The foundations of medical history / by Sir D'Arcy Power.

THE FOUNDATIONS OF MEDICAL HISTORY

SIR D'ARCY POWER
K.B.E., F.R.C.S.

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JOHNS HOPKINS UNIVERSITY
INSTITUTE OF THE HISTORY OF MEDICINE

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by

Sir D'Arcy Power, K.B.E., F.R.C.S. (Eng.)

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INTRODUCTORY NOTE

The Institute of the History of Medicine of The Johns Hopkins University was greatly favored by the presence of Sir D'Arcy Power as Visiting Lecturer in November and December, 1930. During this period he delivered the lectures published with his consent in this volume.

Sir D'Arcy Power, Consulting Surgeon to St. Bartholomew's Hospital, Vice-President and Honorary Librarian of the Royal College of Surgeons of England, formerly President of the Bibliographical Society, is distinguished not only by his teaching and writings in the field of surgery, but also by his valuable contributions to medical bibliography, biography and history. His *Life of William Harvey*, and the admirable biographies of eminent surgeons which appear over his initials in the *Dictionary of National Biography*, as well as his *Memorials of the Craft of Surgery* and many other papers, monographs and books have made his name honored and familiar to students of British medical history.

Sir D'Arcy exemplifies the cultural and humanizing influence which the cultivation of literary and historical studies has so often imparted to British physicians and surgeons.

While the larger circle of readers reached by this publication will welcome these interesting lectures,

the more intimate group who had the good fortune to hear them will recall also with added pleasure the opportunity which they enjoyed of meeting personally and in frequent conferences a distinguished and charming personality whose visit to Baltimore has left delightful and enduring memories.

WILLIAM H. WELCH.

PREFACE

These six lectures were delivered whilst I was acting as the first visiting lecturer at the Institute of the History of Medicine in The Johns Hopkins University at Baltimore during the late autumn of the year 1930. Acting in this capacity at a newly founded institution it seemed more appropriate to point the way along several roads rather than to treat a single subject exhaustively. With medical biography I had a somewhat extensive experience as a contributor to the English *Dictionary of National Biography* and as the editor-in-chief of Plarr's *Lives of the Fellows of the Royal College of Surgeons of England*. As a former president of the Bibliographical Society I had learnt much from Prof. A. W. Pollard, Dr. W. W. Greg, Mr. R. B. McKerrow and Mr. Victor Scholderer. Sir William Osler had made me, per force, somewhat of an iconographer when he caused me to collect and describe some of the many portraits of Dr. William Harvey, the discoverer of the circulation of the blood; whilst a long and intimate connection with St. Bartholomew's Hospital in London had imbued me with a love of institutional history. Using such knowledge as I have of biography, bibliography and medical history I hope that the lectures may prove of service to that band of enthusiastic students who are working, under the

guidance of Dr. William H. Welch, Col. Fielding H. Garrison and Mr. John Rathbone Oliver, to place the history of medicine upon a sound scientific basis.

D'Arcy Power.

January, 1931.

LECTURE I

The Story of the Oldest British Hospital

It was thought that it might be interesting if I told you something of the story of St. Bartholomew's Hospital, an institution with which I have been connected for the last fifty-two years. It is situated in the heart of London on the site where its founder placed it in 1123 and there it remains to this day, fulfilling his design of treating the sick poor who are ill of acute disease and of caring for women in childbirth. It is still in the van of medical progress in spite of its age.

If there had been no plague at Rome in B.C. 293 it is probable that there would have been no St. Bartholomew's Hospital today in London. The story goes that in B.C. 293 there was so great an outbreak of plague in Rome that the Sibyline books were consulted and the advice given in them was to send to Epidaurus for Aesculapius, the god of healing. An embassy was sent and the god was brought back to Rome in the form of a sacred serpent. The ship entered the Tiber and as it passed the island at Rome the serpent escaped, made a home for itself and the plague was stayed. The citizens in gratitude built a temple to Aesculapius on this island and converted the end of the island into the semblance of the

prow of a ship, covering it with travertine and sculptured on it the serpent entwining a staff which is now the familiar symbol of medicine personified.

The temple in course of time was replaced by a basilica, built about the year A.D. 1000 and dedicated to St. Bartholomew because it contained some of his relics. The basilica fell into decay, was restored A.D. 1112 and became one of the sights visited by pilgrims. Six years later in 1118 the White Ship was wrecked in the English Channel and carried down with it the Aethling, son of King Henry II, and many of his young companions. The prince was beloved of all—like our own Prince of Wales—and the mourning was deep and general. The king, his father, was said never to have smiled again and the court, which had been renowned through Europe for its brilliancy, gaiety and learning, became sombre and grief-stricken.

Amongst the courtiers was Rahere, a man of infinite jest, a good musician and a friend of all from king to scullion. He, with others, took to religion, became an Augustinian canon and went on pilgrimage to Rome. In the Eternal City he visited all the places of pilgrimage and amongst others the newly restored Church of St. Bartholomew on the Tiber Island. Shortly afterwards he was struck down by Roman fever and in his delirium he was

> born on high by a certain beast having four feet and two wings and he was set by it in a very high place. And when from such a height he bent down the glance of his eyes to the depths, he

discovered a horrible pit to be beneath him, the terrible vision of which struck the beholder both with fear and horror for its depths baffled all human view. He, therefore, conscious in himself of his sins, thinking that he would forthwith fall into so vast a precipice shuddered and began to give forth lusty cries from his mouth and as he was thus fearful and crying aloud with fear one was beside him bearing the royal majesty in his countenance, of wonderful beauty and imperial authority and, with his look fixed upon him, spake good words saying I am Bartholomew, an Apostle of Jesus Christ, who have come to help thee in thy straits and to unlock for thee the secrets of the heavenly mystery: for thou shalt know that I by the will and command of all the High Trinity, and with the common favour and council of the Court of Heaven have chosen a spot in a suburb of London at Smithfield where, in my name thou shalt found a Church and a Hospital and there shall be the House of God, the Tabernacle of the Lamb, the Temple of the Holy Ghost. . . . . Therefore let thy hands be strengthened and having faith in the Lord act manfully. Nor doubt at all with anxious mind concerning the expenses of this building: merely apply diligence, mine it shall be to provide the costs necessary for the completing the fabric of the work. . . . . Of this work know that thou art the minister and I the master. Do thou employ diligent service and I will perform the office of master and patron.

At these words the vision disappeared.

Rahere on his return to England visited the site thus shewn to him—a site now so well known to us and after eight hundred years unchanged in name. Smithfield it was then; Smithfield it is now. He found it, as the name implies, a smooth field bounded on one side by a rapid stream—the Fleet river—on the

other by the city wall and occupied in part by the clothmarket from which the king received dues of the merchants of Florence who there displayed their beautiful wares. The greater part of the open space was used by the citizens as a recreation ground where their children played games and rode races on the numerous public holidays. It had belonged of old to the kings of England as "no man's land" and from it there came a small rent to the king's chest. Not far away on the rising ground, which is now St. John's Street, were The Elms or place of public execution before the existence of Tyburn. A portion of this land Rahere begged for his church and his hospital and with the help of the Bishop of London and other friends at court the request was granted. The church and hospital were built in 1123 and were dedicated the one as the Priory of St. Bartholomew, the other as the Hospital of the Holy Cross.

Eight hundred years ago: it is difficult to understand the lapse of time, but it can perhaps be realised when I tell you that there is the same interval between the Battle of Hastings in 1066 and the opening of the Hospital as between your Civil War and the present year. Some of the earliest patients, may therefore have been veterans of the Battle of Hastings, and many must have been the sons and daughters whose parents would have told them of the Norman Conquest from personal experience.

St. Thomas à Becket was five years old when the

hospital was opened and as his father and mother lived within half a mile of the hospital he must often have played in Smithfield, brought there by his nurse, for we know that he had a nurse. The first patients, too, must have watched the building of the Tower of London when as yet there was only the White Tower. One of the earliest of the patients came by water from Dunwich in Essex which has long since been submerged by the sea. He was crippled by arthritis and, being cured by massage, skilfully employed, served for many years as a carpenter at the priory.

Rahere as founder was chosen first prior of the convent and master of the hospital. He decreed that the priory and the hospital should be allied but not combined; the hospital to be cared for by eight canons of his own order and four sisters—Augustinians all. For four hundred years, with the staff increasing as the reputation of the hospital increased, the religious character of the charity was maintained with little change. Not much is known of this early period. The brethren and sisters were not trained in any way for the practice of medicine and nursing but they must have learnt much by tradition and the experience of their predecessors during those four centuries—surgery and midwifery chiefly, for it was laid down from the beginning that lying-in women were to be their especial care. Of surgical cases there was never any lack. Jousts and tournaments

were frequent in front of the hospital gate. The place of public execution was within two hundred yards. A cry of "Clubs! Clubs!" would at any time bring out all the apprentices within hearing to fight amongst themselves or against their common enemy, the law students at the Temple—so that broken heads were of constant occurrence. Men fell off ladders, as they do now, breaking their arms and legs; elderly citizens were run over in the narrow streets, and burns were common for no day went by without a fire in the wooden-built and thatched houses. Both the Thames and the Fleet Rivers supplied a quota of the half drowned and wholly drenched, for the shooting of London Bridge in small boats was a well known danger avoided by the more prudent who got out above the bridge and took another boat at the landing stage below it.

The accommodation provided for the patients differed little, if at all, from that of the staff—a rug laid on the floor—for as yet there were no beds. For food such victuals as charitable citizens would give to the brethren who daily went round the markets with a begging bowl. Then, as now, the meat market was close at hand; some at least of the butchers were generous and there were many charitable women who would give a loaf or two of the bread they had just baked. The patients lay in a great hall with an altar at one end and in sight of all where mass was celebrated daily. In the centre of

this hall was an open fire and in 1422 and again the following year there is a warrant from the king to the Ranger of the Great Park at Windsor directing him to supply "one oak tree but not of the best" for the use of the fire in the great hall of St. Bartholomew's at Smithfield.

And so things went on for four hundred years, the hospital gaining in repute and acquiring money from the bequests of charitable citizens until in 1542 King Henry VIII seized the revenues, sold the priory after turning out the monks and despoiled the hospital. A few beds indeed were maintained and the hospital never actually closed its doors but its good work was seriously curtailed and it became a secular foundation. The king indeed promised an annual grant of 500 marks but the money was never paid.

The want of the hospital which had served the city for so many years soon became evident and the citizens of London petitioned the king for its re-opening. A charter was granted and in 1547 it began the second part of its long history with an entirely new constitution and under the direct control of the lord mayor and citizens. The new charter provided that the hospital should be served by duly recognised surgeons under a master or, as you would call him, a medical superintendent; the nursing being undertaken by sisters with a head nurse or matron; surgeons and sisters alike being drawn from the ordinary population and none to be professed clerics

or nuns. The staff of the hospital was thus entirely secularised though a chaplain or "hospitaler" was appointed to serve in the parish church which still stands where it has always stood at the entrance to the hospital. It was his duty also to attend to the religious needs of the patients.

The changes in the fortunes of the hospital came fortunately at an auspicious time in the history of surgery in England. Towards the end of the reign of Henry VIII a generation of surgeons arose who desired urgently to see a better educated doctor. The movement appears to have been the result of the extremely bad treatment of the English sick and wounded in the expeditions against France in the middle of the sixteenth century, for it was urged by Gale, Clowes and others who had served as army surgeons. The surgeons, too, had united with the barbers in 1540 to form a United Company of Barbers and Surgeons; Thomas Vicary being elected the first master of the United Company. Vicary seems to have been a man of outstanding personality, a good organiser, an excellent administrator and one who had influence at court, where he held the important office of serjeant surgeon. The hospital procured his services as the first surgeon under the new scheme, though he seems to have acted as an adviser and administrator rather than in a surgical capacity. No doubt by his advice Thomas Gale and William Clowes were elected as his col-

leagues. Both Gale and Clowes were skilful surgeons, educated in the wars, good teachers and excellent writers, so that the reconstituted hospital started well on the surgical side.

The hospital was less fortunate on the medical side, the need for a physician was not felt for some years and when one was at last appointed he was that Dr. Lopez, the Portuguese Jew, who was hanged, drawn and quartered in 1594 for encompassing the death of Queen Elizabeth.

The next hundred years in the history of the hospital was one of steady progress. Surgery, as under the old regime, was the more prominent side of the work; for the physician, though he usually lived within the precincts of the hospital, rarely visited the wards, but had the patients brought to him for diagnosis and treatment; his prescriptions being kept in a locked book that they might not be accessible to the surgeons. The surgeons operated but only prescribed a few simple remedies as they were completely under the thrall of the physicians and were not allowed to operate unless a physician consented and was present. On the other hand they brought with them their apprentices to watch what they did and note down what they said. The attendance of these apprentices became regularised and in course of time a room was provided with books for their instruction; a dead house under the operating theatre or "cutting room" as it was called and a

museum for the more unusual specimens of morbid anatomy. In this way a medical school came into being which remained the property of the physicians and surgeons and was independent but an integral part of the Hospital until 1921, when it was granted a charter under the title of the Medical College of St. Bartholomew's Hospital.

The nurses were still called "sisters" though they were not enrolled in any religious order; they remained for life and were attached to individual wards and not to the hospital generally. Their identity was to a large extent merged in that of the ward for they were always spoken of and to as "Sister Mark, Sister Hope, Sister Magdalene" etc., according to their ward, and within my own recollection many of these good women had served for thirty or forty years and had gained an empirical knowledge of which the interne was a fool if he did not take advantage.

There was no break in the nursing tradition when Henry VIII took the revenues of the hospital into his own hands but there was a great reorganisation. In 1544 five sisters were appointed and in 1551 the number was increased to twelve. One of the twelve was chosen to act as matron and to her was attached a "fool." Sir Norman Moore in his *History of the Hospital* rather unkindly counts the fool as a sister and thus makes the number thirteen although in reality there were but twelve. The real explanation is probably that the fool is a corruption of the famulus

or servant. Under the new constitution the matron and sisters had duties and perquisities which have now lapsed. The matron had personal charge of all the bedding in the hospital and she was enjoined to see that the sisters did their duty in spinning and did not enter their wards after seven o'clock in the winter or nine in the summer except to attend to patients in danger of immediate death or suffering from extreme sickness. She was allowed as a perquisite to sell ale, the cellars being under her lodging, and received a shilling for the use of the pall when a patient died. The sisters on their side had to wash the patients' linen as well as to scrub the floors but they took half a crown from every patient who was operated upon and one shilling from each patient admitted into their wards.

The appointment of sister carried with it a habit or uniform just as in the pre-Reformation days when the sisters were nuns. Six yards of cloth were allowed yearly at 22/6. The cloth was at first brown but was soon changed to light blue and blue in various shades has remained the colour of the sister's uniform since 1555. The common dormitory remained until 1787 when the sisters began to sleep and live, as they still do, in a little room partitioned off from their ward. The change was probably for the better as there are several orders for the sisters' ward to be cleared of bugs by the hospital bug-catcher. The sisters appear to have been a strong and self-reliant

body of women for on one occasion they made a determined attack upon a sheriff's officer and obliged him to relinquish a patient who had been captured in one of the wards. As early as 1647 women helpers had been introduced who sometimes claimed the reversion to the place of sister. A regular nursing staff was in existence in 1818 for the physicians and surgeons in that year represented to the governors that one sister and two nurses were not sufficient for a double ward. In 1821 the nurses were ordered to wear a brown uniform and in 1868 scrubbers were appointed to undertake the drudgery of scrubbing the floors and passages—a duty which had hitherto devolved on the nurses under the supervision of the sisters. In 1877 an institution was opened for the training of nurses in connection with the hospital and from this time onwards nursing has become more and more a skilled profession under such able matrons as Miss Ethel Manson (Mrs. Bedford Fenwick), Miss Isla Stewart, Miss Macintosh and Miss Dey.

The hospital became known throughout the world in the middle of the seventeenth century owing to the fact that Dr. William Harvey, the discoverer of the circulation of the blood, was one of the physicians on the staff. At the hospital itself Harvey's name remains less as a discoverer than as an administrator for he drew up a series of rules governing the duties of the physicians and surgeons and by these rules—*mutatis mutandis*—the hospital is still governed.

The teaching of medicine and surgery by formal lectures is of long standing in England. Attendance at such lectures was enforced upon all members of the United Company of Barbers and Surgeons—apprentices and masters alike—from 1540 to 1745, and a constant endeavour was made to obtain the best teachers of the day. Little by little, however, there crept in a system of private teaching which in the end destroyed the old formal lecture and led to encroachments upon the monopoly of the United Company. Under the old system opportunities for private teaching were few though many men felt themselves able to teach, money was desirable and pupils were profitable both at once and in the more remote future. Private classes, therefore, began to be held from 1730 onwards; Cheselden and Sharpe at Guy's Hospital; Nourse and Percivall Pott at St. Bartholomew's Hospital taught at first in their own houses and to their own pupils, openly in their hospitals to any one who chose to pay for the course at a later period. William Hunter with a brilliant band of assistants, among whom was his brother John Hunter, actually opened a teaching school unattached to any hospital and made it so great a success that others soon followed his example. This necessarily led to reprisals on the part of the hospitals, and about 1790 David Pitcairn, the physician, and John Abernethy, the surgeon, organised the first regular medical school at St. Bartholomew's Hospital. A lecture

theatre was built, dissecting rooms were provided and a systematic medical training was given based upon anatomy and botany. The evolution has been continuous from that time to the present and is not yet complete. Both the hospital and the school have been in a constant state of reconstruction, rebuilding and addition, no easy matter on an island site in the heart of a city where the value of land is calculated in inches. But it has been accomplished and we still think that our reputation both in practice and in theory compares favourably with any hospital or medical school in the world, whilst we have the tradition and *esprit de corps* bred of an ancestry of more than eight hundred years.

During the last four hundred years many interesting and important men have been connected with the hospital. Amongst those who lived in the hospital, though they did not actually serve it, were John Caius (1510–1573) who lectured for twenty years on anatomy at the Barber-Surgeons Hall in Monkwell Street and is well known as the founder of Caius College in the University of Cambridge. He was a dull and lonely man and there is an amusing picture of him dated May 21, 1559. It is written to Conrad Gesner the Swiss naturalist who was beloved of all men. The writer says:

> As soon as I came to London I sought out your friend Caius to give him your letter and, as he was from home, I delivered it to his maid servant for he has no wife nor ever had one.

Not a week passes in which I do not go to his house two or three times. I knock at the door; a girl answers the knock but without opening the door completely. Peeping through a crevice she asks me what I want? I say in reply "where is your master is he ever in or does he ever intend to be at home." She always denies that he is in the house. He seems to be everywhere and nowhere and is now abroad so that I do not know what to write about him. I shall certainly tell him something to his face when I *do* meet him.

Whilst he was living in the hospital Caius wrote his essay on the sweating sickness.

Sir Thomas Bodley (1545–1613) like Caius lived in the hospital but held no office nor was he ever a governor. He was the founder of the Bodleian Library at Oxford and both he and his wife died within the Hospital gates. She is buried in the hospital church; he at Merton College, Oxford.

Dr. Timothy Bright (1551?–1615), who was one of our early physicians in the time of Queen Elizabeth, was unsuccessful as a physician but is known everywhere as "the Father of Modern Shorthand," for he published in 1588 *Characterie, an Arte of Shorte, swifte, and secrete writing by Character.* He lived in the hospital but instead of attending to the patients as he ought to have done he spent his time in making an abridgement of Foxe's *Book of Martyrs.* He was naturally a fervent Protestant as can be gleaned from these sentences under the year 1572 which end the volume:

The year following died the Cardinal Louvain (a pestilent Achitophel against the children of God) and Charles, of France the ninth, the bloodiest tyrant that ever the earth bear, the 25th. of May being five and twenty years of age. His disease was such that the blood gushing out by divers parts of his body, he tossing in his bed and casting out many horrible blasphemies, lying upon pillows with his heels upward and his head downward, voided so much blood at his mouth that in a few hours after he died.

In the light of modern knowledge this is a prejudiced way of saying Charles died of phthisis after a severe haemoptysis. The record is interesting as showing how early and widespread was the legend that the king suffered from bloody sweats, the truth in all probability being that he had occasional attacks of purpura haemorrhagica.

Dr. Thomas Doyley took the place of Dr. Timothy Bright in 1590 when the governors of the hospital called upon him to resign because he neglected the patients. Dr. Doyley who was a graduate of the University of Oxford had been a spy in the government service abroad, or, more politely an intelligence officer in the Low Countries, and was known to the outside world by his contributions to the great Spanish Dictionary which Richard Percival published in 1591. He had an adventurous early life and on one occasion was taken prisoner not far from Dunkirk where he says in a letter to Lord Burleigh

We were rifled of all our goods and apparel unto our doublets and hose with daggers at our throats and brought to the

common gaol. And after our being there an hour came in the under-bailiff and the sergeant-major of the town with their poignards to our breasts, stripping us stark naked, searched us again and took away such money as the mariners had left us. There we remained from Sunday until Monday having nothing said to us. Then were we severally put to our ransom and I escaped well because they found nothing in my chest but four physic and astronomy books. All letters and notes I had were drowned out of a porthole before they took the ship.

By the fortune of war a few years later Doyley was given the charge of this same governor of Dunkirk who had caused him to be stripped naked. Doyley kept him a prisoner in the hospital where we find him

complaining that he was much annoyed by divers of the poor inhabitants who hang their beddings and beastly rags before his door and by some of the sisters who empty their foul vessels under his chamber as well as by people from Smithfield who wash their filthy bucks in the close.

Dr. Doyley buried in the hospital church March 11, 1602–3, was succeeded as physician by Dr. Ralph Wilkinson (d. 1609) who gave place in turn to William Harvey (1578–1657), whose works on the circulation of the blood and upon the development of animals made his name known throughout the civilized world.

Amongst the surgeons at this time were Thomas Gale (1507–1587) and William Clowes (1540?–1604). The works of Thomas Gale are dull as compared with those of William Clowes who was a master of vituperation and sarcasm. Gale says:

In the year 1562 I did see in the two Hospitals of London called St. Thomas's Hospital and St. Bartholomew's Hospital to the number of three hundred and odd poor people that were diseased of sore legs, sore arms, feet and hands with other parts of the body, so sore infected that a hundred and twenty of them could never be recovered without loss of a leg or an arm, a foot or a hand, fingers or toes, or else their limbs crooked so that they were either maimed or else undone for ever. All these were brought to this mischief by witches, by women, by counterfeit javills that took upon them to use the art of chirurgery, not only robbing them of their money but of their limbs and perpetual health. And I, with certain other, diligently examining these poor people how they came by these grievous hurts and who were their chirurgions that looked upon them and they confessed that they were either witches which did promise by charms to make them whole or else some women which would make them whole with herbs and suchlike things or else some vagabond javill which runneth from one country to another promising to them health only to deceive them of their money.

This fault and crime of the undoing of the people were laid unto the Chirurgions, I will not say by part of those that were at that time masters [governors] of the said Hospital, but it was said that carpenters, women, weavers, cobblers and tinkers did cure more people than chirurgions. But what manner of cures they did I have told you before, such cures, that all the world may wonder at; yea, I say, such cures as maketh the Devil in Hell dance for joy to see the poor members of Jesus Christ so miserably tormented.

The writings of Clowes are equally bitter against the quacks who were so numerous in Elizabethan times. Speaking of such a one he says:

He cosened one Wilfred Joy, Citizen and Draper of London whom he did cut for a stone in the bladder but when he perceived he could find none there he took a stone out of the pocket of his hose and conveyed it into a sponge and did subtily and craftily put it into the wound he had made and he was espied and presently charged there withall. So this man was by him cosened of his money and likewise spoiled; for his pains were not by him anything at all ceased but increased and so he lived but a very small time afterwards. Moreover he promised to cure one Master Castleton, then being a scholar of Cambridge of an impediment in his eyes. He had some sight thereof when this Valentine took him in cure but within a very short time after Valentine, by his rustical dealings, put out his eyes clean and so deprived him of all his sight. And then when Master Castleton perceived that Valentine could not perform his cure but that he was by him thus spoiled he did arrest him first for his money the which he recovered again; but for his great hurt he was fain to put up with it in silence.

Clowes was a master of abuse. He calls one of his slanderers "a great bugbear, stinging gnat, venomous wasp and counterfeit crocodile. And I have been persuaded thereunto by many of my friends which well knoweth this viper, to spare this disdainful derider's name and let him smother himself in his own litter."

Clowes makes several references to the practice at St. Bartholomew's Hospital when he was serving as surgeon from 1575 to 1586. He invented a styptic powder to stop bleeding after amputations and says of it:

The aforesaid powder, the which I did first put in practice in the Hospital of St. Bartholomew's, as is well known unto some of the surgeons that then served there and still live within the City of London who were present with me when I first put it in practice, at which time there was taken off in one morning seven legs and arms and so, by God's assistance, we stayed all their fluxes of blood without any pain unto them, but only in the compression and close rolling (tight bandaging) and tenderness of the wound excepted. After it was made known there were divers that were desirous to have it among the rest Master Crowe, a man of good experience and knowledge in the art and for divers special occasions I was the more willing to give it him but I would not deliver it unto him until he had first seen with his own eyes the experience and proof of it.

Not many days after the worshipful masters of the said Hospital requested me with the rest of the surgeons to go to Highgate to take off a maid's leg which they had seen in the visitation of those poor houses. The said leg was so grievously corrupted that we were driven on the necessity to cut it off above the knee, and then (Master Crowe) did see we stayed the flux and lost not much above four ounces of blood and so cured her after within a very short time.

Several interesting points arise out of this passage. It shows in the first place that Clowes was far in advance of his time ethically. He made known the composition of his powder when every contemporary had his secret remedy. Secondly, it tells of Clowes's honesty. He would not give the prescription for the powder to Master Crowe until he had seen how it worked in actual practice and to do this he asked him to ride up to Highgate with him and watch an opera-

tion. Thirdly, it showed that the governors, then as now, took an active interest in the patients, not only whilst they were in hospital but after they had been discharged. Lastly, there is evidence of field days in the operation theatre though I have no doubt that Clowes had been saving up his cases to show how effectual was his new powder in staunching blood. What a scene it calls up! Seven amputations and no anaesthetics!

Here is another reference to the hospital written in 1586. Clowes is speaking of the prevalence of syphilis in London and says:

I may speak boldly because I speak truly and yet I do speak it with great grief of heart that in the Hospital of St. Bartholomew in London there hath been cured of this disease by me and three other (surgeons) within five years to the number of one thousand and more. I speak nothing of St. Thomas's Hospital and other houses about the City wherein an infinite number are daily in cure, so that undoubtedly unless the Lord be merciful unto us and that the magistrates do with great care seek correction of that filthy vice; and except the people of this land do speedily repent their most ungodly life and leave this odious sin it cannot be but that the whole land will shortly be poisoned with this most noisome sickness.

The worshipful masters of this Hospital can witness that I speak the truth as also I with them, with what grief of mind they are daily enforced to take in a number of vile creatures that otherwise would infect many good and honest people seeking with like care to restrain this grievous and beastly sin and yet the numbers still increase. It happened in the house of St. Bartholomew very seldom, whilst I served there

for the space of ten years, but that among every twenty diseased persons that were taken in, ten of them had the pox.

