

**On the life of William Hunter : the Harveian address, 13th April 1876 / by J. Matthews Duncan.**

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William Hunter.



[*With the Author's Compliments.*]

ON THE  
LIFE OF WILLIAM HUNTER:

THE  
HARVEIAN ADDRESS,

13TH APRIL 1876.

BY  
J. MATTHEWS DUNCAN, M.D., L.L.D.

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## ON THE LIFE OF WILLIAM HUNTER.<sup>1</sup>

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THE chief object of this annual meeting of medical practitioners, on the birthday of the immortal Harvey, is, by doing homage to the Prince of Physiologists, to testify our admiration and gratitude. We admire him as a scientific hero, whose name is indelibly engraved on the discovery of the circulation of the blood, and on embryological research. We are grateful to him, as being, in consequence of his grand discovery, by far the greatest improver of the noble art of medicine that has ever existed.

For us, medical practitioners, there is, as universal experience teaches, no guide so useful as the example of a great and good man who has passed before us; no incentive to high endeavours more powerful than applause or hope of fame. By celebrating the memory of Harvey we offer a guarantee to his followers, however great or however humble, that they also shall have their due place in the medical roll of glory.

In the London College of Physicians, to which Harvey belonged, an annual commemorative service is held in his honour, as is our custom also here. But between the practice of the two places there is this important difference; that, whereas with us each orator selects for the subject of his discourse any fitting matter—in fact, almost always, and most fortunately and appropriately, fixing on some great and famous physician or surgeon—the London orator repeats annually the praises of their great departed fellow and benefactor. It would be difficult to speak in too high terms of these

<sup>1</sup> The portrait is a photo-lithograph by Waterston and Son, from an engraving lent me by Dr Tuke. The autograph is an addition made by the lithographer from a class certificate. Through Sir W. Stirling-Maxwell, Mr George Waterston, jun., has ascertained that the original of this engraving is in the Print-room of the British Museum, the oval being enclosed in a broad border, not given in the reproduction from which the lithograph is taken. The inscription on the original is—“William Hunter, M.D.—J. Thornthwaite del. et sculp. 1780. Published as the Act directs, Feb. 20, 1780, by J. Thornthwaite, No. 390 Oxford Street.” A medallion portrait is in existence, as well as several engravings, and two oil-paintings by Reynolds, who, as well as Hogarth, was his friend.



repeated eulogies; and for this very reason is the annual task more onerous, and the merit of the achievement enhanced. The name of Harvey is admirably adapted for these yearly celebrations; and it may be doubted whether there be in the annals of medicine, from Hippocrates to our day inclusive, any other that would fill the great place. Certainly there is none that has nearly equal title to such high consideration.

Your annual President, having wide scope of selection, experiences no difficulty in choosing from our copious and glorious medical ancestry, some one who presents admirable traits for pointing his moral and adorning his tale, some one whose special pursuits even may have been so like his own as to render his essay to address you a pleasant and congenial work.

I have fixed upon William Hunter; and, in the short time laid apart by you for this address, I shall occupy myself chiefly with matters and reflections such as may be truly said merely to go the length of fully justifying my choice. I shall dwell on the history of his life, on the nature and aim of his activity, and on its enduring products.

Before commencing, I may be permitted a digression, in order to show what William Hunter thought of Harvey; and this cannot be done without elucidating some special points in Hunter's character.

You will be astonished when I tell you on this occasion that, solemnly addressing his anatomical class, he made the following remarks in an introductory lecture:—"In merit, Harvey's rank must be very low indeed. So much had been discovered by others, that little more was left for him to do than to dress it up into a system; and that, every judge in such matters will allow, required no extraordinary talents. Yet, easy as it was, it made him immortal. But none of his writings show him to have been a man of uncommon abilities. It were easy to quote many passages which bring him nearly to a level with the rest of mankind. He lived almost thirty years after Asellius published the Lacteals, yet, to the last, seemed most inclined to think that no such vessels existed. Thirty hours at any time should have been sufficient to remove all his doubts. But this subject," he adds, "taken up in self-defence, grows unpleasant."

