveries and advancements as the 19th and 20th, nevertheless laid the foundations for these later advancements. In the broader field the power of Parliament was built up, the collective responsibility of the Cabinet evolved

and the office of Prime Minister with his official residence at 10, Downing Street was established. It was the century of Clive and Warren Hastings in India, Wolfe in Canada and the American War of Independence. At the turn of the century slave trade was abolished. It was also the century of bribery and corruption, of gambling and drunkenness, of bad roads and poor communications. The 18th century has been described as the cradle of the Industrial Revolution. In the medical world many notable advances were made, and many of the now famous London hospitals were founded. Cracks appeared in the shell of traditional empiricism and the fledgling of medical discovery emerged to grow up in the 19th century and to fly in the 20th. Changes in medical education occurred slowly and almost imperceptibly, but the desire for improvement was rising and culminated in the Apothecaries Act of 1815 and the Medical Act of 1858.

The Profession

There was not the multitude of different careers open to the doctors of the 18th century as there are today. All doctors practised general medicine, although some also consulted. The London hospitals had only physicians and surgeons on their staff. Although Edinburgh had established a professor of midwifery in 1726, it was not until 1793 that a maternity hospital was founded and this was independent of the Infirmary (Guthrie). In London the general hospitals took in all kinds of cases. There were, however, a few specialized hospitals; one was the Small-Pox Hospital at King's Cross which had been started for the purpose of inoculating people by direct inoculation from an active papule, another was the famous Bedlam Hospital for lunatics.

Election to hospital appointments was not always on merit. Dr. J. J. Abraham has published an extract from the minutes of the General Court of Governors of the London Hospital held in 1784 to fill a vacancy on the staff. The candidates had to possess the diploma of a Licentiate of the College of Physicians and were then eligible to stand for election by ballot by the governors. An annual governor paid £5 a year. A life

governor had to make a contribution of 30 guineas. It was not unknown for the friends of a candidate to spend £100 to £200 making governors for the sole purpose of obtaining their votes, a practice in 1794. Most of these appointments were honorary, although Guy's Hospital paid £40 a year to each surgeon and physician, and St. Thomas's £40 a year to each physician and £49 6s. 8d. to each surgeon. However, an established physician made an immense fortune; thus Dr. Richard Mead (1673-1754) is reputed to have made between £5,000 and £6,000 a year from his practice. Dr. Mead is also reported to have held consultations in the 'forenoons, when apothecaries used to come to him at Tom's (a coffee-house) near Covent Garden, with written or verbal reports of cases for which he prescribed without seeing the patients, and took half-guinea fees' (MacMichael).

The surgeons came under the direction of the Surgeons' Company, which later became the Royal College of Surgeons. At St. Thomas's and Guy's each surgeon had to see the 'whole number of his patients once a week, when he presents out those who are cured, and gives directions for the rest. Particular bad cases are seen every day if necessary, because, by a rotation, one surgeon at least visits the hospital every day. On Saturday, the physicians and surgeons all meet and go in pairs to visit all their patients. Friday is the general day for operations and for grand consultations' (Wilks and Bettany). At St. Bartholomew's there were also assistant surgeons, and in 1794 Sir William Blizard was suggesting that these appointments should be available at all hospitals. The surgeons supplied and kept their own instruments. At the beginning of the century the surgeons were still inclined to be mentally linked with the barbers, but by the time the College of Surgeons was formed in 1800 their status had increased and they consulted on equal terms with the physicians. Indeed, it is reported that in 1813 Sir Astley Cooper received 1,000 guineas for a consultation, whilst the physicians shared 600 guineas between them.

The vast majority of medical practice was carried out by the general practitioners and apothecaries. These were a very mixed collection of people as anyone could practice (outside London) without examination. At the hospitals there were one or more apothecaries on the staff and they were in effect the R.M.O.s. They were allowed to take on apprentices and lectured on chemistry. The pay for the apothecary at Guy's Hospital was £80 a year.