John Woodall (1556?–1643) was a colleague of William Harvey for he acted as surgeon to the hospital from 1616 until his death in 1643. He had led a hard life in his younger days when he was surgeon to the colony of English merchants settled on the borders of Poland in Russia. Here he had to treat cases of the plague and was fortunate enough to recover from an attack. His experience brought him to London during the epidemic of plague in 1603 which was worse even than that of 1665. He was appointed the first surgeon-general to the newly founded East India Company in 1612 and for the use of the surgeons in their employ he wrote *The Surgions Mate or a Treatise disclosing faithfully the due contents of the Surgions Chest.* It is a well written and practical surgery designed for the use of ship's surgeons, each of whom was expected to take a copy with him when he went to sea. An interesting point in the book is Woodall's recommendation of lemon juice as a good preservative against scurvy. The practice was not wholly new but the large circulation of the *Surgions Mate* brought it into general knowledge. He says:

I find we have many good things that heal the scurvy well on land, but the Sea Chirurgion shall do little good at sea with them. The use of the juice of Lemon is a precious medicine and well tried, being sound and good. Let it have the chief place for it will deserve it. The use whereof is

thus: it is to be taken each morning two or three spoonfuls, and fast after it two hours, and if you add one spoonful of Aquavitae thereto to a cold stomach, it is better. Also if you take a little thereof at night it is good to mix therewith some sugar or to take of the syrup thereof is not amiss. Further note it is good to put into each purge you give in that disease. Some Chirurgions also give of this juice daily to the men in health as a preservative which course is good if they have store (plenty), otherwise it were best to keep it for need. I dare not write how good a sauce it is at meat, lest the chef in the ship's waist use it in the great cabins to save vinegar. In want whereof use the juice of Limes, Oranges, or Citrons, or the pulp of Tamarinds; and in want of all these use Oil of Vitriol as many drops as may make a cup of beer, water or rather wine if it may be had, only a very little as it were sour, to which you may also add sugar if you please or some syrups according to your store and the necessity of the disease, for, of my experience, I can affirm that good Oil of Vitriol is an especial good medicine in the cure of Scurvy.

The issue of lime-juice with a ration of rum was retained in the British Navy until 1927. The lime-juice was then replaced by orange juice and the rum ration was abolished.

Percivall Pott (1714–1788) bridged the gulf which separated the old era from the beginning of the new. There are many traces of the old order in his writings but in spirit he belongs to modern surgery. He taught at the bedside, showed his pupils what to observe and tells the results of his own experience. John Hunter, his pupil, was immeasurably superior to him as a scientific surgeon but Pott was the better

practical surgeon. All his works are well worth reading, not only for the material but for the side lights which they throw upon the hospital practice of his day. Here is an example:

A girl about fifteen years old crossing Smithfield on a market day was tossed by an ox and fell on her head. As her dress was mean and nobody knew anything of her she was brought senseless into the Hospital. She had a large bruise on the right side of her head through which I plainly felt a fracture with depression. The scalp being removed from that part the fracture was found to be large and the depression considerable. I applied a trephine on the inferior and undepressed part and by means of an elevator raised the whole to perfect equality. Her head was dressed lightly and sixteen ounces of blood were taken from her. She passed the following night very unquietly and the next morning was still senseless. She was again freely bled and a purge was given which soon operated. On the third day, her pulse admitting and her circumstances requiring it, she was bled again. On the fourth day she became sensible and on the fifth was surprisingly well. She remained so until the ninth, on the evening of which she complained of headache, sickness and giddiness. She was again let blood and put under the direction of the physician who ordered some medicine for her. From the ninth to the thirteenth day she remained much the same—that is to say feverish and complaining of heat, thirst, headache and watching. On the fourteenth day she had a severe rigor and the sore on the scalp as well as the denuded dura mater bore a bad aspect. From this time she became daily worse and worse in every respect; and on the twentieth day from that of the accident she died, having been terribly shaken by spasms for several hours.

All the internal surface of the *os parietale* above the fracture

was detached from the dura mater and covered with matter which could not obtain free discharge at the perforation, the membrane being inflamed and thrust up tight against it.

I will not pretend to assert that repeated perforation of the upper part of the bone would have preserved her but I must say, as the case turned out, it would have been her best if not her only chance; and that if I had known at that time as much of these cases as I think I have since learned I should certainly have taken away the greatest if not the whole of what had been depressed.

John Abernethy (1764–1831) always seems to me to have gained his great reputation by his personality and by his ability as a teacher. He had no pretensions to scientific knowledge nor was he a great surgeon, his rudeness was what would nowadays be called a pose for he did not suffer fools gladly and was always impatient with the many *malades imaginaires* who consulted him for digestive troubles chiefly produced by the gross habits of eating and drinking which were common to his generation. He must, however, be reckoned amongst the surgeons who added lustre to the staff of St. Bartholomew's Hospital and as one of the founders of its medical School.

Sir William Lawrence (1783–1862) was certainly the greatest of the pupils of John Abernethy and was a man of much higher mental calibre than his master. He was a fine operating surgeon, a great orator, a zoologist in advance of his time, and a first class fighting man. He was attached to the hospital from 1799 to 1865 and beginning life as a Radical he ended as a

Tory. His encyclopaedic knowledge of the surgery of his time may be judged by the fact that *Lawrence on Rupture* and *Lawrence on Diseases of the Eye* were standard text-books for many years.

A generation later than Lawrence and yet contemporary with him was the silver-tongued Sir James Paget (1814–1899), equally great as a pathologist and as a wise surgeon; a recognised master of surgery throughout the world, beloved by all who knew him for his integrity, the purity of his ideals and his great power of exposition. His lectures on *Surgical Pathology* were published in 1853; they show how much the Museum at St. Bartholomew's Hospital was indebted to his fostering care. His charm of style is exemplified in the following passage where, speaking of John Hunter, he says in his Hunterian Oration:

> I cannot doubt that he attained that highest achievement and satisfaction of the intellect when it can rest in loving contemplation of the truth; loving it not only because it is right but because it is beautiful. I cannot doubt that in the contemplation of the order and mutual fitness in the great field of scientific truth, there may be, to some high intellects, a source of pure delight, such as are the sensuous beauties of nature to the cultivated artist-mind or virtue to the enlightened conscience. I believe that in contemplation such as this Hunter enjoyed pure calm happiness. So Reynolds, his friend, seems to tell of him in that masterpiece of portraiture which teaches like a chapter of biography. Hunter is not shewn as the busy anatomist or experimenter pursuing objective facts; the chief

records of his work are in the background; he is at rest and looking out, but as one who is looking far beyond and away from things visible into a world of truth and law which can only be intellectually discerned. The clear vision of that world was his reward. It may be the reward of all who will live the scientific life with the same devotion and simplicity.

Amongst the later physicians was Peter Mere Latham (1789–1875). He wrote a little volume of *Lectures on Subjects connected with Clinical Medicine.* I often read it for pure joy of the style in which he has clothed his thoughts. It ranks with, or a little before, Sir Thomas Watson's *Lectures on the Principles and Practice of Physic.* You can buy it for ten cents at a second-hand book-stall, and if ever you see it there secure it and have it bound for it is an opus aureum. Dr Latham was physician to the hospital from 1824 to 1841. Here is a sample of what he taught:

> I have been physician here for eleven years. Having no formal lectures to give I have considered my business to be expressly in the wards of the hospital; and I have thought myself expressly placed there to be a demonstrator of medical facts. I use the term demonstrator because it will at once carry my meaning to your minds; it is that I have looked upon myself as engaged to direct the student where to look for and how to detect the object which he ought to know; and the object being known to point out the value of it in itself and in all its relations.

There are many other members of the staff to whom I might call your attention. Amongst them are

Dr. Kirkes (1823–1864) whose *Physiology* has passed through innumerable editions and is still read by medical students in England; Dr. Samuel Gee (1839–1911) whose learned and at the same time useful little manual on *Auscultation and Percussion* was in the hands of every student two generations ago and Sir Norman Moore (1847–1922) whose monumental work must ever remain the standard history of this ancient charity.

LECTURE II

Dining With Our Ancestors

PREHISTORIC MAN

The proximate principles from which the human protoplasm was built up were the same for primitive man as for ourselves. As long as man existed his digestive juices must have prepared the proteids, fats and carbohydrates for assimilation by his tissues. His senses of taste and smell were, no doubt, differently educated from our own, and what appealed to him would in many cases have been rejected by us.

Man has lived under the most varying conditions during the long period of his evolution. At a comparatively early period the climate of Europe seems to have been warm and dry. It then became glacial. The ice presently retreated and hot summers alternated with rigorous winters until the climate gradually became as it is known to us. Very little is known of the earlier periods of man's existence except that he lived near water, probably in families rather than in tribes, that he built hearths and so knew the use of fire, that he fished, caught animals by trapping, and took the kindly fruits of the earth as he found them, honey forming a supply of carbohydrates, and the marrow of the bones he broke adding to his scanty supply of fats.

He took to cave-dwellings as the weather became colder, and from this time—the Aurignacian period—we know somewhat more of his habits, for he built his hearth in his cave, and was not careful about the disposal of his refuse. Bones of the cave bear, the woolly rhinoceros, and of the mammoth, show that he was a hardy and skilful hunter, whilst in the next, or Solutrean, era the bones of as many as one hundred thousand horses have been found in one settlement, proving that by this time, at least, men had ceased to be familial and had become tribal. Reindeer were also known to these men, and the mammoth was still in existence. Then followed the Magdalensian epoch which was succeeded by the Azilian, whose members had some knowledge of agriculture, for the husks of wheat and the stones of the plum and cherry have been found in their dwellings. Fish, too, must at all times have been easy to get; it would form a pleasant change to the predominating diet of meat, and would provide an additional supply of fat and of salts.

Cooking in the early times could have been little more than boiling, and much of the animal must have been eaten raw. It was not until man succeeded in making a fireproof pottery that he could boil his victuals, though there may have been a process of steaming such as is still used by the natives of Australia. They dig a hole in the ground, fill it with stones, light a fire, rake out the ashes, and put the food to be cooked between the hot stones. Some damp

grass or leaves are then placed on the top, and the whole is covered with a sprinkling of earth. The steam generated by the heat is thus confined, and the food is ready to be eaten in a few hours.

There was probably no fixed time for eating until man had become civilised; for very long periods each would take his food when he felt inclined, gorging when it was plentiful and starving when there was none to be had. The exigencies of hunting, or of field-labour, at a later period, would cause any tribal or communal meal to be in the evening.

EGYPT

Nothing is known yet of the Sumerian and Babylonian meals, but the habits of the Egyptians have been amply elucidated. The food of the lower classes was simple and abundant. The lentil, the lotus, the papyrus, and the date were to be had for little or nothing. Milk and cheese were more rare but were not infrequent luxuries. Herodotus says that the workmen who built the Pyramids lived upon cabbage, onions, and garlic. These, no doubt, formed the staple ration, but it must have been supplemented.

The better classes were extremely fond of good living, as we know from the fact that nearly everyone suffered from osteoarthritis, whilst the Bible tells us how the Jews, when they had become an agricultural population after their escape from bondage, hankered continually "after the fleshpots of Egypt." They

were themselves, however, no mean cooks, for did not Rebekah make goat's meat into a dish which was not distinguishable from venison, when she deceived Isaac to obtain a superior blessing for Jacob.

The ritual of dining in Egypt differed somewhat from our own, but in many respects was similar. We wash, shave, and put on evening dress at home; the Egyptian had water brought to him, and was anointed with perfumed ointment by the slaves of his host. It was fashionable to arrive late, though this did not matter much, as there was an interval between the time the guest was invited and the actual hour of dinner, probably a survival of the day when the animal was not killed until the company was actually present. Men and women dined together, and as conversation was a fine art, the interval must have passed pleasantly enough. When the meal was ready every guest was presented with a flower as he entered the room, and the servants brought each a necklace of flowers, generally of lotus; a garland was put upon his head, and a single lotus bud, or a full-blown blossom, was so attached to it as to hang over his forehead. There was usually a separate round table for each person, although the guests sometimes sat together. Wine was first offered; in a vase to the ladies, in a goblet to the men. A small band, consisting of a harp, guitar, lyre and double pipe, played before dinner and throughout the meal. The guests sat on chairs, for the couch had not yet come into common

use. Beef and goose were the chief dishes, but fish of many kinds, kid, wild goat, gazelle, ducks, widgeon, and quail were served at their feasts. Mutton does not seem to have been appreciated, perhaps for the same reason as in England during the middle ages, because it was small and tough. An endless succession of vegetables was also served, although they were more in request at private dinners than at the great banquets. The meat was served in joints, but fish and game were brought whole to the table. Some of the joints were roasted, others were boiled. The boiling was done in a large cauldron placed on a tripod over a fire of wood. One slave regulated the heat of the fire by raising it with a poker or blowing it with bellows which he worked with his feet; another superintended the actual cooking of the meat, and skimmed the liquor with a spoon, whilst a third pounded the salt, pepper, and spices in a large mortar. The pastry kitchen was often separate, and was looked after by other slaves, though the master cook seems to have had a general superintendence. Although men and women sat down together, and children might be present, some distinction appears to have been made in the service. The men were waited upon by male slaves, and the women by females. The attendants were often in pairs, a white slave and a black one, the white servant holding a superior position to the black one. The meal might be at midday, as when Joseph entertained his brethren, and said: "Bring me those

men home, and slay and make ready, for these men shall dine with me at noon," or it might be a supper. The tables were either brought in furnished for each course as we read of them in the *Arabian Nights*, or the same table was used throughout. There was no tablecloth, nor were there any knives or forks. The guests helped themselves, always with the right hand, and ate with their fingers, except in the case of liquids when spoons were provided. Water was handed round at the end of the meal, perhaps with lupins in it, that the guests might rise with clean hands for the lupins acted as soap. Grace was said before meat, as we learn from Josephus (Book XII, Chap. ii, par. 11) who says that when the elders who had edited the Septuagint version of the Old Testament presented it to King Ptolemy Philadelphus, at Alexandria, they were invited to supper at the palace on the anniversary of the King's victory over Antigonus.

> He sent away the several heralds, and those that slew the sacrifices, and the rest that used to say grace, but called on one of them that came to him—whose name was Eleazar, who was a priest—and desired him to say grace, who then stood up in the midst of them and prayed that all prosperity might attend the King and those that were his subjects, upon which an acclamation was made by the whole company with joy and a great noise, and when that was over they fell to eating their supper and to the enjoyment of what was set before them.

Eleazar, who was the high priest, writes this himself, so that there is no doubt about it—if the letter is gen-

uine—as it would always be a memorable day for him to have said grace in the presence of the King, and to have been chosen out of so select a body as the seventy elders. There was also the well-known custom at Egyptian feasts of introducing an image of Osiris, either standing erect or lying on a bier, to remind the guests that in the midst of life we are in death, and that there is a life hereafter. The music and singing were continued after dinner, and the guests were amused by jugglers and dancers.

GREECE

The pictorial art of Egypt shows how the inhabitants lived; the literature of Greece gives us equally certain information of the manners and customs of the Greeks. The *Iliad* and the *Odyssey* contain many allusions to meals at a very early period of Greek civilisation. We learn that all strangers were welcome, that the flesh of oxen, sheep, and goats was commonly eaten, either roasted on a spit or boiled, that fish were rare, but that cheese, bread and fruit were eaten daily. Wine was drunk ordinarily mixed with water, and it was sometimes so strong that it was capable of being kept for years. In some parts of Greece the primitive habits long remained, but at Athens eating and drinking became as serious a matter for consideration as it is amongst ourselves.

The *Dialogues* of Plato bear out the statement of St. Paul in the Acts that all the Athenians and strang-

ers which were there spent their time in nothing else but either to tell or to hear some new thing. The *Symposium* gives a good account of the usual procedure at an Athenian feast at a time when the citizens were at the acme of their mental culture. The feast consisted of two separate parts which might be distinct or combined. There was the feast proper, consisting of two courses, the first of fish, poultry, and meat, the second of fruit and sweets. This was followed by the Symposium, when congenial spirits met to discuss, and often to thresh out very thoroughly some selected topic of general interest, and whilst they did so they drank their wine. Such symposia are still not uncommon in London, the difference being that the guests do not drink to excess, whilst Plato represents Alcibiades as being intoxicated, and, curiously enough, without incurring any moral censure even from Socrates, who was present.

The secluded life led by the Greek women prevented them from appearing at table, but they superintended the cooking of the meal, which was carried out by the female slaves. As in the earlier days, persons were welcomed even though they had not been invited, provided that they would take their share in any discussion that happened to be going forward. It was usual to bathe before dinner, and to put on a special dress. Socrates was understood to be going out to dine when he was seen to be wearing sandals instead of walking barefoot, as was his custom. The guests

reclined two or three on a couch, and if there was no host, a master of the feast was appointed, in which case each guest paid his own share of the expense. The sandals were removed, water was brought round to wash the hands, and garlands were put on. The garlands were of ivy and violets, interspersed with ribbons. A libation of undiluted wine was first offered to the gods with pæan and music. Mallows, lettuce, beans, lentils, fish, poultry, and meat formed the first course, and, as we learn from Aristophanes, the Athenians were passionately fond of pork in the form of sausages, and did not disdain tripe. Fruit and sweetmeats followed, and it was customary to have a female performer playing on the flute. Wine diluted with a half or a third of water, was drunk sparingly during the meal.

The discussion took place as soon as the meal was ended. It was opened by one of the guests, and when he had finished he called on the person sitting upon his right to continue, and he in turn, until everyone had spoken. Wine was drunk during the discussion and, in the *Symposium*, Alcibiades is represented as having emptied the whole wine cistern, which held two quarts, at a single draught, while Socrates continued to sit, drink, and talk until everyone had either left or fallen asleep, for he had so strong a head that nothing affected it.

ROME

The Romans lived a healthy outdoor life in the early days of the Republic, and cultivated farms which supplied them with the necessary food. Even in the days of their greatest luxury there was always a desire to return to the land, and the wealthiest citizens often paid visits to the farms which it was their pleasure to maintain. Living in the early times was of the simplest; eggs, milk, fowls, cheese, with some home-baked cereals, wine made from the local vines and drunk well diluted, supported the hardy race which conquered the world. It was quite different when hordes of slaves and quantities of money led to a very artificial life, except for those whose military duties took them abroad for long and indefinite periods of service, where many hardships had to be endured. The jentaculum, or early breakfast, taken at day-break, and the prandium at midday, were occasional meals. The chief meal was the cœna, originally at three o'clock in the afternoon, but which, like our own dinner-hour, was gradually pushed back until it became what we should call a late dinner.

It consisted of three courses, the first of hors d'œuvres, when eggs played a conspicuous part; the second of fish, fowl, and meats, the suckling pig being an especial delicacy; and the third, a dessert. Wine, either diluted or, less reputably, undiluted, was drunk, and the wealthy were as particular about their vin-

tages as we are ourselves. Ladies were usually present, and the meal was taken reclining—three persons on each triclinium. The guests came straight from the bath, and put on a special bright-coloured dress in which to dine. The table was provided with a cloth, and everyone was given a dinner napkin. Petronius, in the *Satyricon*, gives an account of two banquets, the one well known as Trimalchio's Feast, given by a very vulgar *nouveau riche*, the other a smaller one.

The smaller feast consisted, we are told, of

> a pig crowned with a black-pudding and garnished with fritters, some excellently well-cooked giblets, with beetroot, of course, and whole-meal brown bread, which, personally, I prefer to white bread. The next dish was a cold tart with some fine Spanish wine poured over warm honey. I eat a lot of the pie, and took as much of the honey as I could get. Chickpeas and lupins were then handed round with as many nuts as we liked, and one apple apiece. I took two myself. Then there was some bear on a side table. I eat about a pound of it for it was just as good as wild boar. We had cheese to finish up with, softened in wine, and each of us had some snails and pieces of tripe and liver in little dishes, with eggs in caps, turnips, mustard, and a dish of forcemeat. Pickled olives were brought round in a dish, and some greedy beasts took three handfuls of them. But we had to let the ham pass.

ENGLAND

From time immemorial, that is to say, ever since the country became so far civilised that men had no longer to depend directly upon hunting for their

food, the English seem to have been accustomed to three meals a day. The times at which these meals were taken, and their relative importance, have varied greatly.

Anglo-Saxons

The old English, who are often spoken of as the Anglo-Saxons, took their first meal at nine o'clock in the morning. It was not elaborate, and was probably eaten standing. The second meal, or the Repast, as it was called, was the dinner. It was the chief meal of the day, and was taken about three o'clock in the afternoon. The evening meal or supper was quite subordinate and was eaten just before bedtime. The overwhelming importance of the dinner seems to point to an antecedent time when a single meal was taken about mid-day, as amongst the Romans, who took their prandium when on military service, or their cœna in civil life, after the day's work was ended.

The old English seem to have been a sluggish and rather greedy race, for they rarely did anything after dinner, and often contrived to prolong the meal and the drinking, which accompanied it, until they went to bed.

Normans

The Normans, on the other hand, were very active, and were spare eaters, though the habit of hard drinking continued in England, if we may judge by a clause in

the Canons of Archbishop Anselm, issued in 1102: "ut presbyteri non eant ad potationes nec ad pinnas bibant"—that priests go not to drinking bouts nor drink to pegs, for in drinking to pegs there lurked danger. If one drank short of the peg within the cup, or beyond it, the toper had to drink again and again, until he drank successfully to the exact level of the peg.

MEAL TIMES

The Normans rose early, usually before daybreak, and after washing, dressing, and praying, ate some bread and butter, washing it down with wine. A pasty or meat pie was an additional luxury which the wealthy often allowed themselves. Their bread, like that of the Old English, was eaten hot and new. The chief meal of the Norman day was about nine o'clock, the Old English breakfast hour, so that the rest of the day might be free for work or play. Supper was at seven o'clock in winter, and people then went straight to bed, for light was expensive and bad. Supper soon became nearly as important a meal as dinner, and in process of time, more important, for it was eaten leisurely in the hall, fruit and wine being served with it, though people still went to bed directly afterwards. The old French rhyme recalls the division of the day at this period:

Lever a cinq, diner a neuf,
Souper a cinq, coucher a neuf,
Fait vivre d'ans nonante et neuf.

The early dinner hour certainly lasted until the time of Chaucer, for the Monk in the Shipman's tale says:

> And let us dine as soon as ere we may
> For by my Kalendar it is prime of day

and prime was nine o'clock in the morning.

From the Directions for the Household of Henry VIII, which have recently been discovered in the Duke of Montrose's Library at Buchanan Castle, near Glasgow in Scotland, we learn that dinner was to be at ten and supper at four. The brewer was directed not to put any brimstone in the ale and the master cooks were ordered not to employ any scullions who went about naked or who lay all night on the floor before the kitchen fire. The King's attendants were not to steal any locks or keys, tables, forms, cupboards or other furniture out of noblemen's or gentlemen's houses where he chances to visit. No dogs were to be kept in the house except a few Spaniels for the ladies but twenty-four loaves a day were allowed for His Highness' Grayhounds. Coal was only to be supplied for the Chambers of the King, Queen and Princess Mary.

Harrison in his description of England, published in the time of Queen Elizabeth, says that the higher classes dined at eleven and supped at five o'clock, whilst the merchants seldom took their meals before twelve and six o'clock. Two additional meals made

their appearance about this time. The one called "bevir" is familiar to Wykehamists, to Etonians, and to the older generation of Westminster boys, whilst in Suffolk it still signifies an afternoon snack. It consisted at Winchester College of bread and cheese, taken in summer time about four o'clock in the afternoon. The other meal was the banquet or rere-supper (p. 75). The term "bevir" was driven out by "nuncheon," and "nuncheon," in turn, has been displaced by "luncheon." The two words are by no means synonymous. Nuncheon, in its original sense, had a relation to drinking and not to eating. It is derived from "none," the equivalent of "noon", and "schenche," which is a pouring out or distributing of drink, and we still employ the latter word when we speak of the shank or pipe bone of an animal. Nuncheon was thus the accompaniment of the nonemete, and noon was the ninth hour of the day or three o'clock in the afternoon, until the time of the church service called "nones," was altered to twelve o'clock, when noon became identical with mid-day. Luncheon, on the other hand, is a mere expansion of the old provincial word "lunch," which meant a lump. It was employed at first without any change of meaning, as when we speak of a lunch of bread and cheese, but its use was soon extended to signify a slight meal, just as we now say, to take a snack, *i.e.* a snatch of food.

In Cromwell's time dinner was at one p.m., and at the Revolution people dined at two. So dined Addi-

son and Swift. In 1745, great persons advanced their dinner hour to four p.m., for Pope complains of Lady Suffolk's dining at that hour. "Young people," he says, "may bear these doings, but as to himself, now turned of fifty, if such things went on, if Lady Suffolk would adopt such strange hours, he must really absent himself from Marble Hill." This late dinner hour was soon imitated by lesser people, for Cowper, in his poem on Conversation, written about 1780, speaks of four o'clock as still the elegant hour for dinner, and Cowper was living amongst country gentlemen, and not in high life. There was a general move in the dinner hour at Oxford, about 1805. The colleges whose members dined at three, began to dine at four; those which dined at four, ordered dinner at five. These hours were kept for the next ten years, after which six o'clock became the usual hour for "Hall" and it is now seven.

Thus we have the basis of our modern meals, and their approximate times. The early breakfast is now represented by the early cup of tea, or by the cup of chocolate, which was so fashionable in England during the eighteenth century. The English breakfast is an elaboration of the nine o'clock meal of the Old English, whilst the French have retained the *déjeuner*, corresponding with the later hour of the Norman dinner. Our two-o'clock lunch is the nonemete of the Old English for, as has been shown already, the nonemete was not taken at noon, but *ad nonam*, or about three

in the afternoon. Our five o'clock tea is quite an innovation, introduced in consequence of the increasing lateness of the dinner hour. Supper has almost disappeared from middle-class life, except on Sundays, though it still replaces dinner in the long evenings of the summer term at Oxford and Cambridge. The old supper, taken at seven o'clock, has been replaced in many families by a meal called "high tea," or by the rere-supper (p. 75), a meal which is now known as "late dinner."

THE DINING-ROOM

The chief meals of the day, both amongst the Old English and the Normans, were taken in the common chamber or hall of the house, the room which for many years served every purpose because people lived and slept in it. Its use gradually became more restricted, first by the increasing privacy of the bower or ladies' apartment, and afterwards by the addition of more rooms to the house itself. Of these rooms the parlour was the most important, and it was one of the first rooms to be added. It was a well-known chamber in mediaeval monasteries as the place where conversation was permitted, for during the meals a lesson was read, and strict silence was observed. It did not come into general domestic use until the reign of Elizabeth, and it still serves its original function as a room devoted to ceremonial purposes in some of the English city companies. "A fine to the parlour door" is a

frequent entry in their minutes, the meaning being that a fee was paid by a liveryman on admission to the court or governing body of the Company, which held its meetings in the parlour or council room. A later use of the room is to be observed in the older universities, where it remains as the Common room or the Combination room, to which the members of a college retire for dessert and wine after taking their dinner in Hall.