Such are the words of Hunter, and in order to avoid interference with his meaning, the whole paragraph is here quoted. I may at once say that they are, in my opinion, ungenerous and unjust. They are the result of a certain combativeness in my hero which led him, on this as on other occasions, to express his meaning imperfectly, in order to give greater force to his criticism. Hunter appreciated Harvey most justly and most highly, and he knew well, as his writings show, how much preparation is made previously by others for a crowning discovery, and how easy a matter the discovery seems to the ingenuous onlooker to have been—after it is made. How much did Kepler and others do for Newton? how much Mayer and others for Joule? William Hunter was frequently



in controversy, frequently in self-defence. If we believe his testimony, all great anatomists have had great quarrels, and in the introductory lecture to his anatomical prelections, from which I have quoted, he is defending his views as to Harvey. The only proper course for him was to drop out of his lecture the offending and unjust paragraph, and to have left his other evidently more careful statements as they stood. "The authors," says Hunter, "of the three great discoveries in later times, and all the circumstances, are well known; I mean, the discovery of the western hemisphere by Columbus; of the true solar system by Copernicus; and of the circulation by Harvey. All these three men have equally acquired immortality; but they have not had, nor deserved, an equal degree of honour and credit." Harvey's discovery, he says, "was by far the most important step that has been made in the knowledge of animal bodies, in any age." Elsewhere he says,—“Dr Harvey, as appears by his writings, was certainly a first-rate genius for sagacity and application: and his name is deservedly immortal, on account of the many observations and improvements he made in Anatomy and Physiology.” Having given these extracts, I pass to the more immediate subject of my address, feeling confident I have satisfied you that, had William Hunter lived among us, he would have been a good Harveian<sup>1</sup> and a promoter of our festival in honour of the great discoverer, to whom he had, in paramount respects, a strong resemblance as a philosopher and as an investigator.

It has been often remarked that persons of dissimilar character, who have similar aims, live together more amicably than persons of nearly the same character; and this is well illustrated in the life-long friendship of Cullen and William Hunter. At first, and for only a short time, conjoined in a sort of nascent partnership in practice at Hamilton, they were ever afterwards attached friends; and many letters of Cullen's to his "dear Willie," as he calls him, have been published. These two men form admirable illustrations of the two widely separated intellectual classes of great medical men. To the one class belong Hippocrates and Galen, and Sydenham and Cullen: they may be called the philosophers, those who exaggerate the powers and applicability of mere Reason; and they flourish still among us. The other class has a history beginning in Northern Italy at the revival of learning. "It was at this happy time," says William Hunter, "that Malpighi came forth, the great period for the study of all natural things. At this time the Academy del Cimento arose in Italy, the Royal Society in London, and the Royal Academy in Paris. And from that time, the important doctrine of rejecting all hypotheses, or general knowledge, till a sufficient number of facts shall have been ascertained, by careful observation and judicious experiments, has been every day growing into more credit. That doctrine was the source of

<sup>1</sup> As further evidence, a class certificate of W. Hunter's was exhibited. It is of large size, and more than half of it is occupied by an engraved bust-portrait of Harvey.



Sir Isaac Newton's, and of all the improvements which have been made since the middle of the seventeenth century." This is the doctrine of the second great intellectual class of physicians, and to it belong Harvey, Morgagni, William Hunter, John Hunter, Laennec, and Charles Bell; those who give mere Reason its due subsidiary place, yet full scope. At one time the hostility between these classes was avowed, and strenuous efforts were made to smother the modern school of observation and experiment. In some of the great universities, graduates were required to swear to defend the doctrines of Hippocrates, Aristotle, and Galen, and not to permit their conclusions to be gainsayed by any person. This hostility is no longer avowed; and fortunately such a spirit of freedom prevails in scientific circles that its avowal would be certain to raise for it and its cause a legion of enemies, not of friends; but one can perceive the evident spirit of the two camps still everywhere prevalent, and no better example of it could be given than the quarrel between Broussais and Laennec. The great Cullen was of the philosophical school. His name is perhaps the greatest in it in recent times, and I shall here give only one note of this kind, by remarking that a great philosopher, favourably reviewing his works, points out that he probably did not add a single new fact to medical science.<sup>1</sup> William Hunter was of the opposite, or at least of a different kind. He was of the scientific, not of the philosophical class. Cullen's contributions to medicine, valuable though they are, might be dispensed with. The progress of medicine would be little disturbed by their loss. It is quite otherwise with William Hunter's. Without his contributions, as without Harvey's, progress is impossible. The honoured graves of Hippocrates and Cullen and their truly valuable works may be lost even to memory without very grievous results. The works of Harvey and of William Hunter and of this kind are indispensably necessary for progress. They cannot be forgotten, far less lost. Medical practice must wait till they are produced before it can make a real step in advance. Ingenious medical theories are extremely useful, but they do little for the advancement of medicine: often they retard it. The search for specifics or cures, and such pseudo-philosophical pursuits, have been continued for a thousand years, and as yet not one specific has been discovered. Of the spirit of William Hunter I shall give you illustrations from his own words, and if you read them in the light of the progress of medicine since his day, you will observe how true he was, not only as an apostle of scientific progress, but also as a prophet. "Were I to guess," says he, "at the most probable future improvements in physic, I should say that they would arise from a more general and more accurate examination of diseases after death. And were I to place a man of proper talents in the most direct road for becoming truly great in his profession, I would choose a good practical Anatomist, and put him into a large hospital to attend