Despite the general lack of control of those attending the sick and the lack of examinations, there were nevertheless quacks, mountebanks and

charlatans whose success caused great resentment among the more orthodox practitioners. William Reade, a tailor, who took to treating eye diseases, was so successful that he was knighted by Queen Anne.

Her Majesty sure was in surprise,
Or else was very short-sighted;
When a tinker was sworn to look after her eyes,
And the mountebank Reade was knighted.
(Jeaffreson.)

Apprenticeship

The fundamental method of teaching in the 18th century was by working in intimate contact with established practitioners. For this purpose the aspiring student became an apprentice to his employer and a formal legal document was drawn up. The period of apprenticeship was from five to seven years. On completion of his time the student obtained a certificate stating that he had completed his training satisfactorily, and frequently became a member of the Society of Apothecaries or the Surgeons' Company. Occasionally he would travel abroad or attend a hospital as a pupil for six months or a year before starting to practice.

Judging from the clauses in Dr. John Fothergill's (1712-1780) indenture (Abraham) the apprentice could only have borne a slight resemblance to a medical student; for it was decreed that he 'his master well and faithfully shall serve; his secrets shall keep; taverns he shall not haunt; at dice, cards, tables, bowls, or any other unlawful game he shall not play.' In return his master undertook to teach him 'the art, trade, mystery or occupation of an apothecary,' and provide him with 'sufficient and enough of meat, drink, washing and lodging.' Fothergill's father had to pay £50 for these considerations.

In the master's absence the apprentice visited the patients and at other times helped his master by writing out the prescriptions and dispensing them. Meanwhile he was expected to read as many books as possible and generally acquire a thorough knowledge of medicine. A knowledge of Latin was essential as many books were still written in that language.

Society of Apothecaries

Before the Reformation the care of the sick was the responsibility of the ecclesiastics, but their canons forbade them to shed blood or practice for gain. The barbers were employed to perform the bleeding and later for other surgical procedures, and the apothecaries (storekeepers) to compound and administer medicines. After the Reformation the apothecaries came under the Grocers' Company, but in 1617 the Apothecaries Company was

separated and became independent. Owing to the increased population, the scarcity of doctors and their customary fee of half a guinea for advice, the apothecaries soon began independent practice among the middle and lower classes of the people. This practice was condemned and resented by the physicians who, in 1703, prosecuted an apothecary for advising and treating a patient without calling in a physician. The facts were admitted and the apothecary was convicted; the Society of Apothecaries took the case to the House of Lords, where the verdict was reversed on the ground that both custom and public need required that apothecaries should be allowed to advise their clients as well as to treat them (Cecil Wall). The apothecaries could only charge for the medicine and not for their advice; perhaps this rule was the cause of the massive prescriptions and the public's love of a 'bottle of medicine.'

The Society held no examinations except a preliminary examination in Latin carried out by the Court of Assistants, but the general practitioner after apprenticeship became a member of the Society. In 1815 the Apothecaries Act was passed and from then until 1858 the Society had legal control over all the general practitioners in England. The Act stated that any man not already in practice must in future become a member or licentiate of the Society of Apothecaries if he 'attended, prescribed and dispensed medicine for gain in a medical case.' To obtain their licence the candidate had to satisfy the Society concerning his general education, and the Society insisted that a knowledge of the natural sciences and of Latin was indispensable, while Greek should be known if possible. The candidate must have served a five-year apprenticeship and attended at a hospital or at a recognized 'dispensary.'

Universities

Most of the universities of Europe conferred a doctorate of medicine, the system of examination being the presentation and acceptance of a thesis. The ease with which these degrees were obtained varied considerably from place to place. Thus William Knighton (1776-1836), physician and placater of mistresses to George IV, 'put together some first hand observations and second hand quotations in the form of a thesis which he dispatched to the college professors in the University of Aberdeen and they granted him a diploma' (Harley Williams). Myersbach, a notorious quack, held the M.D. of Erfurth. Jeaffreson states that 'his degree was bought for a few shillings, just before that university raised the prices of its academical distinctions in consequence of the pleasant raillery of a young Englishman, who paid

the fees for a Doctor's Diploma and had it duly recorded in the Collegiate archives as having been presented to Anglicus Ponto; Ponto being no other than his mastiff dog.'