BREAKFAST

Breakfast was a subordinate meal until quite recently. Indeed, the first use of the word breakfast can only be traced back to the year 1463. Saxons and Normans seem to have done a vast deal of work upon empty stomachs. They rose at day-break, and took little or no food in many cases until eleven or twelve o'clock. The first mention of breakfast is in connection with the Duchess of York, mother of Edward IV, who rose at seven and heard matins, after which she dressed, went to low mass, and then took something "to recreate herself." This was breakfast, but it is expressly stated that it was not a regular meal. It presently became an established custom in certain families, for the breakfast of the Earl of Northumberland, in 1512, consisted on flesh days:

For my lord and lady, a loaf of bread for trenchers [p. 63] two manchets or loaves of fine meal, one quart of beer, a quart of wine, half a chine of mutton, or a chine of beef boiled. For

my Lord Percy and for Mr. Thomas Percy—[the two elder children]—half a loaf of household bread, a manchet, one pottle of beer [*i.e.*, two quarts], a chicken, or else three mutton bones broiled. The breakfasts allowed for my Lady Margaret and Mr. Ingram Percy, who were children in the nursery, were a manchet, one quart of beer, and three mutton bones broiled. For my lady's gentlewomen a loaf of household bread, a pottle of beer, and three mutton bones broiled, or else a piece of beef boiled.

The breakfast allowances on fish days were, for my lord and lady, a loaf of bread for trenchers, two manchets, a quart of beer, a quart of wine, two pieces of salt fish, six baked herrings, a dish of sprats. The two elder sons received half a loaf of household bread, a manchet, a pottle of beer, a dish of butter, a piece of salt-fish, a dish of sprats, or three white (fresh) herrings. The two children in the nursery had a manchet, a quart of beer, a dish of butter, a piece of salt-fish, a dish of sprats, or three white herrings. My lady's gentlewomen were allowed a loaf of bread, a pottle of beer, a piece of salt-fish, or three white herrings.

A note added to this memorandum states that "My lord and lady breakfast only on Monday, Friday, and Saturday in Lent; my lord's children have breakfast every day of the week." Breakfasts in the Earl of Northumberland's household at this time were supplied as low as the yeomen of the guard and the yeomen waiters. The attendants in the porter's lodge and in the stable had "drynkyngs" instead of breakfast; no meat or fish was supplied to them.

Breakfast soon became an expensive item, for Mrs. Lee, a personal attendant upon Elizabeth of York, the

Queen of Henry VII, spent ninepence upon her breakfast at Richmond, one day in the year 1502, when she was travelling upon the service of her mistress, and ninepence at that time represented a very considerable sum of money.

Breakfasts became more common about the middle of the sixteenth century, for Sir Thomas Elyot, in his *Castle of Health*, printed in 1541, says:

> I suppose in England young men until they come to the age of fortie years may well eat three meals a day, as a breakfast, a dinner, and a supper, so that between breakfast and dinner be the space of four hours at the least, between dinner and supper six hours, and the breakfast less than the dinner, and the dinner moderate.

Breakfast had not become a fixed meal even as late as the middle of the seventeenth century, for we have no difficulty in learning from Mr. Pepys the exact manner in which he lived, and we may feel sure that his habits closely reflected the habits of those in his own station of life. The first thing that strikes us is the extreme simplicity of his life. He rose early, for by cock-crow he was often at work in his office, yet he rarely speaks of breakfast. He never failed, however, to take his morning draught at a tavern, and it usually consisted of half a pint of Rhenish wine. He records, for instance, on January 31, 1659–60: "In the morning I fell to my lute till nine o'clock. Then to my lord's lodgings, and there met Nick Bartlett,

and gave him his morning draught at Harper's." He had a pretty substantial breakfast on Twelfth Night, 1659–60, but this was probably the end of a Christmas festivity, for it consisted of cold turkey pie and a goose.

Wine was the ordinary drink at breakfast from quite early times, for we read that: "A lady who has not a good smell, or who is pale-faced, ought to breakfast early in the morning, for good wine gives a very good colour, and she who eats and drinks well must heighten her colour."

DINNER

Dinner was the first fixed meal of the day in Anglo-Saxon and Norman times. It was taken in the hall, and in great men's houses it was free to anyone who chose to enter, the only formality required being that the stranger should give his weapons to the hall-keeper as he entered.

THE TABLE

The table was literally a board placed upon trestles. It was brought out at mealtimes and was put away again in the intervals. We still call this time to mind when we say that the servant is laying the table, whilst "the festive board," "board and lodging," and "boarding-house" are all reminders of the original table. This board in all well-regulated houses, where there was a self-respecting mistress, was covered with

a handsome tablecloth, which was often looped up at the sides in a series of festoons. It was probably one of the outward signs of mortification of the senses that led to the covering of the table at St. Swithin's Priory at Winchester with rough hempen sacking in the fourteenth century, for the inmates of the priory were of a superior social class. Much care was taken to avoid soiling the cloth; stress is always laid upon the necessity of keeping the knife and spoon off it, and "by no means should the guest wipe his teeth or his eyes with it." The Normans had the same table arrangements as the Old English, but if a board was not available they used their shields in place of one. The table did not become a fixture until the fourteenth century, when it was spoken of as the table dormant, and it was probably the high table, or the table on the dais, which first became a permanent article of furniture. The Franklin mentions it in the Prologue to the *Canterbury Tales* as an evidence of his profuse hospitality:

> His table dormant in his halle alway
> Stood ready covered al the longe day.

The table was at first attached to the floor by loops put round the trestles; the trestles in process of time were replaced by permanent supports, which at a still later time were turned and ornamented to form the legs as we now know them.

THE SEATS

An ordinary bench formed the seat at table for many years, and they are still in use in the Halls at Oxford and Cambridge. They were replaced by settles, which were often elaborately carved, and finally by chairs. For a long time the guests only sat upon one side of the table, an arrangement which greatly facilitated the work of serving.

THE MEAL

Soup, or to call it by its proper name, broth, began the dinner from the earliest times. It was served to the Scandinavian warriors in stoups or buckets of linden wood, bound with gold or bronze. The broth was poured into these buckets by the servitors whilst the maidens of the household replenished the horns with mead. The broth contained pieces of meat, which were first picked out with a spoon and eaten before the broth was supped up. The spoons in use at this time resembled very closely those seen in Russia at the present day, except that the bowl was pierced with five holes through which the broth drained away, leaving the meat dry and thus enabling the warriors to eat without soiling their beards. In the larger households the king or yarl sat on the dais in the centre of the eastern wall of the hall, whilst a knife, spoon and plate were laid for each of the more important members of his retinue. The place of each mem-

ber of the household seems to have been fixed and was marked by the position of his weapons, which were suspended behind him. The church perhaps followed the custom when, as at Lincoln, each choir stall is inscribed with the name of the prebend and the first words of the psalms appropriated to its use, clearly the spiritual arms of the prebendary. Metal plates were only found in the houses of very rich men and their place was taken for many hundred years by trenchers (p. 63). The queen or lady of the house had by her side a basket of hot loaves somewhat like our dinner buns, and the basket was circulated during the meal that each guest might help himself. The Old English, on the whole, did not fare badly. They roasted and they boiled, they stewed and they baked their meats. They smoked their flesh, too, and they had pounded meat and fish, meat chopped fine and mixed with herbs; sausages and balls of mincemeat like our forcemeat balls. The frying pan was in constant use and was called a hyrsting panne. Marrow puddings and oyster patties were not unknown, and they had bread in many forms. There were fermented bread and unleavened bread, peasant's bread and wheaten bread, hearth-baked bread and bread baked in the oven. Toast, too, was common. There was also a kind of cream-cheese and "bri," the prototype of porridge. Eels, perhaps, were more largely eaten then any other fish, except the penitential stockfish, though carp, pike and herrings are often mentioned.

All the food had to be sweetened with honey, as there was no sugar and beekeeping was an industry partly for the honey and partly for the sake of the wax to make the candles used so extensively in the services of the church.

Beer, brewed without hops, and mead were the usual drinks, but the Old English were very skilful in compounding drinks, and no doubt many of our "cups" have been handed down traditionally from their receipts. The formalities connected with drinking were numerous, and precise. Some of them are still practised at city feasts and at other places where the loving cup goes round at the end of dinner. The children were fed in a rational and wholesome manner, for there is a well-known passage in the Colloquies of Alfred the Great where a little prig in a monastery is asked what he eats. He replies "As yet I have flesh meat, because I am a child living under the rod." "What more dost thou eat?" his questioner asks. "Vegetables," the boy replies, "with eggs, fish, cheese, butter, beans, and all clean things, thankfully." "What dost thou drink?" "Beer, if I have any, or water if I have none," he answers, philosophically. "Dost thou never drink wine?" "No, I am not so rich as to be able to buy wine for myself; besides, wine is not the drink of children and fools, but of elders and wise men."

The forests of oak and beech, which covered large areas in England at this time, afforded pasturage for

innumerable herds of swine which fattened upon the mast. Bacon, therefore, was very abundant, though fish and poultry were largely eaten. The facilities for the interchange of produce were so scanty that each landlord had to consume the produce of his own land until quite late in the middle ages. Fresh meat was only eaten from midsummer to Michaelmas, and salt meat had to be consumed for the rest of the year. This explains in part why our ancestors usually boiled their food, not their meat only, but even their poultry, for boiled goose was as common a dish as I understand that boiled turkey is in Maryland. It also accounts for the great value attaching to salt, because the supply was limited and the demand was great. It was more convenient, too, to boil than to roast for the additional reason that before fireplaces came into ordinary use most of the cooking had to be done upon the ground, and it was easier to hang the pot over the fire than to keep a boy turning the spit. The pot was either suspended by means of a pothook or it was supported upon a three-legged stand. The heat of the fire was increased by the use of bellows of the same type as those still in use amongst us. Fresh meat, fowls and game were eaten upon the day they were killed, and the kitchen, at any rate in the case of pigs and sheep, was the usual slaughter house. The roast meat was generally served on spits, which were often of silver in the houses of wealthy persons. Small

birds like larks and pigeons were spitted in rows, but larger birds were served singly or in couples.

The Normans ate much less than the Old English, but what they had was better cooked and better served. Their fondness for open-air life led them to take their meals into the meadows, where they improvised feasts like our picnics. The custom was not confined to the young, but was indulged in even by the retainers, who formed so important a part of the establishment of a feudal lord. Wine was much more largely drunk by the Normans than by the Old English. Alexander Neckham, master of the school at Dunstable and sometime professor in the University of Paris, writes about 1180 that

> It should be as clear as the tears of a penitent so that a man may see distinctly to the bottom of his glass; in colour it should be as the green of a buffalo's horn; when drunk it should descend impetuously like thunder; it should be as sweet tasted as an almond, strong like the building of a Cistercian monastery, glittering like a spark of fire, subtle as the logic of the schools of Paris, as delicate as fine silk, and colder than crystal.

Little is known of the details of Norman meals or of the manner in which they were taken. Bread, butter and cheese were the ordinary food of the people, probably with little else besides vegetables.

It is interesting to notice that all these articles of daily fare have kept their Saxon names, whilst most of the meats, *e.g.*, beef, mutton, veal and the like have Norman names, for they were more eaten by the

French-speaking ruling class. The bread was served hot, and in the same form as before; whilst the meat was still offered on spits. It was daintily served, however, for expertness in carving soon came to be looked upon as an important part of the education of a nobleman's son. Carving became a fine art, and the ability to carve well long remained one of the distinguishing marks of a gentleman. Wynkyn de Worde printed a book of Keruynge in 1513 which gives directions as to the manner of carving all kinds of victuals. It is explicitly laid down that the hands of the carver must be clean, and that he should never set more than two fingers and a thumb on fish, flesh, beast or fowl. The knife must be sharp and the carver should have a clean napkin handy. The art had its own phraseology, and each animal was carved in a manner peculiar to itself. Thus a deer was broken, a goose was reared, a swan was lifted, a hen was spoiled, a cony unlaced, a crane was displayed and a peacock disfigured; pigeons, woodcock and all small birds were thighed, crabs were tamed and pasties were bordered. It was not until the eighteenth century that each guest began to carve for himself and usually did it so badly that it soon became necessary to provide fricassées and ragoûts in which everything was so dismembered that no carving was required.

We have the following account of servants' meals preserved to us from the thirteenth century. Their

first meal is to be at midday, when they are to be fed plentifully, but only of one meat and not with any delicacies. They are to have one kind of drink, nourishing but not heady, and they are to be admonished to eat heartily and to drink well and plentifully. It is right, too, that they should "eat all together without sitting too long, and as soon as they begin to talk or to rest their arms upon their elbows, make them rise and remove the table." On feast days the servants were to have a second and lighter repast, and lastly, in the evening, they were to have another abundant meal, like their dinner, and then, if the season required it, they were to be made comfortable and warm before they were sent to bed.

The Compotus Rolls of St. Swithin's Priory at Winchester afford an excellent insight into the daily life of the monks about the year 1492, whilst the Dietary Rolls show the actual amount of food consumed daily for a year. The first meal, or the prandium, was taken after sext, *i.e.* at midday. It was eaten in silence, and as soon as it was finished the brethren filed out of the refectory and went at once to the dormitory for their meridian or midday siesta, which lasted for two hours, until it was time for nones. A slight refreshment, called the Collation, was taken after nones. It consisted of beer drunk in the refectory, and if any brother wanted a piece of bread it was there to his hand. The monks then went back to the cloister for study, and, after reading awhile, it was

time to go to vespers at six o'clock. Then came the cœna, or supper, which was practically a repetition of the dinner. Complines finished the day's routine, and it was at this service that the circa was most in request. It was the duty of the circa, after noting those who were absent from service, to go round the choir to see whether any brother had fallen asleep in his stall. Him he roused with a friendly nudge and urged him to go on singing; though, if it were not service time and the monk had fallen asleep in the body of the church, the circa said nothing, but placed his little lamp so that its light shone straight into the face of the erring brother, who, being thus awakened, took the lamp and silently performed the same friendly office for another.

The Dietary Rolls of St. Swithin's show that each person received daily about a pound and a half of meat, with four or five eggs and butter twice a week, on Wednesdays and Saturdays, except on Rogation days, when it was distributed four times a week. A maynard or thirty-two pounds of cheese was supplied weekly for dinner and supper, and as there were usually about thirty-two monks, each received a ration of a pound a week. Moile or bread, warmed beneath the roasting meat and so soaked in dripping, was the great standby, and large quantities of dry ling or salted cod were also eaten. The fish diet needed condiments to make it at all palatable and to aid its digestion, so mustard was always served with it.

The monks, too, had oysters, mushrooms and meat for batter, which was, I suppose, "toad-in-the-hole," or meat fritters. The prior and the higher officers of the convent had their special entrée, which was often expensive, and is mentioned as a separate item in the accounts. Minute details are given about the allowance of drink. The precentor and cook were allowed a punchard of good beer daily, and, after an especially hard day's work, a pitcher of wine in addition.

Not only do we know what our ancestors ate and drank, but we know also something about their habits and customs at table, for they are set out with scrupulous fidelity in the *Babee's Book* and in the various books of nurture which were published in the second half of the sixteenth century. The need for these books arose from a custom which had grown up in the fifteenth century of sending away the boys and girls of the better classes to be educated in the houses of the nobility and gentry, a custom which became so general that those who sent away their own children actually took others in their place.

These books teach that after the cloth had been laid it was unlucky not to put the salt on first. The knives were next arranged, each guest bringing his own knife and the *Stans puer ad mensam*, a manucript of about 1460, says that a child must not bring his knife to table dirty, that he is by no means to pick his teeth with it, and that he is not to put it into his mouth,

though he may help himself to salt with the point. The knives were often razor-shaped, and some of them were notched at the ends.

Spoons were frequently of wood, for Sancho Panza says when Don Quixote proposes to lead a rustic life after their adventures, "Oh! what neat wooden spoons shall I make when I am a shepherd;" and they remained of wood or horn for a long time, but spoons of pewter, latten and tinned iron were common in the fifteenth century. Latten was a mixed metal resembling brass in its nature and colour. The child in *Stans puer ad mensam* is told to "wipe fair thy spoon, leave it not in thy dish."

Forks are quite a modern innovation, though the first mention of them in Europe is more than a thousand years ago. In the year 895 the sister of the Emperor of the East was married to a son of the Doge at a time when the decay of the Carolingian line enabled the Greeks to reap the fruits of the capture of Bari by Basil the Macedonian, in 871. The girl introduced the use of the fork into Venice, for she brought with her one of gold, but it was many hundred years before they arrived in England, although they came directly from Italy, and Master Thomas Coryate of Odcombe in Somerset, claims to have been one of the first to use them. He says in his *Crudities* published in 1611:

> The Italians and also most straungers that are commorant in Italy doe always at their meals use a little fork when they cut their meate. For while with their knife which they hold

in one hand they cut the meate out of the dish, they fasten the fork which they hold in their other hand upon the same dish so that whatsoever he be that sitting in the company of any others at meals should unadvisedly touch the dish of meate with his fingers, from which all at table doe cut, he will give occasion of offence unto the company as having transgressed the lawes of good manners, in so much that for his error he shall be at the least brow-beaten, if not reprehended in words. This forme of feeding, I understand, is generally used in all places of Italy, their forks being for the most part made of yron or steel and some of silver, but these are used only by gentlemen. The reason of this their curiosity is because the Italian cannot by any means endure to have his dish touched by fingers, seeing all men's fingers are not alike cleane. Hereupon I myself thought good to imitate the Italian fashion by this forked cutting of meat, not onely while I was in Italy but also in Germany and oftentimes in England since I came home; being once quipped for that frequent using of my forke by a certaine learned gentleman, a familiar friend of mine, one Mr. Laurence Whittaker, who in his merry humour doubted not to call me at table Furcifer only for using a forke at feeding but for no other cause.

The sting of this gibe lies, of course, in the fact that Furcifer, meaning literally a fork-user, implies classically a gallows-bird or villain of the deepest dye. Coryate speaks only of the small fork; the large fork was already well known. It was used for serving, and we still have it with us in the salad fork, where it often forms part of a spoon. A guest when he dined out took his knife and spoon and later his fork with him as a matter of course, and even so late as 1663 Mr.

Samuel Pepys took his spoon and fork with him to the Lord Mayor's Banquet at the Guildhall.

The absence of forks and the scanty supply of spoons explains the great stress which was laid upon the necessity of washing the hands both before and after meals. The food was taken straight out of the dish with the thumb and two fingers of the right hand, whilst the knife was held in the left hand. Napkins were provided so that the guests might wipe their hands during the meal, and the laying of napkins became an art in itself. Pepys says that on the day before one of his dinner parties, he went home "and there found one laying of my napkins against tomorrow in figures of all sorts, which is mighty pretty, and it seems is his trade, and he gets much money by it."

As soon as the guests were seated at table, grace was said, and an attendant brought to each in turn, beginning with the master of the feast, a jug containing hot or cold water and a basin, whilst an assistant stood by his side with a towel. The water was then poured over the hands so that each might wash, and during this ceremony the tablecloth was protected by a surnape or napkin, which was removed as soon as all had washed. The form of washing the hands was repeated at the end of the meal. This practice of washing the hands before dinner continued until the middle of the sixteenth century, but the washing after dinner seems to have disappeared much earlier, unless it is

still kept up as a vestigium in that perfunctory dip which is rendered necessary at a public dinner when a salver containing rose-water is circulated. I think it probably is so because the records of many of the city banquets in the sixteenth and seventeenth centuries contain an item for rose-water. Nothing edible was put upon the table, except bread, until the washing was finished and the surnape had been removed. The trenchers, indeed, were there, and they consisted of bread. They appear still to be represented by the pieces of bread or toast which are placed under the hors d'œuvres, scrambled eggs, small birds, asparagus, toasted cheese and other savouries.

Trenchers were the primitive plates, except in the houses of very great men. They were formed from special loaves baked for the purpose, and made of an inferior quality of flour. The guests made their own trenchers when there was no attendant to do it for them, but in large houses and on state occasions it was the duty of the butler or pantryman to prepare them. He kept three knives for the purpose, the squarer, the chipper and the smoother. The loaf, baked at least four days before it was wanted, was first cut into two transversely so that the top was separated from the bottom. The top crust was then cut horizontally into four and the bottom piece into three. The crust was afterwards cut off and the trenchers were made smooth with the smoother, which was kept very sharp. The trenchers were, to a certain

extent, badges of rank, for a pile of six or eight was laid before a king, but, if the guest be "of lower degree," the trencherman was directed "to lay five trenchers, and if he be of still lower degree four trenchers, or of another degree three trenchers." The trenchers were arranged in rows of four, piled one upon another, and great care was taken to place them symmetrically. The pieces of meat were laid upon the trenchers and were cut upon them. The gravy then ran into the bread, which was afterwards eaten, though in later times it was considered discourteous to do so, and the trenchers were then put into the voider and were sent away in the alms basket to be distributed to the poor at the gate. Less cleanly people merely threw their trenchers upon the floor to mix with the other refuse, but this was looked upon as piggish. The Old English occasionally had a silver platter placed beneath the trencher, a practice which became general amongst great people as early as the middle of the thirteenth century, and gradually spread to the lower ranks of society. The trencher of bread was then omitted and was replaced, first by platters of wood, or tree as they were called, then of metal, usually pewter, and finally of earthenware or china, our present day plates. Wooden platters were certainly in use until the reign of Elizabeth and the Lord Mayor's Feast in 1663 was served upon them, probably because the city plate had been melted down during the Commonwealth. The wooden bread plate

is still a familiar object upon our tables, whilst many are still living who remember when the farm labourer's dinner was put upon a table that had been hollowed out to form a rude plate. These tables were provided with a sufficient number of holes to accommodate the men usually employed, and they were kept scrubbed as clean as sand and elbow grease could make them.

Pewter was a luxury in the time of Queen Elizabeth. It was reserved for state occasions and was usually hired by the day, or in some cases by the year. Venison to this day is eaten off plates of electro or silver.

The table was also furnished with dishes and with drinking vessels. The drinking vessels were at first of horn, though goblets of glass or crystal have been employed from very early times. Glass gradually came into common use, but for many hundred years they were made in the shape of a horn. The mazer was the most highly prized drinking vessel from the thirteenth to the sixteenth century. It was a more or less shallow bowl, turned out of wood, spotted maple by preference, and of that variety to which the name of "birds-eye" maple is given. It was, indeed, from this fact that it derived its name of mazer. The salt-cellers or nefs were of prime importance in the table decorations, and took the place of our épergnes or centre ornaments. They were often of large size, and were highly ornamented, each having a cover to keep the salt clean. Some excellent ex-

amples still exist, and only a short time ago I sat opposite one of the noblest in Christ's College, Cambridge. It was made in 1507 and was given to the College by Margaret, Countess of Richmond. There was originally one salt-cellar to each table in the hall, but when the tables were formed up to make a T-shaped table, the chief salt-cellar was placed in the centre of the table and about its middle. The guests of distinction were then placed above the salt, and those of inferior rank below it. In still later times the chief salt-cellar was placed before the chief person's seat, the second salt-cellar was put at the lower end of the table, and the rest of the salt-cellars were placed on the side tables. These smaller salt-cellars were often triangular or circular in shape; they were without legs, and had a depression in the upper surface to hold the salt; they were known as the "trencher salts."

The women wore their kerchiefs or wimples and the men wore their hats at dinner, a custom which probably disappeared when wigs came into fashion. Pepys, at any rate, caught cold one day "from sitting without my hat at dinner," and this was before his fine new wig was brought home from the barber's.

The guests were placed at table in couples, arranged as far as possible beforehand to make the meal more pleasant, for each pair were served with the same food out of the same dish. The unit at table was, therefore, the mess and not the individual, as it is now. The number of the mess increased in later

times from two to four. Each mess had one dish of each kind of food allotted to it, and was waited upon by a single attendant known to us as the scout, gyp, or pannier, who was brought by the guests themselves. The introduction of a servant to wait upon his master is still a useful custom at large dinners, especially in the country, where it is difficult to obtain a sufficient number of hired waiters. It is also a matter of etiquette in London amongst those whose official position requires them to dine out frequently. Thus, when the Lord Mayor or the Sheriffs go to a banquet, they take with them two servants in full livery.

This personal service gradually led to abuse, for we read in the *Records of the Barber-Surgeons* that in the year 1600:

> The bodye of this Companie hath sustained much disparagement by reason that some of the livery and others no whit respecting at all the worship of this Company have not only by themselves but by their servants and apprentices disfurnished the tables, at feasts whereat they have sitten, to pleasure their private friends contrary to all modesty and good government. It is therefore ordered that no person of the Livery of this Company, being not of the Assistaunce of the same, shall not at any time hereafter suffer any of his children, friends, servants or apprentices to stay or attend upon him or his wife at any feasts to be kept at the Common Hall of this Mistery.

The plain English of this remarkable ordinance seems to have been that some of the less distinguished members of the Barber-Surgeons Company had been

in the habit of bringing their children and apprentices to the banquets, ostensibly to wait upon them, but in reality to send them home laden with the remains of the feast which afterwards they either ate at leisure or distributed amongst their friends. It is clear that men, as well as women, sat together at public dinners, not only in the city companies but also at other places.

The ordinary dinner of a respectable citizen in the middle of the fifteenth century consisted of soup, two or three plain dishes of meat, followed by cheese, pastry and fruit. This practice of eating cheese before pastry is still common in some parts of France, and is occasionally seen in England. Meat pies, too, were very common articles of food in the middle ages. These were always kept hot and ready at the cook shops, which were so numerous in all the larger towns. In the prologue to Chaucer's "Merry Adventure of the Pardoner and the Tapster at the Inn at Canterbury," the Pardoner declines the Tapster's proffered drink on the plea that he had not yet broken his fast to which the Tapster replies:

> Fasting it,
> Alas! quoth she, thereof I can gode bote
> She stert into the town and get a pie all hote,
> And set tofore the Pardonere.

Meals, however, were not always so simple, for, from the time of Chaucer onwards the banquets were

extremely sumptuous and were served with much state and ceremony. The meal was announced, as is still the case at Queen's College, Oxford, and in the Middle Temple in London, by the blowing of a horn or trumpet, or it was ushered in with music. The viands were brought in by a procession of servants, headed by the steward, and each dish by a valet attended by two esquires, whilst two esquires carried the wine from the dresser or cupboard to the table. The actual attendants at the tables of the great nobility were persons of high estate and were never below the rank of an esquire and they seem to have served upon bended knee. The dishes were placed upon the table by the sewer, whose further duty it was to taste each dish by dipping a cornet of bread into it and to drink a few drops of all the wine poured out to show that neither the food nor the drink, for the preparation of which he was responsible, had been poisoned. John Russell says of this formality that:

Tasteynge and credence longethe to blode and birth royalle,
As pope, emperatrice and Cardynalle,
Kynge, queene, prynce, Archbischope in stalle,
Duke, Erle and no mo, that y to remembraunce calle.

That is to say, that the dishes were not to be tasted for anyone below the rank of an earl.

These formal dinners were often of great length. They lasted five or six hours and contrasted most unfavourably with the shorter banquets of the

southern nations. It is told of a certain Italian nobleman that he called one day at twelve o'clock to transact important business with an English bishop, and was informed that his Lordship was at dinner and could not be disturbed. He called again at two o'clock and received the same answer. He repeated his vist at four, and was told that the bishop had not yet finished. He then went away in a rage, and, happening to hear the bishop's name mentioned at Rome two years afterwards, he asked in affected surprise "What, has his Lordship finished his dinner?"