Oxford and Cambridge were connected with the Royal College of Physicians during the 18th century. To become a Fellow of the College it was necessary to obtain the M.D. of Oxford, Cambridge or Dublin, and the elected Fellows of the College were able by influence to prevent persons of insufficient attainments from admission to degrees. Both universities gave the degrees of M.B. as well as M.D., although the bachelorate was not so often conferred. Very few of the doctors seem to have studied medicine at Oxford or Cambridge, although many obtained their doctorates. The universities treated the subject as a part of general book learning. Edward Browne (1644-1708), son of Thomas Browne (author of 'Religio Medici'), in 1663 wrote a supplicat for admission to the degree of M.B. at Cambridge. A copy of this is preserved in the British Museum (Sloane, 1797) and a synopsis appears in Sir Norman Moore's book, 'The History of the Study of Medicine in the British Isles.' Edward Browne states 'that he had studied medicine for six years, and had heard the usual lectures, and passed through the required oppositions, responsions and other exercises of the kind.' The exercises were a matter of reading and argument.

At Oxford the picture is very similar. The curriculum consisted of courses in anatomy, chemistry and botany and a study of Hippocrates and Galen. Dr. Campbell Hone, in his recently published 'Life of Dr. John Radcliffe,' states that 'the licences for the practice of medicine and surgery were issued by the University without any adequate inquiries as to the qualifications of applicants, and the requirements for the degree of Bachelor of Medicine were meagre indeed. The candidate must have taken his M.A., have spent three years in medicine and attended lectures of the Regius Professor on Hippocrates and Galen twice a week at 8.0 a.m. . . . The D.M. degree could not be taken till four years after the B.M. degree, and during those four years the candidate had to attend the lectures of the Regius Professor and also to give three or four lectures himself on Galen.' The medical staff of the university consisted of the regius professor, two medical fellows who commented on the works of Hippocrates and Galen, and a professor of natural philosophy. There was no hospital teaching, but practical instruction was given in botany, specimens being grown in the botanic garden.

Supreme among the European universities was Leyden where from 1709 to 1738 Dr. Herman

Boerhaave (1668-1738) was professor of medicine. Boerhaave taught medicine as it is applied to the patient and shifted the main emphasis away from classical scholarship towards practical knowledge. He attracted doctors and students from all over the world and his influence, teaching and methods were widely spread by his pupils. Even after his death Leyden remained the Mecca for travelling doctors. One of his students was von Haller (1708-1777), who became professor at Gottingen. He has been acclaimed the father of physiology and besides collecting all the original works on the subject he demonstrated the excitability of muscles and the sensibility of nerves (Guthrie, 1945). Another pupil was Gerhard van Swieten (1700-1772), who became professor at Vienna.

But it was not only the continental schools that gained inspiration from Boerhaave. Alexander Monro (1697-1767), another student of Boerhaave, taught anatomy at the Surgeons' Hall at Edinburgh and later anatomy and surgery in the university with immense success, and attracted great crowds to his lectures. In 1726 four fellows of the College of Physicians were appointed as professors in medicine, physiology, chemistry and *materia medica* at Edinburgh University, and these four, as well as the professors of chymistry and botany, were all pupils of Boerhaave. In the same year the chair of midwifery was founded, the first in any university (Guthrie, 1945). Towards the latter part of the century surgery was taught by the distinguished Benjamin Bell (1749-1806), and medicine by the equally brilliant William Cullen (1710-1790). Both these professors have preserved their teaching for posterity. Bell wrote a 'System of Surgery' in six volumes and Cullen 'First Lines of the Practice of Physic,' 1777. In the preface to this latter book there is a critical review of the systems of medicine of Stahl (1660-1734), Hoffman (1660-1742) and Boerhaave which prevailed through the century. The importance of the Edinburgh school was not only the illustriousness of its professors, or even the fact that systematic medicine was taught, but also there was not the same religious intolerance as existed at Oxford and Cambridge. Quakers and other dissenters could attend the lectures. Fothergill, a famous London Quaker physician, who has already been mentioned, was a student at Edinburgh after completing his seven years' apprenticeship.