The perfect dinner of this time consisted of three courses, each terminated by an elaborate device in confectionery which was termed a "subtlety." The bill of fare for such a dinner might have been:

The first course: A whet of brawn with mustard, followed by potage, stewed pheasants, stewed swan, baked venison and a device or subtlety.

The second course: A meat blancmange, roast venison, roast peacock, egrets, small birds or sucking rabbits, small pasties and poached fritters, ending with another subtlety.

The third course: An almond cream, snipe, quails, or sparrows roasted, crayfish baked, quinces with sage fritters, another device and then dessert.

Ypocras marked the time for leaving the table. It consisted of wine with spices and sugar strained through a cloth. The drink is said to have taken its name from the strainer which apothecaries fancifully

called Hippocrates' sleeve. Grace was then said, and the guests once more washed their hands as soon as the table had been protected with the surnape.

The grace was always in Latin. It varied greatly in length, and differed on flesh days and on fish days. It often took more than one person to perform the grace as may still be heard at some of the colleges in Oxford and Cambridge, where the old customs are retained. As soon as grace had been said, the guests retired into an arbour, or in bad weather into another room, where they were served with pastry, sweetmeats and fruit, whilst the choicer sorts of wine were then produced, the attendants in the meantime taking their places at the table left vacant by their masters.

The fish dinner could be made as elaborate as that upon ordinary or flesh days. The first course would consist of minnows, possibly white bait, or porpoise and peas, of roast pike and of a subtlety.

The second course of dates and jelly, conger, salmon, or dorey in syrup, with turbot or halibut, eels and roast lamperns, followed by a device.

The third course: An almond cream, followed by sturgeon, perch, whelks, minnows and shrimps. Fritters and a tansy, which was practically an omelette aux fines herbes, and of course a subtlety.

The dessert in such a meal consisted of hot apples, ginger wafers, ypocras and a device, in much the

same manner as we have ices made up into elaborate and fantastic shapes.

These meals were, of course, the most sumptuous at the most sumptuous period of English life, from the accession of Henry IV to the death of Elizabeth. Such repasts must have made a splendid show, for the more noble birds, like the peacock and the swan, were dressed in their feathers with beaks and feet gilded. Much ingenuity, too, was expended upon the devices called "warners" when they preceded a course, and "subtleties" when they ended it. The subtleties sometimes took the form of castles with fortifications, which the guests battered with nuts; sometimes they were ships filled with birds and sailing in a sea full of fish. The ship had a sail of silk and ermine, and the mast was surmounted by a figure of Venus.

But such banquets were not of everyday occurrence, though the well-to-do classes lived comfortably and could afford to give each other such small entertainments as this, which is headed "A feast for a Franklin."

The first course: Brawn, bacon and peas, stewed beef or mutton with boiled chickens, roast goose, capon and custard. The second course: Mortress or fish pounded with meat and so corresponding in some respects with our kedgeree, veal, rabbits, chickens and pigeons, followed by fritters and a dessert of apples, pears, spiced cakes and wafers, washed down by bragot, a kind of mead.

The meals became much less sumptuous during the Commonwealth, when it was the custom to place the joint itself upon the table. During this period pudding rose still higher in the estimation of the people, and the English were no longer essentially meat eaters. The menus of the annual dinner or the Buckfeast at St. Bartholomew's Hospital are extant for the last two hundred years. Tarts and puddings do not appear until 1710, when the familiar marrow pudding, which is a glorified bread and butter, was served to the guests whilst, two years later, in 1712, there is an item of 5s. for ice. The dinner was given in summer, and it was probably used for cooling the wine. Dessert, too, which had become reduced to a piece of cheese and some fruit, was never seen except in the houses of the wealthy. Even Charles II had nothing but pears and nuts, with a few grapes.

The custom of dining at a cook shop spread rapidly about the end of the seventeenth century, and it was not unusual to have the meat sent home ready cooked, and this in turn gave place to the extensive use of ordinaries which form so peculiar a feature of the early Hanoverian period.

Two dishes made the dinner of a gentleman at the time of the Restoration, and Pepys was often contented with a much simpler meal. Sometimes he had bread and cheese only, or he bought a plate of meat in a cook shop, and as soon as he had eaten it he went elsewhere for a drink. On one occasion when he

provided dinner for a few friends, it consisted of a piece of beef and cabbage with a collar of brawn, whilst at another time it was a dish of steaks and a rabbit. He gave a much more elaborate dinner on January 26, 1659–60, when there was a dish of marrow bones, a leg of mutton, a loin of veal, a dish of fowl, three pullets, and two dozen larks all in a dish together, a great tart, a neat's tongue, a dish of anchovies, a dish of prawns and plenty of wine.

SUPPER

Supper amongst the old English was a subordinate meal except in the very highest circles. It was a mere repetition of dinner amongst the Normans and was served with the same ceremonies. It was laid down that "betwixt dinner and supper there should be a space of seven hours," and it was also said, "Let your suppers be more large than your dinners, unless nightly diseases or some distillations do afflict you." We learn from the introduction to Lydgate's *Story of Thebes* that the favourite supper dishes in the first half of the fifteenth century were:

> A grand pudding or a round hagis,
> A French moile, a tansie, or a froise.

The pudding and the haggis speak for themselves. The moile, which was once bread and dripping, had become by this time a special dish made of marrow and grated bread. The tansie and the froise were fritters,

pancakes or omelettes; the tansie was an omelette aux fines herbes, and the froise a savoury omelette, for it contained bacon or veal. Fruit, too, was often taken after or in place of supper. The Duchess of York, mother of Edward IV, took her supper at five o'clock, the carvers and servers having supped at four. After supper the Princess disposed herself to be familiar with her gentlewomen with honest mirth; and one hour before going to bed she took a cup of wine, went to her privy closet to pray, and was in bed at eight o'clock.

THE RERE-SUPPER

An additional meal was introduced during the fifteenth century, when men could afford to sit up after dark because candles were so much cheaper. This meal was called the banquet or rere-supper, and it was considered to be especially deadly by those who were over forty at the time of its first introduction, "for after forty," says a wise man, "the ordinary mind is incapable of receiving new truths." Horman in his *Vulgaria*, published in 1511, says, "*Commensatio plurimos occidit*," "rere-suppers slee many men." The banquet soon became the most sumptuous meal of the day, quite eclipsing dinner. More wine was taken at it than at the ordinary supper, and in the end it became a nuisance, for after these gatherings the roaring-boys and other terrors of the night sallied forth on their wild excursions into the dark and badly regu-

lated streets of London. The banquet disappeared under the Puritan rule, and the suppers became meagre for Pepys, after a dinner of bread and cheese, or of pease porridge, and nothing else, would sometimes ask his wife to cut him a slice of brawn as a more substantial supper than usual.

AFTER-DINNER AMUSEMENTS

The after-dinner amusements varied greatly at different times. Amongst the Old English drinking and music in the form of harpers, jongleur, gleemen, and mummers seem to have occupied much of their time. The Normans spent the day in the open-air in tilting, jousting or other knightly sports. They were fond of chess, and thought that a good knowledge of the game was an important part of a knight's education. They also beguiled their leisure with the game of tables which resembled backgammon. Dames or ladies, called by us draughts, was also a favourite game in the middle ages. Little by little all these games were driven out by cards. There are good reasons for believing that these—the devil's picture books—made their first appearance in Europe and in Italy about the year 1350, though their documentary history does not commence until 1392, when they are mentioned in the account of Charles Poupart, the treasurer of Charles VI of France.

Dancing, too, seems to have been a very favourite amusement with the Anglo-Norman girls, who were

often joined after dinner by the young men. The music was sometimes hired, but as often as not the company made it for themselves by singing, and the amusement was often kept up until supper time. The old round dance or the carole was displaced after the middle of the fifteenth century by newer and more lively dances, which scandalised the old folk in much the same way that the waltz scandalised our grandmothers, and the fox-trot some of ourselves.

This slight sketch of the meals of our ancestors shows how little change there has been in England, at any rate during the last few hundred years. We long maintained our somewhat gross habits of eating and drinking, as may be seen by anyone who chooses to compare the menu of a public or private dinner of 1870 with one of today. The change had begun before 1914, but it was hastened by the compulsory rationing, and has been completed by the scarcity of cooks and by the ignorance of the younger generation of wives of the art of cooking. Simplicity of meals, the decadence of private hospitality and the expense of dining at restaurants, whilst it takes something from the joy of life, has done much to prolong longevity and has led to a marked diminution in those diseases which are due to surfeiting.

LECTURE III

Biography

An account of the great medical writers and teachers forms an important branch of the history of medicine. It is not possible to describe them satisfactorily unless we know the circumstances under which they lived, something of their personality, the age at which they began to write and their social surroundings. No human mind has arrived at a great fact or original idea per saltum. Everyone is influenced by what he has learned from his predecessors, though his own experience, thought and experiment may enable him to advance knowledge by arriving at different conclusions from those held by his contemporaries. Such advances may have been the consequence of deliberate experiment to prove a preconceived hypothesis, as in the case of Dr. William Harvey's enunciation that the blood "moves as in a circle." It may be the result of accident, as when Ambroise Paré found that amputation stumps did better when they were not dipped into boiling oil because, fortunately for his patients, the supply of oil had run out and he was obliged to use a simple dressing. It may be a reliance on folk medicine, as when Jenner was told that milkmaids who had been infected with cowpox were immune to smallpox, and thence came vaccination.

Jacques Amyot in his French translation of Plutarch's *Lives* says of biography: "There is neither picture nor image of marble nor arch of triumph nor pillar nor sumptuous sepulchre can match the durability of an eloquent biography furnished with the qualities it ought to have." "It is indeed the safest way to protect a memory from oblivion," as was said by Fuller and in this country you are fortunate in having one of your great teachers of medicine in this very University made safe for all time by the fine biography of William Osler written by Prof. Harvey Cushing.

The aim of biography is, in general terms, to hand down to a future age the history of individual men or women; to transmit enduringly their character and exploits. Character and exploits are inseparable for the purposes of biography. Character which does not translate itself into exploit is for a biographer a mere phantasm. But character and exploit when combined constitute biographic personality. The whole art of biography is to satisfy the commemorative instinct by the exercise of its power to transmit personality.

The biographic aim implies two constant and obvious conditions. First the subject matter—the character and achievement out of which the biography is to be woven—must be capable of moving the interest of posterity. Secondly, the manner or style of the record should be of a texture which is calculated to endure, that is to say it should be of such

a substance as to outlive the fashion or taste of the hour. In other words, biography depends for its successful accomplishment on the two elements of fit theme and fit treatment.

The fact that a man is a devoted husband and father, an efficient doctor, an exemplary minister of religion gives him in itself no claim to biographical commemoration because his actions, though meritorious, are practically indistinguishable from those of thousands of his fellows. It follows, therefore, that official positions, except of the rarest and most dignified kind give in themselves, no claim to biographic commemoration. That a man should become a member of Congress, a mayor, or a professor and attend to his duties are actions or experiences that have been accomplished, or are capable of accomplishment, by too large a number of persons to be in themselves of appreciable magnitude or worthy of permanent commemoration. At the same time office may well give a man an opportunity of distinction which he might otherwise be without, that is to say, official responsibility may well raise his career to the requisite level of eminence.

Nor is eminence in a good sense necessary to reach a biographical standard. A man may easily stand out as a notorious criminal and thus become worthy a biography which is not so ephemeral as that conferred upon lesser criminals by catchpenny broadsheets or

those "last dying words and confessions" which were so frequent in the eighteenth century.

In appraising the magnitude—the biographic capacity or content—of a career it is necessary to guard against certain false notions which prevail widely and tend to distort the judgment. Domestic partiality, social contiguity, the fortuitous clamour of the crowd may all cause mediocrity to masquerade as magnitude. The biographer must forswear the measuring rods of the family heart, of the hospitable board, and of journalistic advertisement. A kinsman or kinswoman like an intimate companion is easily moved by private affection to credit without sufficient discrimination a man or woman's activity with the dimensions which justify biographic commemoration. A newspaper records day by day the activities of some seeker after notoriety until his name grows more familiar to his own generation than that of Washington or Franklin, Shakespeare or Nelson.

True biography is no handmaid to ethical instruction. Its purpose is not that of history and it serves no biological or anthropological science. A biography of Darwin, Huxley or Agassiz deals necessarily with the work which has made their names famous but it is no place for an ex parte statement of biology as a whole. Neither must biography be regarded as "an honour due to the virtuous dead and a lesson in magnanimity to those who shall succeed them." Dead men who in their time are morally unworthy do

not always lie outside the scope of biography, because successive generations do not necessarily judge by the same moral code. The biographer is a narrator, not a moralist, and he accepts alike what tells against a man as readily as that which is in his favour. But he must not give more space or emphasis to a man's lapses from virtue than to his better qualities though this is only true for the average individual. There are men who have proved themselves such monsters of cruelty and lust that they have earned notoriety for themselves and the evil they have done far outweighs any good points they may have possessed. The biographer even then should have a touch of sympathy with human frailty and of charity for their wrongdoing.

Lives written is a hostile spirit, such as that of John Hunter by Jesse Foot, may not be wholly untruthful for they bring to light characteristics which might otherwise have been forgotten and show us the man as he appeared to some of his contemporaries and not as the ideal we have placed upon a pedestal.

The biographer should have a sound knowledge of the history of the time during which his subject lived. He cannot otherwise know the conditions which influenced him or moulded his character. It is desirable, too, that he should have some knowledge of his training and upbringing. The man who comes straight from the plough, like John Hunter or William Kitchen Parker, has a very different and more original outlook

upon the scientific problems which confront him than one who, has a training in universities and courts, like William Harvey who was skilled in the knowledge of his predecessors. On the other hand lack of education makes it difficult for the former class to express itself in words and the originality is discounted in consequence. Such men stand in need of their better educated colleagues or pupils to edit their works and explain their meaning. No one in this respect was, perhaps, more fortunate than Prof. Kitchen Parker who had Huxley for his expositor.

No complete picture of a man can be presented unless the biographer takes into account his likes and dislikes, the friendships which he made and the quarrels into which he entered. Boswell, you will remember, bluntly refused Miss Hannah More's request "to mitigate some of the asperities of our most revered and departed friend" Dr. Samuel Johnson, and replied that he would not "cut off the doctor's claws nor make his tiger a cat to please any body." Much of the zest of a life would be omitted if Ambroise Paré's asides to "mon petit maître" were not mentioned or if Hunter's quarrels with his friends and colleagues were not referred to. To sum up then in the words of Sir Sidney Lee:[1]

[1] "Principles of Biography." The Leslie Stephen Lecture delivered in the Senate House, Cambridge on May 13, 1911, by Sir Sidney Lee.

Various qualities are required of a successful biographer. He must have patience to sift dustheaps of written or printed papers. He must have insight to interpret what he has sifted and the capacity to give form to the essence of the findings.

So far I have dealt with what may be called full-dress biographies, biographies which are intended to deal exhaustively with the lives of a single man. In this country Prof. Harvey Cushing's *Life of Sir William Osler* is an outstanding example; with us Boswell's *Life of Johnson,* Morley's *Life of Gladstone* and Buckle's *Life of Disraeli* are instances. There remains a second class of biography—the short life for a biographical dictionary and the obituary notice for journals and newspapers. Of these I can speak from personal knowledge. My first introduction to these shorter lives was gained in connection with *The Dictionary of National Biography* when it was under the editorship of Sir Sidney Lee. I had been with him at Oxford and one day wanting some information I called at the office, asked to see the editor of the *Dictionary of National Biography* and found Sidney Lee in the editorial chair. When I had explained my requirements and he had satisfied them he said "You seem to be just the man we want. G. T. Bettany who wrote many of the lives of surgeons for the *Dictionary* has recently died and we need somebody to take his place. Just write a life of Robert Liston for the next volume." I did as I was bid and ever afterwards took charge of the surgeons; Sir

Norman Moore continuing to write the lives of the physicians. The instructions I received were to be accurate as to facts; to give exact dates especially of birth and death—the day, month and year; to mention any portraits and to state where they were to be seen. "We also want," he went on to say, "a general summing up of a man's work and its influence upon his contemporaries as well as the position he holds at the present time. You are to be brief, clear and grammatical; we do not want any rhetorical display or purple passages and if you put any in I shall take them out." Canon Ainger, Master of the Temple in London, a witty follower of Charles Lamb, put the last injunction epigrammatically when he said at one of the Mansion House lunches given in connection with the *Dictionary:* "No flowers, by request." I believe that I fulfilled the conditions more or less satisfactorily because Lee and I remained friends until his death on March 3, 1926.

I suppose, too, that my "copy" was satisfactory, at any rate I sent it in punctually, and in due course I wrote about three hundred lives. Having thus graduated in a stern school I was entrusted last year with the duty of editing Plarr's *Lives of the* (deceased) *Fellows of the Royal College of Surgeons of England.* The record fills two stout octavo volumes and I am glad to say has safely seen the light. It contains some 2800 notices.

I am thus qualified to speak to you on the subject of

the lives of surgeons from a dictionary point of view and to tell you some of the things I have learnt in regard to the writing of the lives of medical men—surgeons more especially.

The shorter medical biographies fall into two great groups. The one tries to give an account of every individual who has graduated from a given college or university; the other is a dictionary which includes the lives of selected persons either in a given country or throughout the world at all periods of its history. Munk's *Roll of the Royal College of Physicians of London* and Plarr's *Lives of the Fellows of the Royal College of Surgeons of England* are examples of the first group; Garrison's *History of Medicine* is an excellent instance of the second.

Accuracy, succinctness, and humanity are the three great requisites in each case. Accuracy is secured by going to original sources for the required information. It is useless in most cases to rely upon statements merely because they have already appeared in print. The first writer may have made a mistake or the error may have crept in later, either in printing or copying, and a mistake thus made is likely to remain uncorrected forever. It is well, therefore, not to rely upon hastily written obituary notices in the medical journals but to write to some near relative explaining the reason for the enquiries. For my own part I have nearly always received a full and courteous reply to my questions. To avoid diffuseness and uncertainty,

it is best to ask for answers to individual questions and the facts I wish to obtain are generally:

1. The date and place of birth—day, month and year.
2. The name and profession of father.
3. Maiden name of mother and date of marriage.
4. Place in family, *e.g.* second son, fourth child.
5. Where educated—school, college or university.
6. When married, to whom and date.
7. Number and sex of children.
8. Date and place of death.
9. Where buried.

These are the nine points in a man's life which it is usually the most difficult to ascertain, and having obtained them they can be verified by reference to original records. Whenever possible I try to discover whether an extended life of the individual has been written by himself, by a friend or by a relative. Such lives are often published privately and are apt to escape notice. It requires, therefore, some considerable knowledge and a good memory to ascertain their existence and when they are obtained it is often found that a minimum of information is hidden in a bushel of irrelevancy. The *Index Catalogue of the Surgeon-General's Library* is admirable in this respect but, at any rate in England, it is not consulted sufficiently often.

Accuracy in dates is of the first importance and every date must be carefully scrutinised whilst it is

passing through the printer's hands for even in the final revise 3 often becomes 5; 00 becomes 10, 5 transforms itself into 8, and the older one gets the more likely is this to happen. It is well known, too, that the human mind is so constituted at present that when a mistake has once been overlooked in a proof it is rarely corrected even though it is a glaring error. It is good, therefore, to enlist the services of a friend to read through the final revise to see that no mistake has been made. In this respect it is hardly necessary to add that the index must be prepared from the paged book and not from a revise. I have known it happen on more than one occasion that the author in his anxiety to get the book published has compiled an index from proofs which his corrections have afterwards overrun and thus the references to a whole chapter have been wrong.

Even a short biography should be made interesting by a thumbnail sketch in words to bring the personality of the subject before the reader. Aubrey in his *Brief Lives* has given us such a picture as brings William Harvey before us in the fewest possible words when he says:

> He was not tall but of the lowest possible stature, round faced; olivaster complexion (i.e. complexion like the wainscot); little eyes, round, very black, full of spirit; his hair was as black as a raven, but quite white twenty years before he died. He was, as all the rest of his brothers, very choleric and in his young days wore a dagger and would be too apt to draw his

dagger upon every slight occasion. He was always very contemplative and the first that I hear of that was curious in anatomie in England. He had made dissections of frogs, toads and a number of other animals and had made curious observations on them, which papers together with his goods in his lodgings at Whitehall, were plundered at the beginning of the rebellion, he being for the King and with him at Oxford. But he often said that of all the losses he sustained no grief was so crucifying to him as the loss of those papers which for love or money he could never retrieve or obtain. He did delight to be in the dark and told me he could then best contemplate. He was much troubled and often with the gout and his way of cure was thus: He would sit with his legs bare even if it were a frost on the leads of Cokain House, put them into a pail of water till he was almost dead with cold and then betake himself to his stove and so 'twas gone. He was hot-headed and his thoughts working would many times keep him from sleeping. He told me that then his way was to rise out of his bed and walk about his chamber in his shirt till he was pretty cool, *i.e.*, until he began to have a horror (shiver) and then return to bed and sleep very comfortably.

In like manner Lord Arundell's name for him, "the little perpetual movement called Dr. Harvey," is worth all the portraits of him in existence. It was amplified by Hollar the engraver, a fellow traveller in the ambassador's train who says:

"He would still be making excursions into the woods, making observations of strange trees, earths and naturalls and sometimes like to be lost, so that my Lord Ambassador would be really angry with him for there was not only danger of thieves but also of wild beasts."

The journey was made in the year 1636 and the country through which the embassy passed had been devastated by the thirty years War.

But to return to what may be called dictionary biography, there arises the difficult question of portraits. Should they or should they not be included. I think, personally, that it is better to omit them unless there is an outstanding painting by a master. Examples of such masterpieces are Jansen's portrait of William Harvey; Rembrandt's portrait of Tulpius in the *Anatomy Lecture;* Sir Joshua Reynolds' portrait of John Hunter; Sir Thomas Lawrence's portrait of Sir Astley Cooper; Pasteur in his Laboratory and the Meeting of Pasteur and Lister at the Sorbonne; Sir Everett Millais' portrait of Sir James Paget, and *The Four Doctors* by J. S. Sargent. In these portraits Harvey and Hunter are idealised almost beyond recognition and to those of us who have known personally and loved Paget, Lister and Osler the portraits do little more than recall the features.

If this is true of the greatest portraits, what is to be said of the hosts of mediocre ones? Besides what portrait is to be used? Shall it be in youth, in middle or in old age? The best portraits as works of art usually represent the sitter in his more mature years. Portraits alleged to represent distinguished medical men before the early part of the sixteenth century—say 1520—must of necessity be fictitious, for the different countries of Europe were in much too disturbed a

state and travelling was too difficult to allow a portrait painter to develope his art. In like manner the busts of classical times are mostly copies of pre-existing busts so that I am doubtful whether we have any true representation even of Hippocrates and Galen. It is better, therefore, I think, to omit any portraits from a medical biographical dictionary. Individually I prefer a verbal description from which I can make my own picture of the man—idealised no doubt—but still as I should imagine him to have been.

The ancestry of a man is of considerable importance, and as heredity plays some part in the mental make-up of every person, a sufficient account of his forbears should be given. Without this knowledge it would be difficult to describe adequately the character and attainments of Charles Darwin, of Joseph, Lord Lister, or amongst yourselves of John Collins Warren. Perhaps, too, the religious belief should be mentioned though this is of less importance now than it was two generations ago. The Quakers, for instance, by the facts that they were a self-contained body with strong family affection and a certain rough honesty and rugged obstinacy developed characteristics which especially qualified them to become successful scientific and medical men. With us they were debarred from the universities and being men of peace they did not aspire to serve in the navy or the army whilst being, also, slow of speech and men of few words they rarely entered the law. Theatres and public shows

were anathema to them and they were marked out from their fellows by peculiarities of dress and of speech. They were reduced, therefore, to a self-contained education, which in spite of its limitations was developed on admirable lines and was directed more especially to the conduct of business or to such scientific pursuits as could be carried on in the quiet of a home. They were, too, untrammelled by religious dogma and were thus free to speculate on matters forbidden to members of the Roman Catholic and Protestant churches.

A study of ancestry shows also that heredity *does* play some part in the fitness of an individual to follow the practice of the medical profession, though it is not true, as many people still believe, that the seventh son of a seventh son is necessarily endowed with the gift of healing or is a heaven-born doctor. Both in this country and with us there are many medical men who are the direct descendants of several generations of doctors some of whom have never moved away from the town or village in which the original member first settled. Hugh Owen Thomas, to whom the world is indebted for "Thomas" splint used in the treatment of hip disease and for fractures of the thigh, is a good example of this form of heredity. For seven generations his ancestors, farmers in Wales, had been called in by their neighbours who had met with accidents to their bones and joints, for the whole family had gained a local reputation as bone-setters. Hugh

Owen Thomas qualified as a medical man, settled in Liverpool and developed his hereditary talent not scientifically indeed and perhaps not seeing to what it would lead but with great success. Others saw its value, made it known and thereby revolutionised that particular branch of orthopaedic surgery with which he was connected.

The frailties, vices, and scandals which have occurred in the lives of some medical man have frequently been a source of considerable difficulty to their biographers. They often have a direct bearing on the mentality of the individual and they explain to other people why a man of brilliant attainments may yet have been a dismal failure or in a few cases why he has been an otherwise inexplicable success. Drink and drugs have been the downfall of some of the best brains in the medical profession. Should this cause be mentioned in a short biography? Suicide has not been infrequent; moral offences like adultery are common. A few have gone to prison for such criminal offences as forgery, arson, or procuring abortion. Some have been hanged for poisoning, many have become insane. I think the rule I have myself followed is that given to young brides by older married women:

> My dear, be to his virtues very kind
> And to his faults a little blind.

When a wife or children are living I have omitted to lay stress on lapses from virtue though they must be

indicated if they have been notorious; when there are no direct descendants or the man has been dead for a generation or two they may be mentioned somewhat more fully, though no attempt should be made to point a moral or adorn a tale. In other words I have followed the golden rule of doing to others as I would they should do unto me. If my father had ruined himself by gambling or drug-taking and had cut his throat, *I* should feel the shame of it and should not like to have it published urbi et orbi, but my grandchildren and great grandchildren would not care and probably would have no interest in what happend to their great-great grandfather. Here are two instances of scandals known at the time but now forgotten. A certain distinguished professor of surgery married late in life a widow high up in the English peerage and thus seemed to have married into a much higher social sphere than his own. A little enquiry showed that the countess had been a housemaid in the service of the earl's mother. The earl had seduced her and his mother made him marry the girl. She had the manners and habits of the class in which she was born. Another distinguished medical man was of so lecherous a disposition that no decent woman would stay in his house either as visitor or servant. The fact was pretty widely known but, such is the inconsistency of human nature, he continued a large and successful practice to the end of his life. In neither of these cases were there any children.

Finally there comes the question of who should be admitted to a dictionary of medical biography. Sir Sidney Lee, as I have already said, has pointed out who should be refused admission, but he was thinking of a *Dictionary of National Biography*. For medical biographers the meshes of the net may be somewhat larger and we may include those who would be rejected in a more ambitious scheme. There are some who are unquestionably entitled to a place. Their lives have been full of incident; they have conferred some benefit upon the profession; they have made a discovery of far-reaching importance or they have filled some prominent position with conspicuous success. Pennel of the Afghans is an example of the first class. Going to India as a medical missionary he exercised so great an influence over the warlike tribes of the northwestern frontier in India that his military friends used to say his presence was worth at least half a division of troops. W. Meyer, is a good instance of a man who has benefited his profession for he showed the influence of adenoids upon the health and facial appearance. Jenner by introducing vaccination, Lister by rendering surgical operations safe and Morton by his demonstration of ether as an anesthetic in surgery on October 16, 1846, conferred immortality upon themselves and gained the gratitude of the whole world. The great teachers also come into this class. Many of the greatest are mere names for little is known of their lives and such facts as we know about them have been trans-

mitted through the ages in different languages and by different civilisations, so that they have become distorted on the way, perhaps out of all knowledge if they could be traced to the original. Imenhotep, Hippocrates and Galen are examples and beside them must be placed the teachers and writers of the Arabian school.

The selection becomes easier in some respects and in others more difficult as we approach our own times for we are influenced by our personal likes and dislikes. Everyone would include Gesner and Boerhaave, Benjamin Rush and Philip Syng Physick, Richard Bright and Osler. But even then there remains an innumerable host who have been great physicians and surgeons teaching by example rather than by precept. They must be reckoned amongst the great teachers though they held no professional post and never gave a formal lecture.

The border-line cases are also difficult. Who shall be admitted to the dignity of mention in a biographical dictionary of medicine? If I go to a bookstall and pick up for ten cents some medical book which looks interesting and is by an author whose name is unfamiliar to me I should like to go home and find particulars both about the author and the book in my biographical dictionary. At present I consult the *Index Catalogue* and from it I nearly always receive sufficient help to proceed further. Another class of border-line cases are those where a

medical man is named in the course of general literature. He may be a character in the plot of the book; he may actually have written the book or he may have come into history as the medical attendant of some great person Henry VIII, Napoleon, Nelson, Wellington or one of your Presidents. It is even possible that he may have been mentioned by a poet as were Mead and Cheselden by Pope or he may have been a poet himself like Keats, Oliver Wendell Holmes and our late Poet Laureate, Dr. Bridges. In other cases he may have owed his position to his being a wit and a man of fashion like our Arbuthnot the friend of Swift, or your Abraham Chovet. But in all these cases it is difficult to know where to draw the line, and the division must rest partly with the compiler of the dictionary and partly on the limitations of the space at his disposal. The more elastic the line the more useful will be the book. Medical sportsmen, however eminent in their generation, do not come within the scope of a biographical dictionary of medicine. Few except their personal friends now remember the exploits of Dr. S. D. Darbishire the famous stroke of the Oxford University boat, or of Dr. Etherington-Smith the president of the Cambridge University Boat Club, though he was becoming as good a surgeon as he was an oar; even the fame of Dr. W. G. Grace the greatest English cricketer of his generation is beginning to fade.

Now a *roll* is quite different from a dictionary.

Its object is give some account of every individual who has been a member of the society for which it is compiled. Rolls of schools and of universities have long been in existence and are most useful to the dictionary makers and Munk's *Roll of the Royal College of Physicians of London* has long been a standard work of reference. With the help of my colleagues, Mr. W. G. Spencer and Prof. G. E. Gask, I have recently, as I have already said, produced a *Roll of the Fellows of the Royal College of Surgeons of England*. As in Munk's *Roll* so in our own compilation, which we have called *Plarr's Lives*, we were necessarily limited to a special class of members of the College because their numbers were not very great. It would have been an impossible task to give even the briefest account of those who gained the ordinary diploma of membership. The members of the college date back to the year 1800 and number from 10,000 to 15,000 living at any one time. The Fellows on the other hand have to pass more stringent examinations, the diploma is sometimes conferred on those who have especially distinguished themselves in surgery at home and abroad and the Order was only established in 1843, so that it has not been difficult to give some account of each. In such a roll the name of the father and mother, the place in family and the age at death should be recorded even if no other facts are attainable. If more is known there should be a short ac-

acount of the direction of his life's work and an indication of where a longer biography can be obtained.

To make the story complete there remains to be mentioned the newspaper obituary notices which form the bedrock on which all biographies are based. They are of two kinds. The *stock* obituary written beforehand and with deliberation because the subject is a well-known personage or is of advanced age with a large number of friends; and the *impromptu* notice written hurriedly because the individual has died suddenly and the editor of the journal has been caught napping. Both the stock obituary and the impromptu notice should undoubtedly follow the ordinary biographical lines and should endeavour to give some indication of the man as he lived whilst the facts of his life and the dates should be accurate. The account should not be so generalised as to be useless to those who may be called upon at a later period to write a more complete biography but the conditions under which it will be read must always be borne in mind. The loss will have been so recent that the person is not yet buried, the immediate relatives will read it and it will be criticised by the personal friends and colleagues of the deceased. Whilst it is accurate, it should, I think, be of a rather more charitable nature than notices which appear later and all subjects of acrimonious discussion should be studiously avoided. On the other hand, the saying "De mortuis nil nisi bonum" must not be followed too absolutely. Some

of the best newspaper obituaries I have read carried with them a subacid flavour showing that they were written by someone who had not been whole-heartedly attached to the individual whose life he was commemorating. This has occurred, however, more often in my experience in connection with legal than with medical obituaries.

As regards facts for medical obituaries we are fortunately placed here and in the United Kingdom. *Who's Who* gives autobiographical details of every one who has attained to even a moderate degree of distinction; whilst *The Medical Directory*, published annually, is kept up to date by corrections supplied by each individual. It contains an account of the posts held, the degrees and diplomas obtained and the works written by every registered medical practitioner. Many of the impromptu obituaries are necessarily compiled from these sources of information, supplemented by such personal knowledge as the writer may happen to possess or can gather from friends.

The detailed obituaries which appear in the weekly or quarterly journals are usually written by those who have been more or less intimately connected with the deceased. The exact day, month, year, and place of birth, the date of marriage, and the number of children, together with the place of burial, should always be stated. These details are easy to obtain at the time but a few years later they can only be recovered by

a great amount of research. These extended notices, of necessity, have the defects of their qualities. Being written by friends they are often unduly eulogistic but on the other hand they should contain personal traits and anecdotes which bring out the character of the man in the fewest possible words.

Such appear to me to be the essentials of medical biography. Everything seems easy until one tries, and experience alone shows how numerous are the pitfalls and how warily one must tread to avoid them.

I alluded a few minutes ago to some of the well-known portraits of the great masters of medicine and spoke of them as being idealised. Consider, however, the pictures with which Jesse Foot illustrated his own copy of the *Life* he wrote of John Hunter. You will learn from them what John Hunter looked like in the eyes of his contemporaries. The likenesses, I have no doubt, are accurate but, as you will see,[2] Foot was actuated by the most malignant jealousy. He must have spent thousands of dollars in getting the drawings made and yet it appears that he never showed them to anyone, and that they were kept for his own private satisfaction.

[2] *The British Journal of Surgery*, 1926, vol. xiii, pp. 405–08.

LECTURE IV

Iconography

The Italian poet Ariosto imagined, with some allegorical vagueness, that at the end of every man's thread of life there hung a medal stamped with his name and that, as Atropos with the abhorred shears servered life's thread, Time seized the medal and dropped it into Lethe, the river of oblivion. A few but only a very few of the medals were caught by swans as they fell and by them were carried off to the Temple of Immortality. Here is the perfect iconography, a lasting representation in metal of a great man interpreted by a sympathetic artificer.

The *New English Dictionary* defines iconography as "the description or illustration of any object by means of drawings or figures; any book or work in which this is done; also the branch of knowledge which deals with the representation of persons or objects by any application of the arts of design." It deals in other words with the portraiture of individuals by paintings, drawings, engravings, etchings and medals. Iconography, therefore, needs considerable artistic knowledge, a critical faculty and literary ability. I am not endowed with these desirable qualities and I propose to show what still requires to be done for medical men rather than to present a study of any single individual.

No part of the history of medicine has received less attention than medical iconography which can be dealt with in two wholly different ways. A collection can be made of the portraits of medical men or all the portraits of an individual man can be collected. Both give excellent results. By the first an admirable collection of portraits will be amassed; by the second the real appearance of the man will be obtained. The second method seems to me the more interesting and productive of the better results.

Early in 1912 I got one of Sir William Osler's characteristic postcards, the receipt of which, as Prof. Harvey Cushing well says, generally meant several months' work for the recipient. The postcard asked in effect, "How many portraits do you know of Dr. William Harvey? Suppose you collect them and we will get the Press at Oxford to publish them." I obeyed meekly and by the time the Seventeenth International Congress of Medicine met in London in 1913 the Historical Section of the Royal Society of Medicine issued a quarto volume of *Portraits of Dr. William Harvey*, that is to say I did the work, Sir William, Dr. Raymond Crauford and I paid for it. The plates of portraits were beautifully reproduced but the book was afterwards "remaindered" as medical iconography at the present time has not many votaries.

The outcome of the work was to show that there were twelve oil-paintings of Harvey, none of which were derived from a common source. It seemed, therefore, that the little doctor must rather have liked to be painted. The portraits were made at different periods of his life by artists of varying excellence. This is not surprising for Harvey must have mixed largely with artistic circles and was recognised by his friends to be at least a connoisseur. Charles I, to whom he was personally attached throughout the greater part of his life, had sufficient faith in his judgment to send him to Rome to buy pictures for his collections and Charles was one of the great picture buyers in an age when such purchases were the fashion. Many of the pictures which the king bought may still be seen at Hamptom Court and Windsor Castle but there is no means of knowing whether any of them are those selected by Harvey.

Much still has to be done before there is a satisfactory iconography even of so great a man as William Harvey. In addition to the few portraits which I have mentioned, Mr. Sidney H. Badcock has collected details of thirty-eight engraved portraits and five busts, so that a beginning has been made though it has done little more than scratch the ground. I think the proper way would be to take the Faithorne engraving and Janssen's picture as the starting point. Both

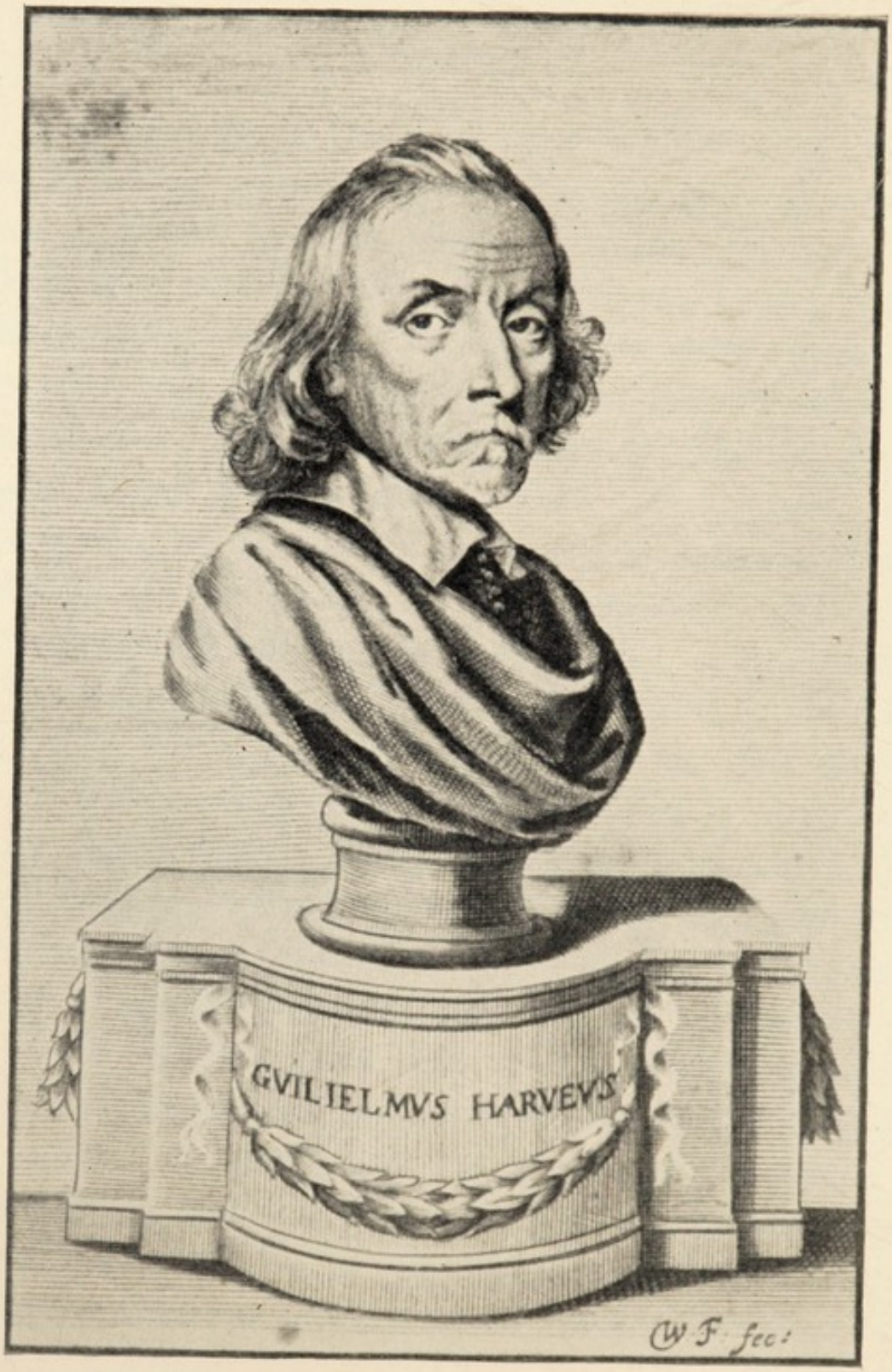

Fig. 1. Faithorne's Portrait of Dr. William Harvey

are undoubted likenesses of Harvey as he was known to his personal friends. I prefer Faithorne's engraving (Fig. 1) as Janssen's picture to my mind has been spoilt in process of restoration.

William Faithorne the elder was born in 1616 and studied under Sir Robert Peake and his son William, both ardent Royalists and both Serjeant Painters to Charles I. Peake the younger, Faithorne and Wenceslaus Hollar were part of the garrison when Basinghouse in Hampshire was besieged by the Parliamentary forces from 1643–5, and being taken prisoners were banished to France. Here Faithorne was befriended by Michel de Merolles, Abbé de Villeloin, who had a collection of 123,400 portraits. The Abbé allowed Faithorne to borrow from them and for several months Faithorne worked under Robert Montheuil. Returning to England in 1650 he married and lived at the sign of "The Drake" just outside Temple Bar. The engraving forms the frontispiece to the English Translation of Harvey's great work on the development of animals, printed by James Young and published in 1653 with the title "*Anatomical Exercitations concerning the Generation of Living Creatures &c.*" It must therefore have been one of the earlier engravings made by Faithorne after his settlement in London, and as a friend of Harvey who even then had much social influence we may be sure that he put some of his best work into it. Faithorne was at his prime in 1653 when Flatman, also a friend, and a better poet

than is usually recognised, wrote an ode in his praise saying:

> A "Faithorne sculpsit" is a charm can save
> From dull oblivion and a gaping grave.

Faithorne died in May, 1691, and was buried in St. Anne's Blackfriars. His eldest son, named after his father, William Faithorne (1656–1701?) was also an engraver but was less successful.

The engraving is worth studying in detail. Mr. Geoffrey Keynes says of the English translation of the *De Generatione* in which it appears as the frontispiece:

> This volume has always commanded a good price because it contains a portrait of William Harvey engraved by William Faithorne, which is of the very first quality. Many copies of the book lack the engraving and may never have contained it, but it is more probable that so fine a work of art has often fallen a prey to those collectors of engraved portraits who would rather mutilate a book than allow a gap to remain in their portfolios. A curious legend has arisen about the book. It is said by W. C. Hazlitt (*Collection and Notes, ii*, pp. 270–1) that 150 copies only were printed and of these 115 were destroyed by fire.

The myth has been sedulously fostered by booksellers in their catalogues but it is certainly untrue, for the book is of no especial rarity. I think that I have recently discovered a clue to its origin for I have in my care at the Royal College of Surgeons of England two copies of the book one of which has been a

presentation copy. Both are printed upon "fine paper" and it is probably of these fine paper copies that Hazlitt was speaking for I know of no others. One of the two copies has the engraving, in the other it is wanting. By a curious chance the original copper plate of the engraving is still in existence and is in the possession of my friend Mr. Sidney H. Badcock, an enthusiastic collector of all that pertains to Harvey, who gives me the following account of the manner in which he discovered it. He writes to me on September 21, 1930:

Leamington Spa, Sept. 21, 1930.

DEAR SIR D'ARCY:

I will try to find the portfolio containing the Faithorne plate but am not very hopeful, Geoffrey Keynes did not know what he was talking about. The plate belonged to Mr. Daniel the Bookseller of King Street, St. James', the equal of Quaritch or Sotheran, the son of the older Daniel of Mortimer Street— . . . . . I began to collect Harvey in 1879, it was in 1882 that I came to the conclusion that the plate was still in existence and started to search for it. Then I found that in 1842 or 1844, I think, the copper plates used by Richardson to illustrate Granger's Biographical History were sold and bought by Mr. Daniel of Mortimer Street, but he would never acknowledge having the Harvey plate. . . . . I have never had the plate printed from, have absolutely refused. The last time it was printed from was in 1906 when 100 copies on 4° paper were struck off for Dr. F. William Cock, who gave me a copy, and Mr. Daniel had 100 struck off for himself at the same time. I have that one somewhere, as far as I can make out it has been reprinted from about 27 times. The printer

did not return the copper plate to Mr. Daniel and when the plates were sold and bought by Mr. Waters of Leamington (?), he and I went through the 7½ Cwt. but no Harvey, then I started to search for the printer and eventually found him. In the meanwhile Mr. Childs the manager of Maurice's the Bookseller of Bedford Street, Strand had bought from Mr. Daniel everything which was not included in the 2 sales at Sothebys, so made an agreement with him that if he or I found the printer I should have the Harvey plate, at last we found him and Mr. Childs with some threats obtained several plates including the Harvey. I actually bought the plate on January 16, 1923, 41 years after I had begun to search for it. It distinctly shows the retouching, which Mr. Richardson said would be necessary, to the hair and face to make it do for his purposes. I have not seen any reprint. The Monthly Literary Advertiser November 18, 1923, p. 88 says of Richardson's portraits printed by William Bogue and Son, a limited number were printed on folio India paper and on folio paper. I have never seen one of them.

Yours ever,
SIDNEY H. BADCOCK.

I think, therefore, that it is correct to say that Faithorne's engraving is the best representation of Harvey as he appeared in the year 1651 or 1652, that is to say at the age of sixty-three or sixty-four.

The watermark in the earliest impression which I have seen is a series of square panels which are floriated and over two of the borders are the initials R. M. P. The paper is very thin. The watermark in the later impressions, the plate being much worn, is 3 and below it C & Co in an eighteenth century script.

The second great portrait of Harvey hangs in the Library of the Royal College of Physicians in London. There is no doubt about its authenticity. It was one of the three pictures saved when the old College of Physicians was burnt in the Great Fire in 1666. It is possible that the portrait was painted expressly for the College and it may have been a gift from Harvey himself. The painter was Cornelius Janssen (or as he often signed himself, Jonson) van Ceulen who was born in 1593 and died in 1664(?). Like Faithorne he was a Royalist and was a fashionable painter in London from 1618–38. He was for a time somewhat overshadowed by Van Dyck who was painting in London from 1632–40. Janssen went to live near Canterbury in 1636 and on the outbreak of the Civil War retired to Holland in October, 1643, where he spent the rest of his life. The portrait is perhaps one of the best known of the pictures of Harvey. It represents him sitting in a large armchair looking towards the spectator. He is wearing the M.D. gown as a graduate of the University of Cambridge, the arms of which are fastened up with braided loops. He has long gauntlet gloves and holds his doctor's velvet cap in his left hand, whilst the right rests on a stone parapet. The face is long and thin with a small peaked beard and scanty grey hair. I do not like this portrait very much in spite of its history. Janssen has taken all the character out of the face and a subsequent restoration has destroyed the right hand which

now appears to be crippled, whereas in reality Harvey is known to have had a fine hand with delicate tapering fingers. But there is another portrait seemingly unknown except by the engraving in which he appears to be of about the same age, holding his graduate's cap in his left hand whilst his right hand rests on a pillar.

Better portraits are those which belonged to the Rev. James Franck Bright, the son of Dr. Richard Bright, physician to Guy's Hospital—the discoverer of "Bright's Disease" and that which was painted for his grandniece Elizabeth Surrenden-Dering, grandaughter of Daniel Harvey, William's fourth brother. Dr. Franck Bright's picture was probably painted by William van Bemmel (1630–1708), though it has been attributed to Anthony Van Dyck. It is a pleasing picture and I made use of it as the basis of a design for the Buckston Browne Harveian medal in 1924. The portrait represents Harvey standing and leaning lightly on a crutch-stick which he holds in his right hand, whilst in his left is a handkerchief with a gold fringe. He is dressed soberly in black with a plain white collar. The hair is iron grey and long, as we know that he usually wore it. The face is small with a somewhat drawn expression for the painter has represented him in the mood described by Dr. Ent when in reply to his question "Satin' salva omnia?" he gave the noble reply "Qui possint ubi turbatur respublica, egoque adhuc ipsemet in alto mari?" ("Is

all well with you?" "How can it be where the whole state is full of strife and I myself am still in the deep sea.") The hands are singularly delicate and are most beautifully painted with much character. I do not know what the herb is which he holds in his left hand. The armorial bearings are those usually assigned to the Harvey family but they do not seem to have been assumed until after the Restoration in 1660 when Harvey had been dead for some years. To make the arms individual to William Harvey it looks as if the stemma had been painted in at a later period and had replaced some other crest.

The other pleasing portrait of Harvey is at King's Weston House near Bristol in Gloucestershire. It is let into the wall and represents Harvey as a very old man with a small, oval face, hollow-cheeked and wide-browed. The face is deeply lined, the eyes are sunken and the whole expression is one of fatigue. This I think was done designedly and was probably the expression which would best be remembered by the great-niece for whom the picture was painted. The whole Harvey family were by nature very united and fond of each other and she would remember her great-uncle—the distinguished London physician—only as a sad and very old man with beautiful hands. The picture is attributed to Sir Peter Lely (1618–1680) but it is not signed.

There remains yet another picture but it is memorial and does not pretend to be more than a memorial.

I published an account of it in the *Annals of Medical History* (N.S., i, p. 241, 1929). It is included in a group of the Harvey family which occupies one wall of the drawing room at Rolls Park, Chigwell, Essex, which has been in the possession of successive descendants of Eliab Harvey since he bought the estate in the middle of the seventeenth century. The drawing room was built about 1700 and was especially designed by Eliab Harvey IInd for this portrait group of his grandfather, uncles and aunt. The portraits are on canvas and were painted at the very end of the seventeenth century, perhaps from pre-existing portraits sufficiently like the originals to pass muster with a second generation.

The centre portrait is undoubtedly Thomas Harvey (1549–1623), the merchant and jurat of Folkestone. On the left side of the picture from above downwards are: (i) William Harvey (1578–1657); (ii) John Harvey (1582–1645) at first an equerry at the court of Charles I, afterwards Receiver of Crown Lands in Lincolnshire, and finally Member of Parliament for Sandwich; (iii) Thomas Harvey (1584/5–1623), a member of the Levant Company having a special interest in tin. On the right side of the group, also from above downwards are: (iv) Daniel Harvey (1587–1649), a Member of the Grocers Company and of the Levant Company. He was in partnership with Thomas and like him had a special interest in tin. He was elected a Sheriff of the City of London in 1640

but preferred to pay the fine rather than serve. (v) Eliab Harvey (1589/90–1661), like his three brothers, was a Turkey merchant and perhaps the most successful. He bought Rolls Park and built the chapel attached to the Church at Hempstead in which he and his successors were buried. The best known of his line was Admiral Sir Eliab Harvey (1758–1830), who was in command of the *Fighting Temeraire* at the battle of Trafalgar. (vi) Michael Harvey (1593–1642/3), was also a Turkey merchant and was a Member of the East India Company but of him little or nothing is known. In the centre of the picture and below his father is (vii) Matthew (1593–1642), twin brother to Michael, and like him a member of the East India Company. The portrait of the lady above the door I believe to be Amye Harvey (1596–1645), who married George Fowke in 1615 and was the mother of children. The Harvey family was not prolific, William, John and Matthew had no children. The Michael branch died out in 1712, and the son of Thomas, known as John Harvey of Antwerp, cannot be traced. The generations from Daniel and Eliab lasted longer, but the direct descendants in the male line are now all dead.

I have sometimes wondered why Harvey was painted so often. There are two plausible explanations. In the first place he lived amongst an artistic circle. Faithorne, Janssen, Wenceslaus Hollar, and Bemmel were his friends. Inigo Jones the architect

had been a student with him at Padua and after his death, fifty years later (1652), Harvey took a part in the publication of his posthumous work *Stonehenge Restored*. The two great art lovers of the time, Charles I and Thomas Howard, Earl of Arundel, were his patrons. I do not suppose for a moment that Harvey liked sitting for his portrait. "Little perpetual motion," as the Earl of Arundel used to call him, must have felt it a penance to sit in a studio and yet the extant portraits show that he often did so. The second plausible reason to account for the number of unsigned portraits may be, I think, that he lived through a time when the Puritans discountenanced portrait painting as a vain thing, and when the nobility had been ruined by the Civil War. Art was then at a discount and artists had fallen upon a lean time. Thanks to the care of his brother, Eliab Harvey, who looked after his finances, William Harvey was a comparatively wealthy man. His bequests to the College of Physicians show him to have been generous and the keepsakes he left by will to each member of his family prove that he was affectionate. My suspicion is that many of the unsigned portraits by the lesser artists may represent a slight return for favours received—a small loan in cash, a recommendation to someone in power, some act of generosity which the artist had no other means of repaying.

And now I leave Harvey and turn to another whose iconography cries aloud for consideration. I mean Ambroise Paré.

AMBROISE PARÉ

The iconography of Ambroise Paré is still virgin soil, the tilling of which would, I think, yield excellent results. My attention was called to it a few months ago by the fact that Lord Moynihan presented to the Royal College of Surgeons of England a replica of an unrecorded portrait discovered by Mr. C. J. S. Thompson at Fécamp in France. The result of my investigation showed that the portraits of Paré arranged themselves in three groups: (i) oil paintings which are probably likenesses; (ii) copperplate engravings and woodcuts; and (iii) what may be called fancy portraits for they represent Paré idealised, that is to say as he ought to have been, not as he was.

There are two paintings in the first group: (i) An unsigned portrait representing Paré in a seven-buttoned surtout with a small ruff and a cloak over the left shoulder. It is reproduced both by Paget and by Packard in their accounts of Paré. In 1897 it is said to have been in the possession of the Marquise Charron, whose husband was a direct descendant of Catherine Paré (d. 1659), the surgeon's daughter, who married Claude Hedelin, an advocate (d. 1638) but of the Charron family I can learn nothing. The second portrait is the one which I have just mentioned as having been found at Fécamp. It represents Paré as a younger man with a square beard instead of the pointed one he is usually represented as wearing. He has on a skull cap and a wide linen collar in place of a

ruff. Dr. C. Hofstede de Groot, fomerly the director of the print room at the Rijks-museum at Amsterdam, points out that the collar, the clean-shaven cheeks, the form of moustache and the cap are indications that the picture was painted after the first quarter of the seventeenth century. Paré died in 1590 and if we accept Dr. Hofstede's statements it cannot be a contemporary portrait and may not be Paré at all.