London University was not then in existence. University College was founded in 1827 for dissenters and University College Hospital was founded as the centre for systematic medical teaching. In contrast to this, King's College was established on Church of England principles. University College agitated, soon after its foundation, to obtain a charter enabling it to give degrees.

This eventually led to the government granting a charter forming London University in 1836.

Hospital Teaching

At Edinburgh the University was associated with the Infirmary, so that practical and theoretical medicine could be taught. It appears that clinical material was not readily available (if at all) at Oxford and Cambridge. At London teaching was carried out at the hospitals and, towards the end of the century, formal lectures were given.

At the beginning of the century surgery was the main subject taught in the hospitals, and there is fortunately a contemporary account of the manner of this teaching still preserved. This account is contained in a document written in 1792 by Joseph Warner (surgeon to Guy's Hospital from 1745 to 1790) and is printed in full in Wilks and Bettany's (1892) 'Biographical History of Guy's Hospital.' The following are abstracts from this document: 'Each surgeon was permitted to receive four pupils and four dressers at a time, inclusive of apprentices.' The apprentices were the most superior, then the dressers and finally the pupils. The pupils originally had to bring certificates of their apprenticeship, 'but now they only bring their money.' The pupils were considered as belonging to the hospital and not to one particular surgeon; they were obliged to submit to the rules of the hospital and were subject to be expelled for any misbehaviour. They could not be admitted for a term of less than six months. 'The pupils' business is only to look on, and to make such an enquiry as he shall choose of the surgeon who is then attending. There are not many bodies opened for examination; but when we can obtain leave for an inspection it is the business of the surgery man to acquaint the pupils with the intention, and all those that wish may attend. It is the business of the surgery man to make them acquainted with every accident immediately on its entry.' For these privileges the pupil paid 24 guineas per annum or 18 for six months. This money was shared amongst the surgeons and apothecaries to the hospital. The dressers, who paid £50 per annum direct to one surgeon, became the responsibility of that surgeon and took a more active part than 'looking on,' as also did the apprentices who paid from £250 to £1,000 to their master (but they also expected to succeed to their master's appointment).

At the same time as this clinical teaching was carried on lectures were given. Thus to quote again, 'There have been lectures read in anatomy in which observations in surgery have ever been introduced from the beginning. . . . The fee for these lectures and for the dissecting room is twelve guineas. There are lectures read every

morning at half-past seven on Midwifery by Dr. Lowder in the Borough. . . . At ten o'clock Mr. Babington the apothecary, gives a lecture in Chymistry. Those mornings that pass without the lecture in Chymistry, Dr. Saunders supplys with one on the Practice of Physic. The anatomical lectures are every day from one o'clock until three o'clock.' The fee for each course of lectures except the anatomical was 10 guineas. Saunders' lectures, which were published under the title 'Elements of the Practice of Physic' in 1780, were the first series of lectures on the theory and practice of medicine to be given at Guy's. Dr. Saunders was a graduate of Edinburgh and was a pupil of Dr. Cullen, and it was probably this association that led Saunders to give his lectures at the hospital.

Lettsom, who was a student at St. Thomas's for one year in 1766, does not mention attending lectures on medicine, but states that he spent his time 'visiting the patients, writing out their symptoms and afterwards examined the prescriptions of the physicians. I compared the writings and practice of authors and by degrees I acquired some precision in anticipating both the practice and the remarks of the faculty. If I thought myself much at a loss I repeated my visits to the hospital in the afternoon, and this not only confirmed the little knowledge I had acquired but likewise gave me a frankness and ease of demeanour at the bedside' (Abraham, 1933). From these remarks it will be seen that Lettsom had evolved the practice of careful case-taking almost simultaneously as Antonde Haen (1704-76), who succeeded van Swieten at Vienna, and who is credited as being the first to evolve this practice (Guthrie, 1945).