There was a third painting in the École de Médécine at Paris, bought in 1852, and bearing the inscription in a circle: "Ambroise Paré. An. Dom. 1570. Aet. 56." He was pointing to a cloudy sky where the word Jehovah was written in Hebrew characters. When the picture was cleaned Paré disappeared and it was revealed that his portrait had been painted over one of Tagliacozzi (1546–1599).

There are many busts of Paré as copperplate engravings and woodcuts. The earliest is a copperplate in a square border with the inscription, "Labor omnia vincit. A. P. An. Aet. 45. R" (Toil beats everything. Ambroise Paré, aged 45. R). I have not been successful in tracing R. who signs the plate which appears in the *Anatomie Universelle* which was published in 1561. Packard reproduces it in his *Life and Times of Ambroise Paré*, page 54.

The engraving is reproduced as a woodcut in a circle to form a medallion in the *Deux Livres de Chirurgie* in 1573. It bears the same motto but the age

is altered from forty-five to fifty-five, and the R is omitted so that it reads round the medallion, "Labor omnia vincit. A. P. An. Aet. 55." As with Harvey in the case of Faithorne, so with Paré. In both cases a bust was drawn by a friend during the lifetime of the sitter. Vallée drew a bust to prefix to the final edition of the complete works issued in 1585. It was passed by the family and perhaps by Paré himself, and there can be very little doubt that it was at least a tolerable likeness.

In 1607 Giullis Horbeck engraved another portrait of Paré, but it was not wholly original for he based it upon Vallée's engraving. The inscription at the top left hand corner states that it shows Paré at the age of seventy-five. This portrait appears in the sixth edition of *Les Oeuvres D'Ambroise Paré*, Paris, 1607.

The portrait best known to English readers is that contained in the frontispiece of the 1634 and 1649 editions of Thomas Johnson's translation. It is signed T. Cecill and has below it the distich:

> Humanam Ambrosii vere haec pictura Paraei
> Effigiem, sed Opus continet Ambrosiam.

(This picture shows truly the human portrait of Ambrose Parey; but the book is full of Ambrosia.) The two lines were written by Joan Heroaldus and were often engraved beneath portraits of Paré. Heroaldus was, I suppose, Jean Heroard (1551–1628), surgeon to Louis XIII, a doctor of medicine of

the University of Montpellier, and author of a detailed account of the health of his royal master.

Of the fancy portraits the greatest and the most pleasing is undoubtedly the heroic statue of Paré made by David of Angers for the town of Laval. It was unveiled on July 29, 1840, and is certainly a masterpiece. An engraving of it by Petit appears as frontispiece in Malgaigne's edition of the complete works. David also designed a bronze medal of the head.

A less pleasing study is the portrait by Robert Fleury representing Paré writing with his hand upon a skull, an arquebus by his side, and his military equipment in the background.

Such are a very few facts about the iconography of Ambroise Paré. There is still much to be learned. Many of the engravings assign the surgeon's age and some of these dates are certainly incorrect. Why were they given at all?

One whole group of the busts are characterised by a cloak thrown over one or other shoulder. Which of them is the original and where did Cecill obtain the original of the portrait from which he made his engraving? It is clearly a likeness. It would be interesting, too, to know more about Cecill himself for at present he is chiefly spoken of as an engraver of title pages in the first half of the seventeenth century.

LISTER

An iconography of Lord Lister has long been overdue, and should be done whilst those of us who are still alive and knew and loved him are able to give their impressions of the accuracy of the numerous portraits, engravings and medals which are gradually tending to become stereotyped and idealised. Something indeed has been done. The *British Medical Journal* (vol. ii, 1927, p. 110) reproduced in colour Mr. J. H. Lorimer's portrait which was painted in 1895, and Ouless' portrait which hangs on the staircase of the Royal College of Surgeons of England is well known. Both are good likenesses but neither gives the delicate colouring of his complexion, the one is too red and the other too pink.

VESALIUS

The iconography of Andreas Vesalius has been exhaustively treated by Mr. M. Spielman who is well known as an art critic. It is published as No. 3 of *The Research Studies in Medical History* by the Wellcome Historical Medical Museum in London, and is appropriately dedicated to His Majesty the King of the Belgians. The book, published in 1925, may well be taken as a model for future medical iconographies. It is well illustrated and deals with the portraits of Vesalius in oils, the pictures, the engravings, the sculptures, and the portrait medals. There is an account of

each representation and where it is to be found; and Mr. Spielman has appended a very complete iconographical bibliography with a list of the painters, engravers, draughtsmen, sculptors and medallists who are known to have perpetuated the features of the great anatomist.

A similar method might be adopted not only in the case of Harvey and Hunter amongst Englishmen, but for Malpighi, Fracastor, Morgagni and Boerhaave all of whom still await a satisfactory iconography. Ample material for each awaits the compiler. The list of names for medical iconographies is not long. Of necessity it does not go further back than the invention of printing and in England, at any rate, not before the middle of the sixteenth century. Hollar and Holbein mark the beginning in my country and there are numerous portraits of the Dutch professors carefully and truthfully executed in the next century. Dr. A. de Mets published in 1929 two well illustrated pamphlets on the Belgian doctors and teachers, the one he called "*Iconographie médicale Anversoise*," the other "*Iconographie Médicale Gantoise.*" The iconography of Haller (1708–1777) has already been done satisfactorily by A. Weese who published in 1909, at Bern, a folio volume entitled *Die Bildnisse Albrecht von Hallers.*

In making an iconography the caricaturists must not be forgotten, for the caricaturing of members of the medical profession has long been a favourite with

artists. The caricatures of Hogarth and Rowlandson and of the French school of their period were in the main unfriendly. Some of them were savage attacks and were of the gross character which marked the humour of the age in which they were produced. The tradition survived but in a modified form with Caron D'Ache in France. In modern England the gentle caricatures which appeared weekly, in the periodical known as *Vanity Fair*, came from the pencils of "Spy" and "Ape." They were really portaits slightly exaggerating some feature or characteristic attitude of the subject which made them easily recognisable and were perhaps better than the more formal pictures as giving a true picture of the man.

Good news comes from Vienna that a catalogue is in preparation of the Josef Brettauer collection which consists of about 7000 medals dealing with medicine. Dr. Josef Brettauer of Trieste died in 1905 and the collection came into the possession of the University of Vienna. It covers a wide field and will soon be open for exploration by medical iconographers, for the catalogue will be prepared by Prof. Max Neuburger and Dr. August Loehr. So far as is known at present the collection consists of a section dealing with physicians—ancient and modern—of all times and nations; of another dealing with epidemics and of a group referring to the gods of healing and patrons of medicine; to medical corporations and congresses; to nursing, pharmacy and veterinary medicine.

The British Museum also contains numerous medals of physicians and surgeons in the numismatic department, but they are not catalogued separately and have, therefore, to be looked for under the individual names. Finally, but by no means least, there are the references in the *Surgeon-General's Catalogue*, which are invaluable.

LECTURE V

Bibliography

Bibliography is defined as the systematic description and history of books, their authorship, printing, publication, editions, etc. The term was first used by the Rev. Thomas Frognall Dibdin, D.D. (1776–1847). Dr. Dibdin was a nephew of Charles Dibdin (1746–1814), a well known writer of popular songs, "Tom Bowling," amongst others.

The Rev. Dr. Dibdin began his career as a bibliographer in 1802 by publishing at Gloucester, England, an *Introduction to the Knowledge of Rare and Valuable Editions of the Greek and Latin Classics.* The book brought him to the notice of Lord Spencer who put him in charge of the Althorp Library, then one of the most valuable private collections of books in England. As a bibliographer Dr. Dibdin was a failure for he had neither the knowledge nor the accuracy required for this kind of literary work. But as a pioneer he gave an impetus which led others to follow his example with better success.

I suppose, however, that Conrad Gesner (1516–1565), the Swiss naturalist who, like Sir William Osler, was beloved by all; Jean Astruc (1684–1766), and Albrecht von Haller (1708–1777) were the real founders of modern medical bibliography. They were not bibliographers as the term is now used but they

did valuable work in compiling lists of medical authors with the titles of the books which they wrote. Their labours have been gradually expanded and at the same time have become more specialised until they have culminated in the work of your distinguished librarian, Col. Fielding H. Garrison, who contributed such an excellent article on "Medical Incunabula" to the June (1930) number of the *Bulletin of the New York Academy of Medicine* in which he deals more especially with medical books printed before the year 1500 and the means of identifying them. Dr. A. C. Klebs, too, is working on still more extended lines for he is including all medical incunabula and not those only to be found in a single library. His self-imposed task is great but is well worthy of accomplishment.

My own work has been concerned with some of the early printed medical books which began their existence in the sixteenth century and found such favour that they were reprinted again and again until they were replaced by books of a more scientific character.

I propose to tell you about some of these books and of the method of dealing with them from a bibliographical standpoint because I want to inoculate some of you with a desire to go and do likewise. I must premise for your information that if you are going to become amateur bibliographers you must look upon bookhunting as a form of sport and you will very soon find it a most fascinating study. You must in the first place discover a book suitable for the hunt and this

will probably be found quite accidentally in the catalogue of a secondhand bookseller or, as likely as not, in the unconsidered trifles in the basket outside his shop. You will buy it without any thought of the pleasure to come, merely because it pleases you or because you have a vague recollection of the title or because it is an older edition of a book that you already have at home, or for any other reason. At any rate, you buy it and if it is a folio or a quarto your wife, or other female dependent, will complain on its arrival that it is another of those nasty old books that lie on the shelf and collect dust; whilst if it is a small duodecimo or an octavo you have the added zest of smuggling it into the house and filling up some casual gap where it may perhaps escape notice for a few days and so enable you to say, almost truthfully, that it has been there for quite a long time.

When a book has passed through many editions, and has thus shown itself to have been a favourite with several generations of readers, the first thing to do is compare the earliest edition with the latest. This enables you to determine the cause of the popularity it has enjoyed and the changes which successive editors and printers have made in the course of years. Such work I have done for *The Englishman's Treasure* of which the first known edition appeared in 1577 and the last in 1888. I have also traced *The Birth of Mankind* or *The Woman's Book* which was reprinted at frequent intervals between 1540 and 1654. If I were

twenty years younger I should like to render the same service to the *Regimen Sanitatis Salerni* or *The School of Salernum* as it is called in the English translations. It has been done in part by Sir Alexander Croke who published his book at Oxford in 1830. The work was well done but since his time much has been learnt from Sudhoff and others and the poem still needs the attention of a modern bibliographer. It is the source of many popular dietetic rules current, even yet, amongst the lower and middle classes of every European country. But the subject is so vast as to be beyond the power of any one man. Whoever enters upon it should confine himself to the single portion with which he feels himself most competent to deal. The origin of the poem; the manner in which it increased in length; and the various manuscripts which appeared before it was printed are sufficient for one person. Another should take the English versions; another the French; another the German, another the Italian and South European, for it has been printed over and over again in all European languages.

The quest of bibliography is not only interesting in itself but it has considerable educational value. It teaches much about the individuality of the author and of the times in which he lived. Many points of contemporary history have to be determined and the social customs of the time must be taken into account. As an example I shall, in another

lecture [pp. 14ff], trace out in some detail *Aristotle's Masterpiece* which on examination has shown itself to be an extraordinary compilation of sixteenth and seventeenth century knowledge. To the scandal of our modern educational methods, it still has a large sale in England though I am wholly at a loss as to the mentality of those who buy it.

For bibliographical purposes the normal course of a successful book is as follows: The manuscript written by the author and sent to the printer. This manuscript until recently was given out to several compositors who set it up with moveable types and issued it in sheets or slips to the printer's reader who corrected the clerical errors. When these mistakes had been corrected by the printer a clean proof was sent to the author for any alterations he might wish to make. The author having made his alterations or additions returned the proof to the printer and in due course was supplied with a "revise." The revise being approved by the author was printed off in sheets of four, twelve, sixteen or thirty-two pages according to the size in which the book was to appear. The sheets were then collected together, no special care being taken to collect them in the order in which they had been printed. The whole of the sheets, each gathered into a complete set, were supplied to the publisher who again issued them in sheets or had them bound and sold them as a book. As the individual sheets had been set up by different compositors and might have

been printed on different paper many slight variations in various copies supply pleasing problems for a bibliographer to solve. There may be different spellings, different watermarks in the paper, different types, different faulty letters, different clerical errors and different pagination in two copies of the same edition of a book which at first sight appear to be identical. It is necessary, therefore, to compare every page and not to be content with reading a single sheet and drawing deductions from it alone.

Even at this early period of its life a book may present many points of interest to the bibliographer. *It may never have been published at all*, although it has got as far as the stage of a revise. This happened in the case of the 1723 reprint of Servetus' *Christianismi Restitutio*. The original work was published in 1553 and for writing it Servetus was burnt alive at the instigation of Calvin on October 27 in that year. Servetus was a physician who had been associated with Vesalius and this particular book contains the first clear description of the pulmonary circulation smothered in a mass of theological discussion. Servetus suffered at Geneva for his anti-trinitarian doctrine and not for his physiological knowledge.

Most of the copies of the *Restitutio* were destroyed with their author but one came into the possession of Dr. Richard Mead (1673–1754), the well known physician who determined to reprint it. The first five sheets were set up by Samuel Palmer from a copy

supplied by Gysbert Dummer, a Dutchman and Isaac Dalton printed the rest at the instance of Dummer. Peter Paris, a Frenchman, set up the remaining sheets and the correction for the press was undertaken by Patrick (probably the Rev. Samuel Patrick D.D. (1684–1748) the lexicographer). After reading the sheets Patrick called attention to their heretical nature. Immediate action was taken and the sheets, so far as they were printed, were seized by order of Dr. Gibson then Bishop of London who caused them to be burnt and the type distributed. The book, therefore, was never completed but the Bodleian Library at Oxford contains the proof sheets of the first 263 pages, whilst the Medical Society of London has a quarto volume ending abruptly at page 252 which seems to contain a set of final revises. A few years ago Sir William Osler and I feared this volume was lost. We both remembered to have seen it in the Library of the Medical Society when I was president, but neither of us could find it on the shelves where it should have been, nor could we trace it as having been lent to anyone. At length after a prolonged search we found it in the place where we ought to have looked first, viz., in the Society's safe. The discovery was a great joy to Sir William who immediately executed a step dance in its honour.

Other accidents may happen to a book at this early stage of its existence. *The author may die*, leaving his book unfinished as happened in the case of Charles

Dickens and his novel *Edwin Drood*. Such a book may then appear as a fragment or be concluded by someone else. It is a joy then for the bibliographer to discover how much was written by the original author and how much by his continuator.

The printing works may be destroyed by fire and the stock burnt when only a few copies have been sold. This is said to have happened to the 1653 edition of the English translation of Dr. William Harvey's *De Generatione*, which was "printed by James Young for Octavian Pulleyn and are to be sold at his shop at the sign of the Rose in St. Paul's Churchyard" (see p. 105). It is said that only 150 copies were printed and of these 115 were destroyed by fire." The statement is certainly wrong as regards the size of the edition and the numbers of copies saved. I should have no great difficulty in laying my hands upon 35 copies in public libraries alone and there must be many in private hands. There may have been a fire but the ornamental addition as regards the book is useful for it enables it to be sold at an enhanced price when a copy comes into the market. Mr. W. R. LeFanu, the librarian of the Royal College of Surgeons of England, has lately drawn my attention to the fact that the Library contains two copies of the book, one with and one without Faithorne's portrait. Both copies are printed on fine paper and one specially bound and with gilded edges is evidently a presentation copy. The possible explanation, therefore, is that the book was

issued in two forms one on ordinary paper and one on fine paper. It may have been that the destruction of the limited number of the fine paper copies has led to the rise of the myth.

The book may be *lost completely or temporarily*. It may be thumbed out of existence by fair wear and tear. This has happened to many children's books and some schoolbooks but there is always the possibility of one or more of these lost books having survived and, being found, becoming a bibliographer's prize if he is able to recognise the nature of his find. The temporary eclipse of a book is well exemplified by the 1649 edition of Harvey's *Exercitationes Duae*, which was printed at Cambridge in England. It was stated for many years that there was no such edition and that it had been confused with the Rotterdam issue of the same year. In 1912, however, two copies were discovered and were found to differ in the fact that one had a corrected title page and in this last summer one of my friends sent me a copy of the first issue saying that he had bought it on a stall for twelve cents (6d) as long ago as 1886. He pointed out to the stall keeper that it seemed to be worth more but the man said he had only given four cents for it and he was not going to raise the price.

There are some books which *have vanished as regards the first edition* even if it ever existed. Aikin in his *Biographical Memoirs of Medicine in Great Britain*, published in 1780 says of Thomas Vicary "the name of

this person deserves record as the author of the first anatomical work written in the English language. He was a citizen of London, Serjeant Surgeon to the Kings Henry VIII and Edward VI and the Queens Mary and Elizabeth and chief surgeon of St. Batholomew's Hospital." The title of his work is "A Treasure for Englishmen, containing the Anatomy of Man's Body," printed in London in 1548. The statement is repeated in the *Biographica Medica* by Benjamin Hutchinson, published in 1799. No trace of this edition can now be found in spite of the most diligent search. The earliest printed copy is a duodecimo which was entered at Stationers Hall in 1577 with the following heading

Tricesimo die Januarii (1577)

Henry Bamforde Lycensed unto him. "A briefe Traytise of the Anatomye of Man's Bodye" xiiid & a copie.

There must, however, have been an earlier edition, for John Halle published a translation of Lanfrank's *Surgery* in 1565 and says in the prologue that he "is somewhat encouraged to publish it by the example of good maister Vicarie, late Sargeaunte chyrurgien to the queenes highness; who was the first that euer wrote a treatyse of Anatomye in English (to the profite of his brethren chirurgiens and the help of younger studientes) as farre as I can learne."

A similar mystery attaches to the earlier editions

of Sir Thomas Browne's *Religio medici*. I think that the explanation in both cases is that each circulated in manuscript for some years and being either useful or for edification ultimately were printed. But the explanation is only tentative and some fortunate bibliographer may perhaps find copies of each of these lost editions.

During the sixteenth century and perhaps for some years afterwards an edition consisted of 1250 copies. The type had then to be distributed and set up again. At least such was the rule made by the compositors themselves to ensure a continuity of work, but I imagine that it was often evaded. The existence of the rule explains why two editions of a book which could not have been expected to have a large sale often appeared in the same year and yet were not identical. An example is to be found in the 1540 issue of *The Woman's Book*. One of which has at the bottom of the title page "Cum privilegio Regali ad imprimendum solum," the other has no such permission. I believe the "cum privilegio" copies to be the later of the two editions published in this year. The sale had been so unexpectedly rapid that it was worth while to safeguard the book as far as possible to prevent piracy. The books of the fifteenth and sixteenth centuries were sold in sheets which the purchaser could have bound according to his fancy. Different copies of the same edition are, therefore, often found in wholly different bindings and in the

case of the more expensive works, at any rate, the bindings often bear the initials or the heraldic coat of the owner. Even as late as 1676 I do not remember to have seen two copies of Wiseman's *Surgical Treatises* bound alike.

The young medical bibliographer may at first know nothing about the author of the book in which he has become interested and he may be ignorant of the subject matter so that he will educate himself as he goes along. It is not usually difficult to find out about the author because there are plenty of biographical dictionaries and lists of medical writers. In one or other it is nearly always possible to obtain some facts about every medical writer. But if this seems at first to be impossible it adds considerably to the interest of the game. The bibliographer must, however, have access to one or more of the large libraries for he may have to consult handlists, short title catalogues and monographs before he gains his end.

Examination of the book has to be done very warily, for there are several pitfalls and for this reason it is absolutely necessary to make a critical examination of the book itself and not to trust to the observations of others. For instance, a little duodecimo appeared with the title page

The Order of the Hospitalls of K. Henry the viiith. and K. Edward the vith. viz. St. Bartholomew's; Christ's; Bridewell; St. Thomas's. By the Maior, Cominaltie and Citizens of London, Governours of the Possessions, Revenues and Goods of the sayd Hospitalls. 1557.

The book is in black letter and has neither the name nor the place of the printer. It contains the rules which the citizens of London desired should govern the charities which had been placed under their control after the upheaval in the middle of the sixteenth century. It declares how many governors shall be elected; the manner in which they shall be chosen; the length of time they shall serve; the manner of conducting their business and the duties of the salaried officers serving under them, with many other matters serviceable and necessary at the time but of no importance now.

A casual examination of the book shows no reason to doubt the statement of the year 1557 made on the title page, and an examination of the records of the City of London shows that a set of ordinances were actually drawn up and presented to the court of aldermen in this same year. There is, however, no indication that they were ever printed. I knew the book very well and had long entertained some doubts about it. The type did not seem to be quite right, the paper appeared to be more modern than that used in the sixteenth century and all the copies I had seen were associated with seventeenth century governors of the royal hospitals. These facts aroused my suspicions as to the genuineness of the date and I began to wonder whether there could have been two editions, the one printed in 1557 and a second issued in facsimile about 1680–1700; so I went carefully through the book and

found that the order authorising its enactment was duly signed as it should have been by Offley, for Sir Thomas Offley was Lord Mayor of London in 1556. The name of the town clerk who verified the extract and signed at the foot of the order, however, appeared as John Goodfellow, but William Blackwell was town clerk of London from 1541 to 1570 and John Goodfellow was town clerk from 1690 to 1700. It was clear, therefore, that the book could only have been printed between these latter years and that there could have been no first edition.

My suspicions as to the authenticity were thus confirmed and the next step was to ascertain why a manuscript which had remained so long unprinted should at last appear in type. I ascertained that in 1681 the court of aldermen made a determined attempt to regain their ancient jurisdiction over the four royal hospitals, which had practically lapsed from disuse. On February 14, 1681, "a reference was made to the presidents of the four hospitals, and four aldermen were nominated to inquire into and examine the ancient method of managing the hospitals and appointing governors." The result of the enquiry was to show conclusively that the court of aldermen—that is to say, the governing body of the City of London—had jurisdiction over the hospitals but that it had been found difficult to enforce it. The dispute dragged on for several years until on October 28, 1690, "The Clerk—that is to say,

the Secretary or Superintendent—of Christ's Hospital was ordered by that day seven-night to deliver an account in writing how, and in what manner, the Governors of that Hospital were anciently nominated and appointed and when and how the same came to be altered."

On March 10, 1690–1, the committee of aldermen reported that they had made enquiries and found that the lord mayor and certain selected members of the corporation were ex officio governors of the four royal hospitals but that the right had not been exercised for many years past. The inquiry had turned upon a consideration of the "Order of the Hospitals made in 1557" manuscript in the city records. The printing of the original manuscript was evidently the direct outcome of the struggle. It was necessary that every governor of the hospitals who took an active interest in the dispute should study the "Orders" by which the city controlled their actions. It was found that these had so far only existed in manuscript. A new copy was, therefore, obtained from the Guildhall and its authenticity was guaranteed by the signature of the town clerk, John Goodfellow, who, as I have said, was in office from 1690–1700. His signature, therefore, was clearly not a part of the original document and as the original manuscript was an extract from the city records, it bore the name of the lord mayor of the day but not of the town clerk in 1557.

The edition of the *Orders* was of considerable size for I have seen many copies of it. It does not seem to have been put on sale but a copy was probably given to every governor of the four royal hospitals and to every member of the Corporation of the City of London.

The next question to consider was who paid for the printing of the book and why? Strype's edition of Stow's *Survey of London*, published in 1754, states that, "The Orders" were printed in a little book in the time of Mr. Goodfellow, Towne Clerk, and the statement is amplified by Gough in his British Typography in 1780 as follows "The Order of the Hospitals, &c., since reprinted in the old character and size at the expence of Mr. Secretary Pepys."

The statement is interesting and perhaps accurate, except that the book is not a *reprint* as it had not been printed before. Mr. Secretary Pepys here mentioned is Samuel Pepys the Diarist who was Secretary of the Admiralty. He was also a governor of the Bluecoat School—one of the four royal hospitals—and was thus interested in the dispute which threatened to curtail the powers of the governing body by placing them under the control of the city.

The Bluecoat School—Christ's Hospital—which had been founded by King Edward VI, in 1552, was going through a difficult time during the treasureship of Nathaniel Hawes from 1683–1690, when there was

a general relaxation of discipline. Mr. Pepys obtained a voice in the management by securing a grant of public money for the support of a mathematical school which had then been recently established. The school was intended to train officers for the king's ships and, as Secretary of the Admiralty, Pepys was directly interested in its success. Finding the conditions in the school to be unsatisfactory, there can be little doubt that, with his customary energy, he set himself to improve them and to do this he would naturally enquire about the ordinances by which it was governed. I think it is probable that there is some truth in the tradition that he had the Ordinances printed and paid for them, as he was liberally minded in all matters upon which he had set his heart. If this were the case it was quite in keeping with his character to have the book set up in type resembling that which would have been used a century and a half earlier.

Another pitfall for the unwary bibliographer is to mistake a facsimile for the original. Reproductions are now so cleverly done as to make this easily possible. The best example I know is the facsimile of Laennec's inaugural thesis for the M.D. degree. It was published by Maurice Letulle in Paris on October 1, 1923. The title page runs:

Propositions sur La Doctrine D'Hippocrate relativement A LA MÉDECINE PRATIQUE, Présentées et soutenues a l'École de Medecine de Paris le 22 Prairial an xii, Par René-

Theophile-Hyacinthe LAENNEC de Quimper (departement du Finistere).
A Paris De l'Imprimerie de Didot Jeune, Imprimeur de No. 241 l'École de Medecine, rue des macons-Sorbonne No. 406
An xii (1804)

In addition to the text there are numerous autograph annotations by Laennec and five sheets of loose manuscript notes are added. The binding, the paper, the foxing of the paper are all carefully reproduced and there is so little evidence of the volume being a facsimile that it might easily be taken by the inexperienced for the original thesis. The paper, however, is watermarked AM enclosed in a tilting shield, the shield ending in a fleur-de lys, and on other sheets are the letters D.C.BL. in modern type. The shield appears as a watermark both in the printed page and in the loose sheets and by this means it is possible to distinguish the facsimile from the original.

Being assured of the genuineness of the book he is considering, the young bibliographer's next task is to discover where it was printed and from what press it was issued. The two hang together, for if the town be known the printer be not difficult to find; and contrariwise if the printer be known it is comparatively easy to discover where he worked though many of the early printers moved from one address to another in the same town, printed in various cities, and often changed their countries. There are various ways of discovering the place and time of production. The

number of printers in the sixteenth and seventeenth centuries was never very large and in London, at any rate, the printers and publishers were obliged to belong to the Stationers Company with whom they registered the title of a book and paid a small fee to secure the copyright. The registration was compulsory under penalty of a fine, but a few books escaped notice either from slackness on the part of the officials of the Company who omitted to enter them on the register or because the printer gave no notice of the book in order to escape paying the fee. Most of the registers of the Stationers Company are in existence, so that the first search for the name of a book printed in London and of its publisher should be made in these registers which begin in 1554. The registers have been transcribed and there is a good index. If the year of publication is known, it is easy to discover from them the name of the printer or publisher, or if the name of the printer is known the year of publication can be traced. If neither the printer's name nor the year of publication is known some information can be gathered from the ornaments used in the title page or at the beginning or end of the chapters. This is dangerous, however, because printers bought old ornaments, borrowed them or used them generation after generation when printing was an hereditary trade. The study of such ornaments is in itself interesting and goes hand in hand with printers' and publishers' devices upon which my friend

Dr. Ronald B. McKerrow has issued an important and sumptuously illustrated monograph.