At the London Hospital Sir William Blizard obtained permission to give lectures on anatomy and surgery inside the hospital in 1781. Four years later the first medical school building was opened and this was due not only to the energy of Sir William Blizard but also to his financial backing.

Out-patient teaching was not carried on during the 18th century. But here again Lettsom had realized its value. In the second edition of his book, 'Of the Improvement of Medicine in London,' 1775, he suggests a scheme of lectures and demonstrations to be given at the General Dispensary (Abraham, 1933). These suggestions did not bear fruit until after the passing of the Apothecaries Act in 1815, the year in which Lettsom died.

On completion of their hospital training the students were given a certificate signed by each surgeon specifying the time for which they had entered and stating that they had worked diligently.

Royal College of Physicians

Certain commemorative orations were delivered, in Latin, at the Royal College of Physicians (then in Warwick Street) during the 18th century, but otherwise no medical education was conducted at the College. Nevertheless, the College had a powerful influence on the practice of medicine, particularly in London, as it was necessary to be a Licentiate of the College in order to practice in London or seven miles around. There was an examination for the Licentiate diploma and a stiffer examination for the Fellowship. There was no M.R.C.P. (although the F.R.C.P. seems to have been rather similar), but the Licentiates used to describe themselves rather loosely as Members. Before becoming a Fellow the examinee was styled as a Candidate and this title was used until he had completed his examination and duly been elected.

The examination for the Licentiate diploma consisted of oral examinations (usually three) conducted in Latin or English by certain Censors at a Comitia Minora. For the Fellowship examination, the candidate, who must not be an alien, Jew or Quaker, and must not have practised as an apothecary, midwife or surgeon, must have studied for four years at a university and hold the M.D. degree of Oxford, Cambridge or Dublin, was examined by the President and Censors at a Comitia Majora on the books of Hippocrates and Galen. In 1765 it became compulsory for the Licentiates to be examined in Latin. The regulations for the Fellowship, particularly in regard to the university education and doctorate degrees, could be waived if the candidate had sufficient influence. In 1783 a distinct order of Licentiates in Midwifery was initiated, but this diploma ceased to be granted after 1800 (Warren, 1951).

Surgeons' Company

From 1540 (constitution of Barber-Surgeons' Company) until 1745 (constitution of Surgeons' Company) the Company of Barbers and Surgeons held the monopoly of the teaching of anatomy and surgery. However, by the beginning of the 18th century private lectures were being given. For instance, Cheselden, of St. Thomas's, was reprimanded by the Company in 1711 for giving lectures at his home. Edward Nourse, of St. Bartholomew's, and Sharp of Guy's likewise gave private lectures (D'Arcy Power, 1895). In the first half of the century the Company's lectures were seldom given, but in 1753 Percival Pott and William Hunter were elected as lecturers on anatomy, and in 1766 a chair of anatomy was founded and in 1791 John Gunning was made professor of surgery but resigned after three months and the post lapsed (Wall).

The Surgeons' Company help many different examinations. The surgeon's apprentice had to pass a preliminary examination in Latin at the Hall (cf. Society of Apothecaries) before they could be bound to seven years' servitude; on completion of which they were examined in surgery, the internal speculation of the natural causes and remedies of all manner of infirmities or diseases, etc. (Wall).

They also examined the Army surgeons and obviously this examination was very much easier than that for civilian surgeons, as the Company were very resentful when in 1749 an Act of Parliament allowed retired Army and naval surgeons to practice without further examination. The Company also examined the Navy surgeons (mates' examination) and the surgeons of the East India Company and conducted their promotion examinations.

The Company also acted as a pensions tribunal for the Navy, and indeed had to examine Nelson, in 1797, in connection with the loss of his eye. It was apparently the custom of the Company to examine the disabled sailors at 6 p.m. on the first or third Thursday of every month, but Nelson insisted that he be examined between the hours of 10 and 4 (Oman, 1947).

Private Schools and Lectures

To fill the enormous gaps in the teaching of medicine many private schools developed all over London. These schools usually taught anatomy and surgery. The established doctors also gave courses of lectures in their houses. In London this was the only method of learning midwifery. It will be noted that in the quotation from Mr. Warner's deposition, he states 'there are lectures read every morning at half past seven on Midwifery by Dr. Lowder in the Borough.' William Smellie (1697-1763) settled in London in 1739, and Guthrie states that 'during his ten years in London 900 students attended his classes.' Dr. William Saunders is reported to have made £1,000 a year from his lectures on chemistry and pharmacy, which he gave at his house in Covent Garden. Dr. George Fordyce, who was on the staff of St. Thomas's Hospital, published the substance of the lectures he gave at his house in Essex Street in 1777 under the title 'Elements of the Practice of Physic.' His lectures began on the first Monday in February, June and October, and consisted of lectures about the Natural History of the Human Body and the History and Methods of Treating Fevers and Internal Inflammations. Fordyce also lectured at the Great Windmill Street School.

The most famous of the private schools was that of William Hunter (1718-1783), in Great

Windmill Street. Most branches of medicine were taught and the lecturers included both William and John Hunter, Mathew Baillie (who was the first to publish an English textbook of pathology), Benjamin Brodie, and later Sir Charles Bell. Some of the pupils of this school founded their own schools: Samuel Lane founded Grosvenor Place School, John Cooke and Roget founded the Medical School of Manchester, and Joshua Brookes the Great Marlborough Street School which only taught anatomy, but Brookes gained fame by injecting his bodies with nitre and thus being able to lecture on anatomy during the summer—a procedure which had previously been too unpleasant to be bearable. Even in the first half of the 19th century these schools flourished and new ones were started (Dean Street School 1800, Webb Street School, 1819, Dermott's School, Gerrard Street, 1833) (D'Arcy Power, 1895). The foundation of London University, with its medical schools attached to the hospitals, caused the disappearance of these schools, although in the provinces the private schools persisted very much longer. At Bristol, for instance, it was not until 1893 that the medical school became a faculty of the College, although the University College was founded in 1877.

Classical Learning and Clinical Observation

At the time of the foundation of the Royal College of Physicians in 1518 classical scholarship was considered almost sufficient in itself to qualify for the practice of medicine; the classical scholars attaining their medical knowledge during their study of Greek. Dr. John Clement (d. 1572), who was president in 1544, was also professor of Greek at Oxford. Sir Norman Moore considered that Theodore Goulston (Censor in 1626) was 'the last Physician of the Renaissance kind who studied Greek and through it obtained his medical knowledge.' But even if he was, there is no doubt that the works of Hippocrates and Galen continued to exert a dictatorial influence upon medicine until the latter half of the 18th century. It has already been noted that the Fellows of the Royal College of Physicians were examined in these works throughout the century.

The first blow to the infallibility of Hippocrates and Galen was the discovery of the circulation of the blood by William Harvey (1578-1657). At the same time as Harvey was verifying his discovery Theodore de Mayerne (1573-1655), who was elected a Fellow of the College in 1616, was carrying out chemical experiments in pharmacology and therapeutics. The precise study of disease during life was established by the careful and copious note-taking of Mayerne. In 1650 Francis Glisson (P.R.C.P. 1667) published his

'Tractatus de Rachitide sive morbo puerile, qui vulgo The Rickets dicitur,' an English translation appeared the following year. This gives an anatomical and clinical account of rickets and discusses the 'diagnostica,' 'diacritica,' and 'prognostica' of the disease. Thus Mayerne and Glisson established the present-day practice of collecting facts by careful case-taking and correlating all aspects of a disease, and then suggesting conclusions from this wide survey.