An examination of the ornaments which the early printers used on their title pages will often serve to identify the particular edition under consideration even if the date of publication has been destroyed or is not given.

Look at the elaborate title page of the first edition of "The Woman's Book" printed in 1540 (fig. 2). It is built up with four panels none of which are identical. The top one is the most interesting for its history can be traced and it shows how an ornament may be in use for many years and may have passed through the hands of several different printers who were not necessarily related to each other. The panel consists of a rose and cable design, the two end roses are Tudor roses, the two centre ones are in full bloom. They probably represent the red and white roses of York and Lancaster. In the centre is a space with a broken line at the top which is seemingly meaningless, but turn the page upside down and the panel at once comes into proper shape and the space is part of a shield. This set me thinking. It is clear that this panel should have been at the base and not at the top of a title page, and that the shield must originally have been designed to hold some emblems or arms. Looking one day through Dr. McKerrow's monograph, I came upon this plate (Fig. 3) which explains the whole history and takes us back at once to the earliest period

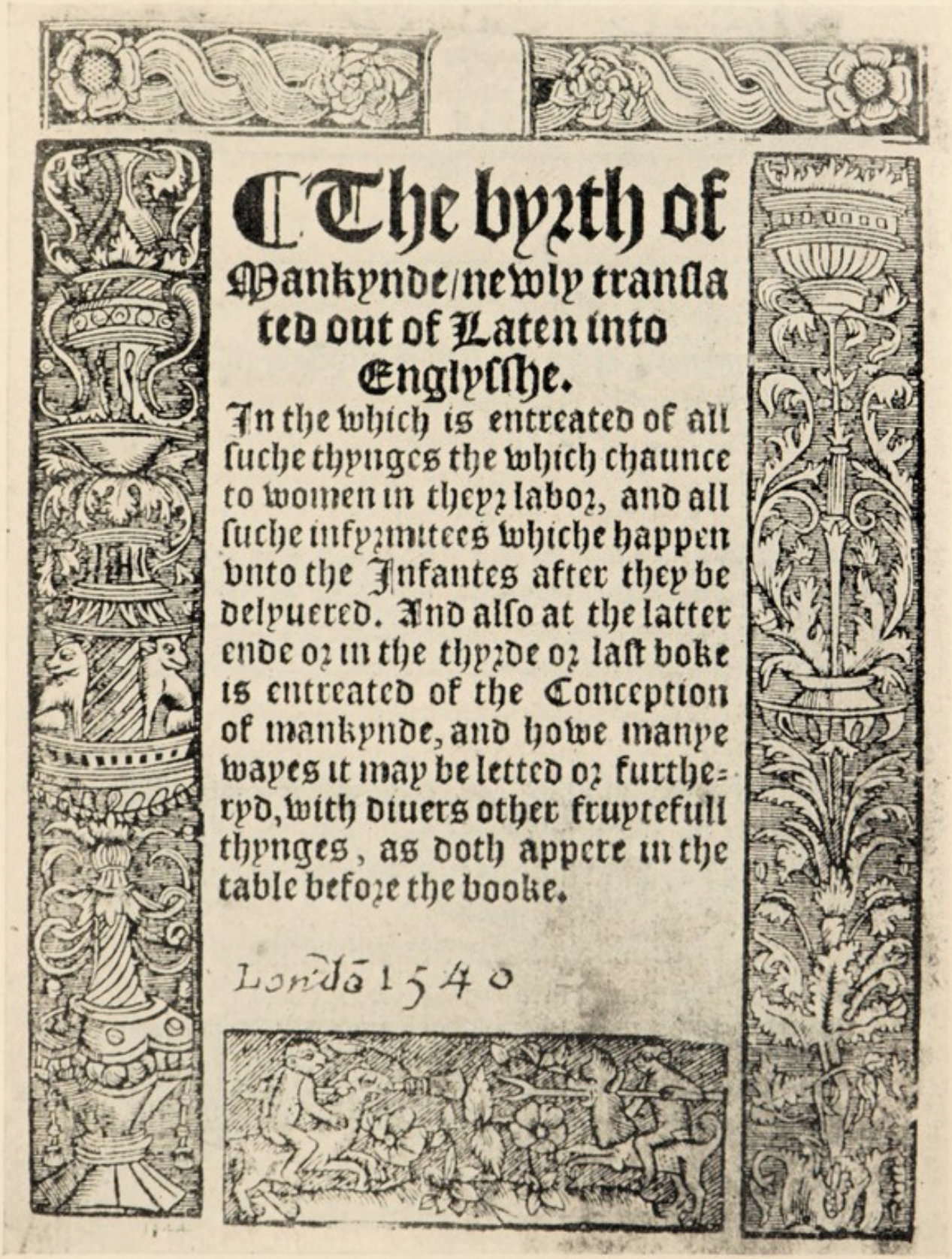

FIG. 2. TITLE PAGE OF THE FIRST EDITION OF "THE WOMAN'S BOOK"

Compare the top panel with No. 48 in figure 3.

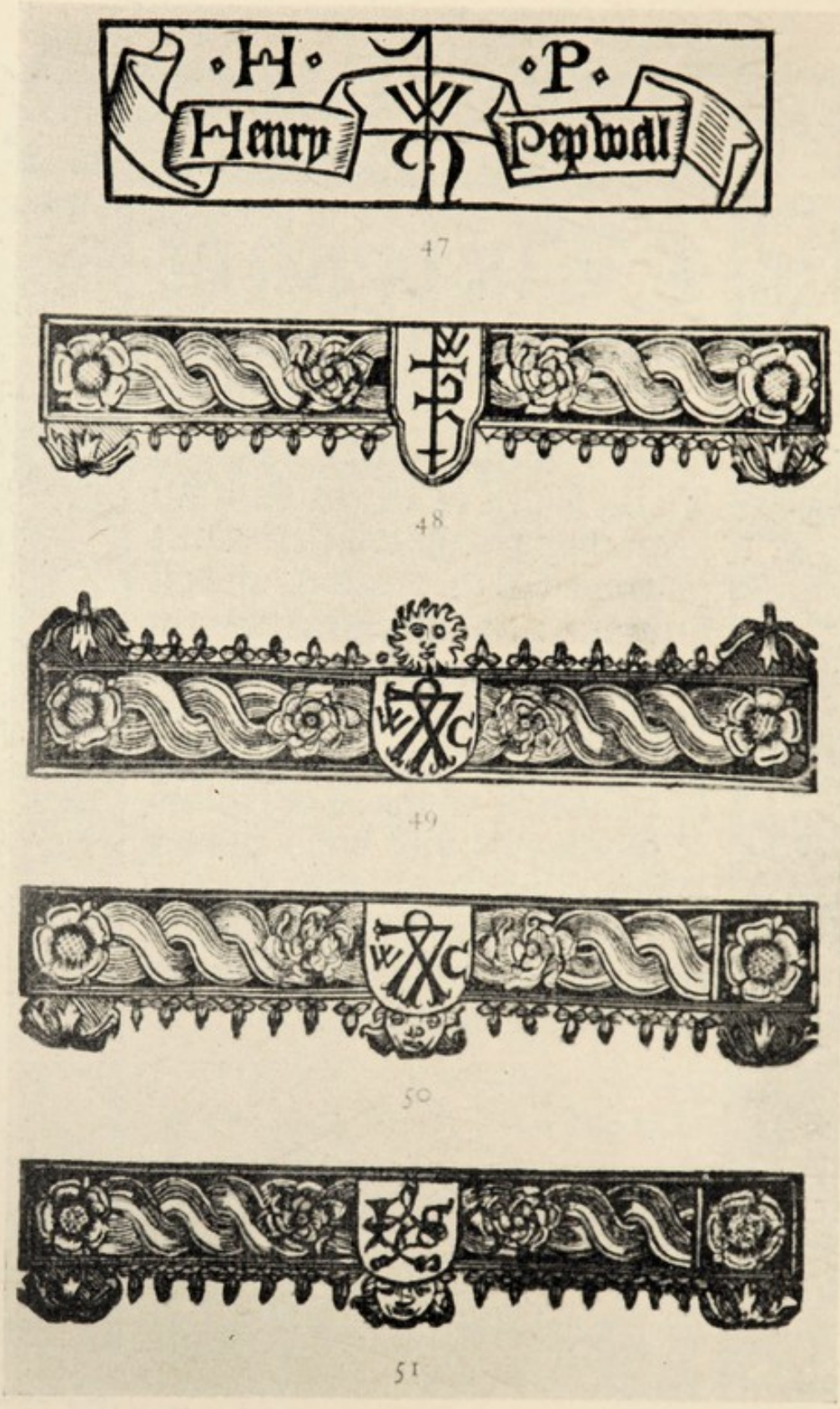

FIG. 3. ORNAMENTS USED ON TITLE PAGES OF SIXTEENTH CENTURY BOOKS PRINTED IN ENGLAND

Compare No. 48 with the top ornament in figure 2.

of English printing. Nos. 49 and 50 show the panel as it first existed. The shield in the centre has the mark and initials of William Caxton and above it in No. 49 is a face. No. 51 shows the shield with the mark of Wynkyn de Worde who was using it in 1521 and bears his device. No. 48 shows a similar panel used by Henry Pepwell in the same year, but it was altered for him and the shield is longer because it has been adopted to contain his mark as may be seen in no. 47. Dr. McKerrow says that de Worde's ornament passed in all probability to Peter Treveris, who was printing from 1521–1532. It was also used by John Scott and by Nicholas Bourman who were both well-known printers. It had come into the possession of Thomas Raynald in 1540, and by that time the lower part of the shield had been cut away, Pepwell's device had been removed, and the whole panel had been turned upside down so that Pepwell's lower border was now used as the upper ornament, leaving a meaningless gap in the imperfect shield (Fig. 2). The whole ornament shows signs of wear though it is still serviceable, and it shows, I think, that it came from Pepwell to Raynald.

The Woman's Book had a long and prosperous career and innumerable impressions were published between 1540 and 1654. I have myself been able to trace eleven editions, each of which seems to have consisted of many reprints. Gradually, however, as in the case of *The Englishman's Treasure*, the advance of accurate

knowledge stopped the sale and the book was replaced by more recent works on the subject. Such, indeed, is the fate of all medical works. Medicine fortunately is progressive, and within one's own memory Sir Thomas Watson's *Lectures on Physic*, Sir James Paget's *Lectures on Surgical Pathology* and Michael Foster's *Textbook of Physiology* have passed into the limbo of obscurity.

Finally let me sum up the advice I would give to a student intending to write a bibliographical monograph. First, choose a book in the language best known to you; take one which has run through many editions in a long course of years. If it began its life in manuscript before the invention of printing, so much the better. Do not trust to what other people have said about it; read it for yourself from beginning to end. Get the first edition for it shows what the author wished to say and how he liked it to appear. Compare it with the later editions and point out how they have changed under successive editors. Describe the individual copies you have seen, state where they are, and note their condition—whether complete or defective. Identify the presses at which the book was printed and determine whether the different issues are merely reprints without change, reissues from standing types, or reprints from fresh type. Mention the watermarks of the paper on which it is printed. The points to be looked at are the printer's signatures, any faulty pagination, broken letters, and the correc-

tion of printer's errors which had appeared in previous editions. Even the most glaring error of the press may pass unnoticed for many years and through successive editions. Such an instance occurs in Vicary's *Anatomy*, where on page 44 of the 1586 edition is the statement that, "The seconde portion of the Guttes is called Jejunium, for he is evermore emptie for to him lyeth evermore the chest of the gal beating him sore and draweth forth of him al the drosse and cleanseth him cleane." As it stands this is nonsense but it is repeated through every edition and appears unchanged at page 66 of the 1651 edition. Reference to the 1577 edition however shows that "beating him sore" should really be "biting him sore" in allusion to the supposed irritant properties of the bile, "the chest of the gal" being the gall bladder or bile cyst.

I have already said that books in the sixteenth and seventeenth centuries were usually issued in sheets which the purchaser afterwards had bound to his own taste. Note, therefore, the binding and the presence or absence of endpapers, for as regards these little or nothing is known at present. Scribbled memoranda, book plates and ex-libris with the names of former owners should also be mentioned. Thereby hangs a tale. Just thirty years ago I went to lecture in Sheffield and the next morning I visited the hospital and went to the rooms of the interne who had been a former pupil. Three or four old quarto volumes were

lying in a dusty bookcase. I picked up one of them, asking where they had come from, and was told that they had been left by a former member of the staff who, it was said, had bought them in France. I opened the book at random and saw that it had been well read and annotated in a sixteenth century hand. Looking at the title page I saw in the same hand the signature "François Rabelais." There was no doubt that they had once belonged to the great humanist jester and they are now in the Public Library at Sheffield. It happened in like manner to my friend Mr. F. C. Pybus of Newcastle-upon-Tyne in 1924. He bought a copy of Harvey's *De Generatione* from a second-hand bookseller's catalogue. When it arrived he discovered to his joy that the flyleaf bore the signature of Eliab Harvey, brother of William Harvey, with the date 1674. It must have come to him with the other effects of his brother and that it had been William's own copy is shown by the fact that most of the flyleaves have notes on Aristotle written in his well-known hand and with his monogram WH put against those passages which he thought to be of especial interest. Lastly, if you are writing a monograph give a summary of what you have done and discovered. Many excellent monographs have been written where the facts are so scattered through the book as to lead to much loss of time in discovering them, and *do* add a good index.

LECTURE VI

"Aristotle's Masterpiece"

I bring to your notice this book which is called *Aristotle's Masterpiece*. It began its long life 427 years ago in all innocence. It is now a hoary old debauchee acknowledged by no one. In fact, it is so disreputable that I had some difficulty in bringing myself to buy a copy. It is sold only in those shops which are devoted to contraceptives and I thought that if my numerous friends saw me going in or met me coming out my object would certainly be misinterpreted. But being "ingenuus, ingenuique pudoris" I put on a bold face and here is the book. I cannot think who now buys or reads it, and yet it seems to have a large and constant sale. I have now knowledge of sixty-six editions and there were at least ten copies in the shop where I bought this one, and if there are two hundred such shops in London alone there must be two thousand copies in circulation. It is continually being reprinted so that the demand seems to remain constant. There must consequently be a large class of persons in England possessed of prurient minds and so uneducated that the pseudo-science of the middle ages still appeals to them. But this is no matter of surprise, for in 1925 Mr. Edward Lovett published a book which he called *Magic in Modern London*. He showed from personal knowledge that nearly all the old

charms, mascots and supersititions are in active use amongst us at the present day. It is, for instance, still possible to buy a wind by the purchase of a knotted string; to save oneself from drowning by carrying a caul—cauls went to a premium during the war—or to loosen cramps by keeping a fossil shark's tooth in the trouser pocket. Indeed nearly every motor car has its mascot "for luck," and the plaques of St. Christopher—the patron saint of travellers—are innumerable. Superstition, therefore, is not confined to the uneducated, and pruriency is, I suppose, satisfied amongst those who read by the modern sex novel.

Aristotle's Masterpiece has long held so degraded a position that it has never been examined critically, though it well repays a study both on account of its history and of its contents. At the present time it is a composite work and in this volume, which is the current issue, the parts are arranged in the following order: (i) The Masterpiece; (ii) The Experienced Midwife; (iii) Aristotle's Book of Problems; (iv) The Problems of Marcus Antonius Sanctipertias; (v) The Problems of Alexander Aphrodisiensis; (vi) A Treatise on Physiognomy; (vii) A Treatise on Palmistry; (viii) A Chapter on the Power of the Celestial Bodies over Men and Women which is practically a short treatise on Astrology.

There is no evidence to show that all the Problems attributed to Aristotle were really written by him, but they were evidently favorite reading long before

the invention of printing and must have circulated largely in manuscript amongst those who had some knowledge of Greek. As incunabula, that is to say, as works printed before 1500 they took the form of chapbooks of 40 to 50 folios in quarto, occasionally with an illustration.

The German *Catalogue of Incunabula* gives an account of twenty-six impressions between 1473 and 1500, mostly in Latin but some in German. The Latin translation was made by Theodore Gaza (1400–1478). The chapbooks received the title of *The Life and Death of Aristotle* to make them best sellers and gradually acquired accretions from Avicenna, Galen and Albertus Magnus. So far as we are concerned today *Aristotle's Masterpiece* began its career as a folio printed at Venice in 1503. In 1563 a little duodecimo appeared at Cologne under the title:

Aristotelis ac philosophorum medicorumque complurium ad varias quaestiones cognoscendas admodùm digna & ad naturalem philosophiam discutiendum maxime spectantia.
Quae acceserunt versa Pagella demonstrabit.
Coloniae. Apud heredes Arnoldi Birckmanni
Anno 1563

and on the reverse of the title page, as promised, are the additions:

Marci Antonii Zimarae Sanctipetrinatis Problemata. His addita unà cum trecentis Aristotelis & Auerrois propositionibus; suis in locis insertis.

Item Alexandri Aphrodisei super questionibus nonnullis Physicis solutionum Liber-Angelo Politiano interprete.[1]
Incipit: Omnes homines naturaliter scire desiderant ut scribit Aristoteles, Princeps Philosophorum.
Explicit: ex pluribus artificialibus codicibus Problemata colligere.

The book is in the University Library at Cambridge England, under the reference *U*.B. 167 (G)*. It appeared in London twenty years later when George Bishop published in 1583:

Problemata Aristotelis ac Philosophorum medicorum complurium; Marci Antonii Zimarae Sanctipetrinatis Problemata, unà cum trecentis Aristotelis Auerrois Propositionibus. Item Alexandri Aphrodisei super questionibus nonnullis Physicis Solutionum Liber, Angelo Politiano interprete.

This little 24 mo. of 287 pages was evidently successful and "filled a want" as the booksellers say, for it was translated into English and was published in London as an octavo in 1595 by "ye Widow Orwin" under the title *The Problems of Aristotle with other Philosophers and Physitians*, and in the same year it appeared in Edinburgh. A. Hatfield also published

[1] Angelo de Ambroginis Poliziano (1454–1494) was well known as an Italian humanist. We are told that he was atrociously ugly with a huge nose and great goggle eyes which nearly touched each other, but as soon as he began to speak he carried away his audience and they forgot his personal appearance.

editions in octavo in 1597 and 1607. It is still being reprinted in 1930, a little abridged but following the order of Bishop's 1583 version. George Bishop, the first publisher, was a bookseller and printer in London—a Shropshire man—who was admitted a freeman of the Stationers Company on April 16, 1662. He married Mary, the eldest daughter of John Cawood—himself a well-known printer. Bishop rose to the highest positions, for he was five times Master of the Stationers Company and was elected an Alderman of the City of London. He issued a large number of books and had shares in Holinshed's *Chronicles* and Hakluyt's *Voiages*. He died early in January, 1610–1611, and was buried in the church of St. Faith, beneath St. Paul's Cathedral. His only son John, a student at Christ Church or more probably at University College, Oxford, died before his father but his widow survived until September, 1613, when she was buried by the side of her husband.

The Widow Orwin, who sometimes used the device of an urn marked with T.O. in the books she published, sometimes that of two hands clasping each other, and the motto "By Wisdom, peace and by Peace, plenty," and sometimes Mars standing with sword and shield, was Joan who married Thomas Orwin when she was the widow of George Robinson. Both her husbands were printers in London.

Arnold Hatfield was a printer in London from 1584–1612. He lived in Eliot's Court, Old Bailey, and used

the types, ornaments and initial letters of Henry Bynneman, who died in 1583 and was the actual printer of Holinshed's *Chronicles*. Hatfield died about 1612. He was one of those who printed Philemon Holland's translation of Plutarch's *Moralia* and of Ortelius' *Theatrum Orbis Terrarum*.

The Problems as the title page of the original edition says are taken from Aristotle and other philosophers, but chiefly from Aristotle. They are not problems as we now use the word but rather catechisms, being thrown into the form of question and answer. The method takes us back to the time when Plato walked up and down in the shady groves of Academe, surrounded by his pupils and asking questions which they could or could not answer. Such was the Peripatetic school and here are Aristotle's questions and answers perpetuated and being printed in London in this very year 1930. It fills me with astonishment, for it is like suddenly discovering an ichthyosaurus or other fossil animal lying hardly changed in the middle of Regent Street. In this book "Aristotle's Problems" deal with the different parts of the body, beginning with the head and ending with the child in the womb. In an abridged form they have been taken from the Problemata which are assigned to Aristotle, but there are still more accretions for there is a section on the interpretation of dreams and another literally de quibusdam aliis which is headed "of Divers matters."

The following are examples of the Problems:

Q. Why are men that have but one eye good archers? And why do good archers shut one eye? And why do such as behold the stars look through a trunk with one eye?

A. This matter is handled in the perspective arts and the reason is, as it doth appear in the *Book of Causes*, because that every virtue and strength united and knit together is stronger than when dispersed and scattered. Therefore all the force of seeing dispersed in two eyes, the one being shut is gathered into the other and so the light is fortified in him; and by consequence he doth see better and more certainly with one eye being shut than when both are open.

Q. Why do some that have clear eyes see nothing?

A. By reason of the oppilation and naughtiness of the sinews with which we see; for the temples being destroyed the strength of the light cannot be carried from the brain to the eye.

Here is the English of the Bible and the sinews are the nerves.

Q. Why do men sneeze?

A. That the expulsive virtue and power of the sight should thereby be purged and the brain also, from superfluities because as the lungs are purged by coughing, so is the sight and brain by sneezing; and therefore physicians give sneezing medicaments to purge the brain; and thus it is such sick persons as cannot sneeze die quickly because it is a sign their brain is wholly stuffed with evil humours which cannot be purged.

Q. Why do such as are apoplectic sneeze, that is, such as are subject easily to bleed?

A. Because the passages or ventricles of the brain are stopped and if they could sneeze their apoplexy would be loosed.

Here is the authority for the age-old practice of burning feathers under the nose of persons in "a fit," and the explanation to be given when asked for the reason.

Q. Why do the teeth only amongst all other bones, experience the sense of feeling?

A. That they may discern heat and cold that hurt them, which other bones need not.

Q. Why have men more teeth than women?

A. By reason of the abundance of blood and cold which is more in men than in women

This problem is like the one set to the Royal Society by King Charles II: Why does a fish weigh more alive than when it is dead? Did Aristotle ask it of his pupils as a joke?

Q. Why doth the spittle of one that is fasting heal an imposthume?

A. Because it is well digested and made subtle.

This belief in the virtue of the spittle of a fasting man is firmly rooted and practised at the present day.

Q. Why hath a woman who is with child of a boy, the right pap harder than the left?

A. Because the male child is conceived in the right side of the mother; and therefore the flowers do run to the right pap and make it hard.

Q. Why have some men the piles?

A. Those men are cold and melancholy, which melancholy

first passes to the spleen, its proper seat, but there cannot be retained for the abundancy of the blood; for which reason it is conveyed to the back bone, where there are certain veins which terminate in the back and receive the blood. When these veins are full of the melancholy blood then the conduits of nature are opened and the blood issues out once a month, like women's terms. Those men who have this course of blood are kept from many infirmities such as dropsy, plague, &c.

Q. Why are the Jews much subject to this disease?

A. Because they eat much phlegmatic and cold meats which breed melancholy blood, which is purged with the flux. Another reason is that motion causes heat and heat digestion; but strict Jews neither move, labour nor converse much which breeds a coldness in them and hinders digestion, causing melancholy blood which is by this means purged out.

In course of time this answer has been severely edited as the anti-semitic feeling lessened. The original reads:

Queritur. Quare Judaei indifferenter patiuntur talem fluxum?

Respondetur. Theologicè, quia ipsi tempore passionis Christi clamaverunt "Sanguis ejus super nos et super filios nostros". Ergo dicitur in Psalmo "Percussit eos Deus in posteriora dorsi."

Aliter respondetur magis naturaliter [as it now stands.]

[*Q.* Why do the Jews all alike suffer from piles? The answer is, as theologians say, because when Christ was crucified they cried out "his blood be upon us and upon our children." Therefore as it is said in the Psalm "God smote them in their hinder parts." Otherwise and more naturally the answer is, etc.]

Q. How is it that the heart is continually moving?

A. Because in it there is a certain spirit which is more subtle than air which by reason of its greater rarefaction seeks a larger space filling the hollow room of the heart; hence the dilating and opening of the heart and because the heart is earthly, the thrusting and moving ceasing its parts are at rest tending downwards. As a proof of this take an acorn, which, if put into the fire, the heat doth dissolve its humidity, and therefore occupies a greater space so that the rind cannot contain it. The like of the heart. Therefore the heart of a living creature is triangular, having its least part towards its left side and the greater part towards the right; and also doth open and shut in the least part by which means it is in continual motion. The first motion is called diastole, that is extending the heart or breast; the other systole, that is shutting of the heart; and from these all the motions of the body proceed and that of the pulse which the physicians feel.

Q. Why is the heart first engendered; for the heart doth live first and die last.

A. Because the heart is the beginning and original of life and without it no part can live. For of the seed retained in the matrix there is first engendered a small skin which compasses the seed; whereof the heart is made of the purest blood; then of blood not so pure the liver; and of thick and cold blood the marrow and brain.

Q. Why is it a good custom to eat cheese after dinner and pears after all meat.

A. Because cheese by reason of its ear[th]liness it tendeth down towards the bottom of the stomach and so puts down the meat. This food digests all other but is not able to digest itself. And the like of pears. Note that new cheese is better than old and that old soft cheese is very bad and causeth headache and stopping of the liver and the older the worse.

This problem exists almost word for word in the Regimen Sanitatis where it runs:

Cheese is a surly Elf
Digesting all things but itself.

It would be interesting to speculate as to which was the original, the Problem or the lines in the Regimen.

Q. Why does the spleen cause men to laugh as says Isidorus: "We laugh with the spleen, we are angry with the gall, we are wise with the heart, we love with the liver, we feel with the brain and speak with the lungs".[2]

A. The reason is, the spleen draws much melancholy to it, being its proper seat, the which melancholy proceeds from sadness and is there consumed; and the cause failing the effect doth so likewise. And by the same reason the gall causes anger for choleric men are often angry because they have so much gall.

The Isidorus here mentioned is probably the great Spaniard who was Bishop of Seville, A.D. 600–636. He was undoubtedly the greatest man of his time in Spain and amongst his numerous writings was a treatise on medicine in thirteen books.

Q. Why doth the hair of the eyebrows grow long in old men?

A. Because through their age the bones are thin from want of heat and therefore the hair doth grow there by reason of the rheum of the eye.

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[2] The original quotation is an elegiac:

"Cor sapit et pulmo loquitur, fel commovet iram
Splen ridere facit, cogit amare jecur."