In the year that Glisson was President of the College, Thomas Sydenham (1624-1689) published the first of many works. Sydenham scorned his contemporaries and revived the true Hippocratic methods of studying medicine. In the preface to his complete works he states 'the improvement of physic in my opinion depends (1) upon collecting a genuine and natural description or history of all diseases that can be procured; and (2) laying down a fixed and compleat method of cure.' Whilst paying tribute to the ancients, he does not consider that they are the end-all of medical knowledge. 'Hence we see that great circumspection is necessary to prevent our being led into error. Again experience teaches us a shorter and easier method of curing several diseases than the common one; and to reason against fact is highly absurd; then it follows that we ought not to confine ourselves to pursue strictly the generally received methods of cure, but to forsake the beaten path occasionally, as reason and experience direct.' This teaching spread, and was given great impetus by Boerhaave and his pupils. Nevertheless, it was not until the 19th century that the classical works assumed their proper importance as companions of medicine, rather than the masters.

The classical approach combined with observation is summed up in Dr. John Huxham's (1692-1768) words in the preface to the third edition of 'An Essay on Fevers' (1757). He states: 'I will not take upon me to say a person cannot be a good physician without consulting that great oracle of Physic, and reading the Ancients; but this let me say, He will make a much better physician for so doing.' This is surely the position today.

During the 18th century most lectures were given in Latin; Cullen of Edinburgh was the first to lecture in English (Garrison). All the lectures at the Royal College of Physicians were given in Latin until 1846, when Dr. John Elliottson caused great distress by delivering the Harveian Oration in English and, to add insult to injury, chose 'Mesmerism' as his subject (Harley Williams). The great value of Latin was that it was the international scientific language and so overcame all language difficulties for travelling students.

Books

At the beginning of the century most of the books were written in Latin, but gradually during the century more and more were written in English. At the same time periodical literature was introduced. There were many hundreds of books on medicine written and published during this era and it is impossible to recount them all. A useful summary and discussion of the better-known books is given in 'Medical Books, Libraries and Collectors,' by J. L. Thornton (1950). The basic textbooks were translations of Hippocrates, Galen and Celsus, and the modern works of Boerhaave, Hoffman and Sydenham in medicine. Surgery was covered by the writings of Samuel Sharp, Percival Pott, John Hunter and Abernethy, and midwifery by William Smellie. There were many books on individual subjects, including at least two on the common cold ('A Treatise of the Disease called a Cold,' John Chandler, 1761, and 'A Serious Address on Common Coughs and Colds,' Thomas Hayes, 1786). There was a history of medicine written by John Freind (1675-1738) whilst he was in the Tower of London, from where he was released by the intervention of his friend Dr. Mead, who refused to relieve the King from an attack of renal colic unless he released Freind from prison.

'A Compendium of Physic and Surgery' (1769), published anonymously, appears to have been a valuable book of the synoptic type, and there were also the popular health books as well as the outpourings of the cranks and obsessionals. Although we may pity ourselves today with the vast literature that continues to accumulate in a geometrical progression, even 200 years ago there was more than enough to study.

Conclusion

During the 19th century medical education became more stabilized and uniform and most readers have a practical knowledge of the first half of the 20th century. It appears that during the second half of this century a return is to be made to a modified apprenticeship system which will follow rather than precede the academic teaching. The importance of 'apprenticeship' has always been appreciated in regard to the training of specialists (viz. the registrar appointments), and it will very soon be compulsory to serve one year in a hospital after qualification. Sir Henry Cohen has recommended a period of three years in specially designed postgraduate training for the aspiring general practitioner, the first year to be spent as a trainee assistant to an established practitioner. He further advises that 'as a man of culture with an interest in general trends of national life, he should read some of the more

important books dealing with contemporary affairs and with work in other professions . . . and he must retain his acquaintance with those imaginative and creative works of permanent value.'

Pope, on leaving a party of medical men, once remarked about the medical profession: 'They are in general the most amiable companions and the best friends, as well as the most learned men I know.' May this always be true.

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