THE PROBLEMS OF MARCUS ANTONIUS SANCTIPETRIAS

These Problems are placed next to those of Aristotle though in point of time they should come after the Problems of Alexander Aphrodiseus. I had some difficulty in tracing the author until by reference to earlier editions I found that a part of his name had been omitted. He is in reality Marcus Antonius Zimara and there is an account of him in the Biographie Universelle (Paris, 1828, tome 152). Antonius Zimara was born at Galatina near Otranto in Italy about the year 1460. He studied at Padua and was teaching philosophy there in 1507. Driven out during the Wars of the Holy League, which ended with the battle of Ravenna in 1512, he returned to Otranto and in 1522 was acting as professor of theology in the University of Naples. He returned to Padua in 1525 and died there in 1532. He had two sons, Nicholas, a doctor of law, who died after a brilliant career in 1598; and Theophilus who wrote a voluminous treatise in Latin *On the Soul*, which was published in Venice in 1558.

Zimara dedicates his book of Problems "ad Joannem Castriotum, Ferrandinae ducem illustrissimum," and in another place he says, "Marcus Antonius Sanctipetrinas Hydruntius, illustrissimo Ferrandinae duci, domino Joanni Castriotae." Ferentino is a

town in the Papal States on the road from Naples to Rome by way of Monte Cassino. It was a considerable town of the Volsci in Roman times, and is still surrounded by the remains of old walls built of hewn stone without mortar. It is now the see of a bishop, contains a cathedral, several parish churches, three convents and a population of 8000 persons. Zimara wrote in addition to his Problemata: (i) "Tabulae et dilucidationes in dicta Aristotelis et Averrois recognita et expurgata" which was published in two volumes at Venice in 1564; and (ii) "Antrum magico-medicum . . . cum signaturis planetarum . . . ad omnes corporis humani affectus curandos . . . subjungitur; accessit motus perpetui mechanici . . . documentum," which was published at Frankfort in 1525; and in 1526 at the same place, "Antri magico-medici pars secunda in qua arcana naturae sympathiae et antipathiae rerum in plantis . . . omniumque corporis humani morborum, imprimis podagrae, hydropis, pestis epidemiae . . . cura hermetica, specifica . . . continentur etc." It appears, therefore, that Zimara of Sanctipetri was a doctor of medicine who dabbled in astrology and sought for perpetual motion as well as a professor of philosophy. He was part doctor, part mystic. The last edition of the *Masterpiece* contains eighteen of his problems which run along the ordinary lines of question and answer. These two may be taken as exampes of his style:

Q. Why do such as cleave wood cleave it easier in the length than athwart?

A. Because in the wood there is a grain, whereby if it be cut in length, in the very cutting one part naturally separateth from another.

Q. What is the reason that if a spear be stricken on the end, the sound cometh sooner to one who standeth near, than to him who striketh?

A. Because as hath been said there is a certain long grain in wood directly forward filled with air; but on the other side there is none and therefore a beam or spear being stricken on the end the air which is hidden receiveth a sound in the aforesaid grain which serveth for its passage. And seeing the sound cannot go easily out of it carried into the ear of him who is opposite, as those passages do not go from side to side, a sound cannot be distinctly heard there.

Here is a groping into physical science which does not carry him very far, though it might have led him to the invention of the stethoscope, had his mind been of the practical kind. He is even less successful in his physiology. He asks:

Q. Why are the sensible powers in the heart, yet if the hinder part of the brain be hurt, the memory suffereth by it; if the forepart, the imagination; if the middle, the cogitative part?

A. It is because the brain is appointed by nature to cool the blood of the heart; whereof it is, that in divers of its parts it serveth the powers and instruments with their heart for every action of the soul doth not proceed from one measure of heat.

This to me is nonsense.

THE PROBLEMS OF ALEXANDER APHRODISEUS

Next to the Problems of Zimara come the "Problems of Alexander Aphrodiseus." The order is misplaced, for in point of time Aphrodiseus was long before Zimara. He was a native of Aphrodisias, a city in Caria, and lived at the end of the second or beginning of the third century A.D. He is known as one of the celebrated commentators on Aristotle. His object was to restore the genuine interpretation of the writings of Aristotle and to free them from the accretions of the five hundred years which had elapsed since his death. His commentaries were translated from the original Greek in which he wrote them into Latin and Arabic.

It is rather doubtful whether Alexander Aphrodiseus wrote the Problems with which he is credited, and the real author may have been Alexander Trallianus who was born in Tralles in Lydia and was a physician. He lived from 525 to 605 and was the author of many works on medicine and the treatment of disease. He practised in Rome and travelled much in Spain, Gaul and Italy. He was a Christian which Alexander of Aphrodisias was not. The Problems speak of the immortality of the soul, which is a point in favour of their being attributed to Alexander of Tralles rather than to Alexander Aphrodiseus. The Problems appeared as "Ἰατρικὰ ἀπορήματα καὶ φυσικὰ προβλήματα," and were translated into Arabic

and Latin. The Latin version runs "Quaestiones Medicae et Problemata Physica." They were first printed in Latin by George Valla at Venice in 1488. The Greek text was published at Venice in the Aldine edition of Aristotle's works in 1495, and in that of Sylburgius at Frankfort in 1585. The Latin translation with the Greek text was printed at Paris in 1540 and 1541 by J. Davion and it is from this text, I think, that the Problems in the present form were translated into English. Here are some examples:

Q. Why is honey sweet to all men but to such as have jaundice?

A. Because they have much bitter choler all over their bodies, which abounds in the tongue; whence it happens when they eat honey the humors are stirred and the taste itself by the bitterness of choler causes an imagination that the honey is bitter.

Q. Why do nurses rock and move their children when they would rock them to sleep?

A. To the end that the humours being scattered by moving may move the brains; but those of more years cannot endure this.

Q. Why is fortune painted with a double forehead, the one side bald and the other hairy.

A. The baldness signifies adversity and the hairiness prosperity which we enjoy when it pleaseth her.

Q. How comes it that such as have the hiccup do ease themselves by holding their breath?

A. The breath retained doth heat the interior parts of the body and the hiccup proceeds from cold.

Q. How comes it that old men remember well what they have seen and done in their youth and forget such things as they see and do in their old age?

A. Things learned in youth take deep root and habitude in a person, but those learned in age are forgotten because the senses are then weakened.

Q. How comes marsh and pond water to be bad?

A. By reason they are phlegmatic and do corrupt in summer; the fineness of water is turned into vapours and the earthiness doth remain.

Q. Why are studious and learned men soonest bald?

A. It proceeds from a weakness of the spirits or because the warmth of digestion causes phlegm to abound in them.

Q. Why do hard dens, hollow and high places send back the likeness and sound of the voice?

A. Because that in such places also by reflection do return back the image of a sound, for the voice doth beat the air and the air the place which the more it is beaten the more it doth bear and therefore doth cause the more vehement sound of the voice. Moist places, and as it were soft, yielding to the stroke and dissolving it, give no sound again; for according to the quantity of the stroke the quality and quantity of the voice is given, which is called an echo. Some do idly fable that she is a goddess; some say that Pan was in love with her which without doubt is false. He was some wise man who did first desire to search out the cause of the voice and as they who love and cannot enjoy that love, are grieved, so in like reason was he very sorry until he found out the solution of that cause; as Endymion also, who first found out the course of the moon, watching all night and observing her course and searching her motion, did sleep in the daytime and that she came to him when he was asleep, because she did give the philosopher the solution of the

course herself. They feign also that he was a shepherd because that in the desert and high places he did mark the course of the moon. And they gave him also the pipe because that the high places are blown with wind or else because he sought out the consonancy of figures. Prometheus being also a wise man sought the course of the star which is called the Eagle in the firmament, his nature and place. And when he was as it were wasted with the desire of learning, then at last he rested when Hercules did resolve unto him all doubts with his wisdom.

As I read such an attempt to rationalise the old classical fables I am more than ever amazed that it should be worth while for a modern publisher to print them for the use of the half-educated classes whom they expect to buy the book.

PHYSIOGNOMY

The treatise on "Physiognomy" is, I expect, taken from Polemon's *Physiognomia* but I have not been able to see the book and so cannot be certain. Polemon was probably born in Attica in or before the third century after Christ and was a Christian. He wrote his work on "Physiognomy" in Greek. It became well known and was drawn upon largely by subsequent writers. It was first published at Rome in 1545 in Greek, and in Greek with a Latin translation in 1552. It was also translated into Arabic. In speaking of the *eyes* the treatise says, "If a person has any greenness mingled with the white of the eye, such is commonly silly and often very false, vain and deceitful,

unkind to his friends, a great concealer of his own secrets and very choleric." Is this the origin of the slang expression, "Do you see any green in my eye?" Meaning that you are not such a fool as to be taken in by a palpably false suggestion. Of *tongues* it is said that, "A stammering tongue signifies a man of weak understanding and of a wavering mind, quickly in a rage and soon pacified." Of *chins*, "A crooked chin bending upwards and peaked for want of flesh is by the rules of physiognomy a very bad man being proud, impudent, envious, threatening, deceitful, prone to anger and treachery and a great thief."

The "Book of Problems," which I have alone considered, had a long and blameless existence for very many years as a separate work. An edition said to be the twenty-fifth, but the publishers in the eighteenth century were not particular in numbering their editions, was published without date but printed and sold by J. W. : J. K. : G. C. : D. M. : A. B. : E. M. : R. R. : J. O. & L. : B. M. : and A. W. The frontispiece shows Apollo driving the chariot of the sun in the upper compartment, and in the lower one an astrologer and a shepherd herding his flock. The twenty-sixth edition, which seems to be only a few years later, is without the name of the printers but is dated 1749. It has the same frontispiece.

THE MASTERPIECE

The earliest edition of the *Masterpiece* which I have seen is dated 1684, with the title:

Aristotle's Masterpiece or the Secrets of Generation Displayed in all parts thereof. Entered according to Order. London Printed by J. How and are to be sold next door to the Anchor Tavern in Sweethings Rentes in Cornhill.

This is a duodecimo volume of 190 pages. The frontispiece is a picture of a woman followed by a black boy with the legend, "The Effigies of a Maiden all hairy and an infant that was black by the imagination of *their* parents." This frontispiece is repeated at the end and there are four pages of cuts, the description of each being on the back of the page. These pages are not numbered.

Another edition with additions was published in 1694, with the following title page:

Aristotle's Masterpiece compleated in two parts. The first containing the secrets of Generation in all the various parts thereof. Treating fully of the benefit of marriage and the prejudice of unequal matches; Signs of Insufficiency in men or women; of the Infusion of the Soul; Of the likeness of Children to Parents; Of Monstrous Birth; Of Virginity; Directions and Cautions for Midwifes; Of the Organs of Generation in Women and the Fabrick of the Womb, the use of the Genitals; Signs of Conception and whether a Male or Female. The Second Part being a Private Looking-glass for the Female Sex treating of the various Maladies of the Womb and all other Distempers incident to women of all ages. The whole being more correct than anything of this kind hitherto published. London Printed for D. P. & are to be sold by all Booksellers.

The edition is a small octavo of 154 pages and in both the frontispiece is a hairy woman and a black

boy, but in the 1684 the woman is looking to the right and is wearing a cap whilst in the 1694 copy she is looking left, is not wearing a cap and has her hair hanging down. The book, therefore, must have had a considerable sale because the frontispiece has had to be redrawn. Perhaps it began its life much earlier for there are cuts of various monsters copied from sixteenth century books which have been continued on into the 1930 edition with hardly any change. Thus there is a picture of "A Monster born at Ravenna in Italy in the year 1512," and of another that was born "at Nazara in the year 1530." Of this the legend states:

> It had four arms and four legs likewise in the reign of Henry III there was a woman delivered of a child having two heads and four arms and the bodies were joined at the back; the heads were so placed that they looked contrary ways; each had two distinct arms and hands. They would both laugh, both speak and both cry and be hungry together; sometimes the one would speak and the other keep silence and sometimes both speak together. They lived several years but one outlived the other three years [a manifest lie] carrying the dead one (for there was no parting them), till the survivor fainted with the burden and more with the stench of the dead carcass.

Another monster, representing a hairy child, was born in France in the year 1597, at a town called Arles in Provence;

> It was a male and was all covered with hair like a beast. That which made it more frightful was that its navel was in the

place where its nose should stand, and its eyes placed where its mouth should have been and its mouth placed in the chin. It lived but a few days frightening all that beheld it. It was looked upon as a forerunner of desolution which soon after happened to that Kingdom in which men to each other were more like brutes than human creatures.

The *Masterpiece* at its best is a mere catchpenny production written for the prurient-minded and the less said about it the better. It has had a long life and still seems to be what the publishers call a good seller.

ARISTOTLE'S LEGACY

Side by side with the *Masterpiece* is Aristotle's *Last Legacy* which began life frankly as a chapbook to be sold at Fairs and by hawkers. The first edition I know of is undated but was probably printed about 1690. It is a quarto of 24 pages and is entitled:

> Aristotle's Legacy or his golden Cabinet of Secrets opened in Five Treatises. 1. The Wheel of Fortune. 2. The Art of Palmistry. 3. A Treatise of Moles. 4. The interpretation of Dreams. 5. Observations on Fortunate and Unfortunate Days; with many other Secrets and Experiments never before published to which is added a Compleat Book of Riddles. Translated into English by Dr. Borman, Student in Astrology. Licensed according to Order. Printed for J. Blare at the Looking-Glass on London-Bridge.

Ten years later, that is to say about 1700, for again the book is undated, it had become:

Aristotle's Legacy or his Golden Cabinet of Secrets being Youth's Delightful Pastime opened in five Treatises: I. The Wheel of Fortune. II. The Art of Palmistry. III. A Treatise of Moles. IV. The Interpretation of Dreams. V. Observations on Fortunate and Unfortunate Days. To which is added A Complete Book of Riddles. Translated into English by Dr. Solman, Student in Astrology. Licensed according to Order. Printed by J. Blare at The Looking-Glass on London-Bridge.

This edition is a duodecimo. The frontispiece is a woodcut of Aristotle in an oval frame with verses below.

The *Legacy*, having served its purpose, ceased to exist and is not included in the collected edition of 1930, though it appears in that of 1815 in a greatly condensed form and without the sections on Moles and Dreams. The 1790 (?) issue states that it was translated by Dr. Boreham, Astrologer, and that it was printed at Newcastle-on-Tyne "in this present year," which is not given.

ARISTOTLE'S COMPLEAT AND EXPERIENCED MIDWIFE

The first edition of this appears to be in the year 1700. The title page reads:

Aristotle's Compleat and Experienced Midwife. In two parts: I. A Guide for child-bearing women in the time of their conception, Bearing and Suckling their children with the best means of helping them both in Natural and Unnatural Labours together with suitable remedies for the various indispositions of New-Born Infants. II. Proper and safe remedies

for the Curing of all those Distempers that are incident to the Female Sex and more especially those that are any obstruction to their bearing of children. A work far more perfect than any yet Extant and highly necessary for all Surgeons, Midwives, Nurses and Child-Bearing Women. Made English by W——— S——— M.D. London. Printed and Sold by the Booksellers. MDCC.

This is a duodecimo of 168 pages. The frontispiece shows a lying-in chamber with the mother in a fourpost bed and six women attendants all with high-combed hair. The plate is signed "John Drapentier sculp."

The third edition is dated 1718 and is word-for-word a reprint of that published in 1700. It appears slightly changed in the 1930 edition, for an attempt has been made to bring it up to date. The change has been so little that the old herbal treatment is still recommended. I quote from the 1930 edition:

The following prescriptions are very good to speedy deliverance of women in travail: (1) A decoction of white wine made in savory and drank. (2) Take wild tansey or silverweed, bruise it and apply it to the woman's nostrils. (3) Take date-stones and beat them to powder and let her take half a drachm of them at a time in white wine. (4) Take parsley and bruise it and press out the juice and dip a linen cloth in it and put it so dipped into the mouth of the womb. It will presently cause the child to come away though it be dead and it will bring away the after-burden. Also the juice of the parsley is a thing of so great virtue (especially stone parsley) that being drunk by a

woman with child it cleanseth not only the womb but also the child in the womb, of all gross humours.

A scruple of castorum in powder in any convenient liquor is very good to be taken in such a case and so also is two or three drops of castorum in any convenient liquor or eight or nine drops of spirits of myrrh given in any convenient liquor, gives speedy deliverance. Give a woman in such a case another woman's milk to drink; it will cause speedy delivery almost without pain. The juice of leeks being drunk with warm water highly operates to cause speedy delivery. Take peony seeds and beat them into a powder and mix the powder with oil and anoint the parts of the woman with child. It will give her deliverance speedily and with less pain than can be imagined. Take a swallow's nest and dissolve it in water, strain it and drink it warm, it gives delivery with great speed and much ease.

Mizaldus [Antonius, who lived from 1520–1578] recommends a lodestone held in the woman's left hand; or the skin cut off a snake to be girt about the middle next to the skin. But these things are not so certain notwithstanding Mizaldus quotes them.

Fancy this being gravely printed at the present day, and I have but little doubt that the remedies are all still in use unbeknown alike to Doctor and midwife. The author, editor or compiler of this precious rubbish was William Salmon, a well known sixteenth century quack. My friend Mr. C. J. S. Thompson gives an account of him in *The Quacks of Old London* (Brentano, 1928, pp. 126–37) which may be summarised as follows: William Salmon, Saman, or Saumon was born on June 2, 1644, and began life as assistant to a mountebank with whom he travelled about

the country. He then crossed the Atlantic and lived for some time in New England. Returning to London he first established himself near the gate of St. Bartholomew's Hospital where he treated many, sold them medicines and practised as an astrologer. His remedies included an Elixir Vitae and Family Pills, and in 1671 he published a *Synopsis Medicinae or Compendium of Astrological, Galenical and Chemical Physick* in three books. The work was written in English at a time when all orthodox medical literature was in Latin. It had a large sale and was followed by many other publications of which the *London Almanack*, in 1684 is one of the best known. It combined prophecies with dates and was a precursor of Old Moore, which still has a huge clientèle. Salmon made much money, formed a large library, was the possessor of two microscopes, several mathematical instruments and many curiosities which he had gathered in his travels. Of his three thousand volumes many were works on physic and surgery printed in the seventeenth century, rare copies of the classics, many Bibles, a very complete library of contemporary medicine and a good proportion of works on mathematics, theology, botany and alchemy. He became involved in a religious quarrel about 1700 when he was a prominent member of the "New Religious Fraternity of Free-thinkers," a body which met near Leathersellers Hall, in London, which is built upon the crypt of St. Helen's Priory in Bishopsgate

Street. His books were sold by auction at St. Paul's Coffee House on November 16, 1713, so that he probably died in that year.

His wife carried on what was probably the first wax work show in London, at the beginning of Queen Anne's reign. It was held at the Turkish Seraglio in St. Martin's near Aldersgate Street where is now the General Post Office. She combined the art of modelling wax figures with that of making glass-eyes and states in her bills that,

> She takes likenesses of Gentlemen and Ladies and has on view the Temple of Ephesus, of Apollo, the Vision of Augustus and the Six Sibyls, moving figures. Also an old woman flying from Time who shakes his head and hourglass with sorrow at seeing age so unwilling to die. Nothing but life can exceed the motions of the heads, hands and eyes of these figures.

BIBLIOGRAPHY

I have traced the following English versions of Aristotle's "Masterpiece" and would thank Dr. E. B. Krumbhaar of Philadelphia for allowing me to see the copies in his possession.

1684 Pp. 190. Frontispiece is a hairy woman looking right, wearing a cap, and a black boy. Six engravings of monsters with descriptions. Frontispiece repeated at end of book.
Library of the Royal College of Surgeons of England.

1694 Pp. 154. Frontispiece is a hairy woman looking left, with hair hanging down, no cap.
Library of British Museum.

1720 Aristotle's Masterpiece. Pp. 168. On reverse of title page a rough woodcut in two compartments. Man seated at table, wearing a ruff and cap; woman with wimple. Hebrew characters above.
Professor Krumbhaar, Philadelphia.

1731 Aristotle's Compleat Masterpiece, in three parts. The eighteenth edition. 12mo. Pp. 144. No frontispiece or woodcuts.
Prof. E. B. Krumbhaar, Philadelphia.

1751 Aristotle's Compleat Masterpiece. Pp. 152. Frontispiece of astrologer with a hairy woman and a black boy.
D'Arcy Power.

1766 Aristotle's Masterpiece Improved. Pp. 156. Frontispiece of a hairy woman and a black boy. On verso is an astrologer's study; astrologer in ruff and cap. Engraving at end of page 156. Labourer with pickaxe, beetle, and basket in an oval bearing the legend, "Thou shalt labor until thou return to dust."
Professor E. B. Krumbhaar.

1775 Aristotle's Complete Masterpiece. 29th edition.

1782 Aristotle's Masterpiece. Pp. 144. Printed in Glasgow. Frontispiece is a hairy woman and black boy.
D'Arcy Power.

1793 Aristotle's Masterpiece. Pp. 130. New York.
Surgeon-General's Library, Washington.

1796 Aristotle's Masterpiece. A new edition. Pp. iv + 411.
Surgeon-General's Library, Washington.

1799 Aristotle's Masterpiece. A new edition. Pp. 100. Philadelphia.
Surgeon-General's Library, Washington.

1812(?) The Masterpiece of Aristotle. Pp. 144. Frontispiece

of a hairy woman and black boy; woman with coif and looking right.

Library of British Museum.

1812 The Works of Aristotle in Four Parts. An enlarged edition. 12mo. London, 1812. Pp. 360. Frontispiece of an astrologer and a naked woman and child; below are four lines from Milton.

D'Arcy Power.

1815 The Works of Aristotle. 2d edition. Pp. 360. Frontispiece of an astrologer and a naked woman with infant behind her; below are four lines from "Paradise Lost."

D'Arcy Power.

1817 Aristotle's Masterpiece. New York.

1821 The Works of Aristotle. Pp. 310 + 1. Frontispiece is a naked woman with draped veil in an astrologer's cave. Plate signed, "Drawn by Read," "Engraved by Park." Published October 31, 1821.

Prof. E. B. Krumbhaar and Library of the Royal College of Surgeons.

1830. The Works of Aristotle. Pp. 214 + 1. Frontispiece is a naked man and woman in astrologer's room.

Prof. E. B. Krumbhaar.

1830 Aristotle's Master-Piece. Pp. 142. Frontispiece is three-quarter length of bearded man with hand on skull.

Prof. E. B. Krumbhaar.

1840 (circa) The Works of Aristotle. Pp. 137. Coloured frontispiece of naked woman with scarf in an astrologer's room. Whole page plate of man, woman and child at page 48. Naked woman holding celestial globe in oval, with signs of Zodiac at page 64.

Prof. E. B. Krumbhaar.

1850 (circa) The Works of Aristotle. Pp. 352. Frontispiece is bearded man writing at a table, with woman in a coan garment.

Library of British Museum.

1857 The Works of Aristotle. Pp. 320. Frontispiece is a good steel engraving of Aristotle from a classic monument.

Library of the British Museum.

1860 (circa) Aristotle's Works. Pp. 352. Frontispiece is a man with a peaked beard, writing in study; woman in a coan garment. Section on venereal diseases.

Prof. E. B. Krumbhaar.

1883 Aristotle's Masterpiece. Pp. 142.

Library of the Surgeon-General, Washington.

1922 (circa) The Works of Aristotle. 8vo. Pp. 270. Frontispiece is a naked woman in a forest.

Prof. E. B. Krumbhaar.

1930 The Works of Aristotle. Pp. 512. Frontispiece is an astrologer revealing a partially draped woman.

The Welch Medical Library, Baltimore.

ARISTOTLE'S COMPLETE MIDWIFE

1700 Aristotle's Compleat and Experienced Midwife made English by W—— S——, M.D. 3d edition. Pp. 168. Frontispiece shows a lying-in chamber, and six women attendants with high-combed hair. Plate signed, "John Drapentier, Sculp."

Library of the British Museum.

1718 A reprint of the 1700 edition with worn plate at frontispiece.

Library of the British Museum.

1749(?) Aristotle's Compleat and Experienced Midwife.

16mo. Pp. 156 + 2. Folding plate of a lying-in chamber with a four-post bed at page 44. 9th edition.

D'Arcy Power.

17— Aristotle's Compleat and Experienced Midwife. 10th edition. Made English by W—— S——. Pp. iv + 156.

Library of the Surgeon-General, Washington.

ARISTOTLE'S LAST LEGACY

1690 (circa) Aristotle's Legacy or his Golden Cabinet of Secrets. Translated into English by Dr. Borman, Student in Astrology. Pp. 24. Printed by J. Blare at the Looking-Glass on London Bridge.

Library of the British Museum.

1700 (circa) Aristotle's Legacy or his Golden Cabinet of Secrets. Translated into English by Dr. Solomon, Student in Astrology. Printed for J. Blare at the Looking-Glass on London Bridge. Pp. 92. Woodcut of Aristotle in an oval frame with verses below.

Library of the British Museum.

1711 Aristotle's Last Legacy. Translated into English by Dr. Saman, Student in Astrology. Pp. 162 + 4. With advertisements.

Library of the British Museum.

1720(?) Aristotle's Last Legacy. Pp. 156. No advertisements.

Library of the British Museum.

1749 Aristotle's Last Legacy. Pp. 113. Frontispiece is an astrologer seated with celestial globe in front of him; framed skeleton and scythe on left; books arranged on shelves behind.

D'Arcy Power.

1769 Aristotle's Last Legacy.

1773 Aristotle's Last Legacy.

1790 (circ) Aristotle's Legacy. Translated by Dr. Boreham, Astrologer, Newcastle. Pp. 24. Woodcut of a man divining by cards with the devil behind him in the shape of a woman with horn.

Library of the British Museum.

ARISTOTLE'S PROBLEMS

1583 Aristoteles: Problemata ac Philosophorum Medicorumque complurium, etc. Londonii. The Impress is Geo. Bishop, 1583. 16 mo. Pp. 189.

Royal Society of Medicine, London.

1749 Aristotle's Book of Problems. Pp. 152. Frontispiece, Apollo driving sun chariot, and below an astrologer with triple cross.

Library of the British Museum.

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Sans Tache

Sans Tache

IN THE "elder days of art" each artist or craftsman enjoyed the privilege of independent creation. He carried through a process of manufacture from beginning to end. The scribe of the days before the printing press was such a craftsman. So was the printer in the days before the machine process. He stood or fell, as a craftsman, by the merit or demerit of his finished product.

Modern machine production has added much to the worker's productivity and to his material welfare; but it has deprived him of the old creative distinctiveness. His work is merged in the work of the team, and lost sight of as something representing him and his personality.

Many hands and minds contribute to the manufacture of a book, in this day of specialization. There are seven distinct major processes in the making of a book: The type must first be set; by the monotype method, there are two processes, the "keyboarding" of the MS and the casting of the type from the perforated paper rolls thus produced. Formulas and other intricate work must be hand-set; then the whole brought together ("composed") in its true order, made into pages and forms. The results must be checked by proof reading at each stage. Then comes the "make-ready" and press-run and finally the binding into volumes.

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The motto of the Waverly Press is *Sans Tache.* Our ideal is to manufacture books *"without blemish"*—worthy books, worthily printed, with worthy typography—books to which we shall be proud to attach our imprint, made by craftsmen who are willing to accept open responsibility for their work, and who are entitled to credit for creditable performance.

The printing craftsman of today is quite as much a craftsman as his predecessor. There is quite as much discrimination between poor work and good. We are of the opinion that the individuality of the worker should not be wholly lost. The members of our staff who have contributed their skill of hand and brain to this volume are:

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Press: Robert Gallagher, Raymond Gallagher, Henry Hager.