<sup>1</sup> See Sir W. Hamilton's "Discussions on Philosophy," etc.



the sick, and dissect the dead." In another place he remarks as follows,—“In our branch (Anatomy), those teachers who take but little pains to demonstrate the parts of the body with precision and clearness, but study to captivate young minds with ingenious speculation, will not bear a reputation that will outlive them half a century. When they cease from their labours, their labours are buried along with them. There never was a man, perhaps, more followed and admired in Physiology than Boerhaave. I remember the veneration he was held in; and now, in the space of forty years, his Physiology is—it shocks me to think in what a light it appears.” Still another extract to show his notion of how physic is to progress. “Anatomy is the art,” says he, “of examining animal bodies by dissection. It teaches the structure and functions of those bodies, and shows nearly on what life and health depend. When these are well understood, a great step is made towards the knowledge and cure of diseases.” Speaking of his researches on the anatomy of pregnancy, he truly asserts that they are of the utmost consequence “in explaining the phenomena of births and abortions, as well as in regulating our practice.” “The more,” he says, “we know of our fabrick, the more reason we have to believe, that if our senses were more acute, and our judgment more enlarged, we should be able to trace many springs of life which are now hidden from us; by the same sagacity we should discover the true causes and nature of diseases; and thereby be enabled to restore the health of many, who are now, from our more confined knowledge, said to labour under incurable disorders. By such an intimate acquaintance with the economy of our bodies, we should discover even the seeds of diseases; and destroy them, before they had taken root in the constitution.”

Pursuing the same subject, Mr Babington remarks that,—“When at the close of the fifteenth century, medicine, in common with the other sciences, experienced a revival, it was the cultivation of anatomy, and not any closer attention to the symptoms of disease, which restored it to life. Vesalius was undoubtedly considered by his contemporaries as wasting, in the gratification of an idle curiosity, energies which would have been more usefully employed in the study of disease. Yet, while those who held this language are forgotten, Vesalius is justly celebrated as the founder of modern medicine. He first laid a solid foundation, on which the science has been erected by others. When, a century later, Harvey drew from anatomical and physiological investigations the discovery of the circulation, it is recorded that his fame as a physician was injured, because his talents were supposed to be devoted to pursuits foreign to the science of medicine. Yet this physiological discovery is now universally confessed to have first introduced the true knowledge of disease, and the true principles of treatment. In the same manner John Hunter was considered by the majority of his contemporaries as a theorist; as one who was rather a physiologist than a surgeon, and whose pursuits had little connexion with



the practical improvement of his profession. Yet the works of the greatest surgeons of the day—of Cheselden, of Sharpe, or of Pott—were trivial and transient, when compared with the vast and enduring results which have proceeded from the theories of Hunter." These truths, as stated by Babington, I might illustrate by the researches and criticisms of our own day. But I avoid this tender topic, and conclude by reminding you of one item of the praise of Cullen and of John Hunter by the respected biographer of the former; namely, that Cullen did not introduce a new remedy for a disease, and Hunter did not invent a new instrument.

Although I have no intention of giving you a life of my hero, I wish to state some of the principal particulars of it. Numerous details are to be got from various sources, chiefly from a biographical account by Dr Samuel Foart Simmons, but also in Thomson's *Life of Cullen*, in Sir Benjamin Brodie's *Hunterian Oration*, in Gulliver's *Account of Hewson*, and other publications, such as the various histories of William's great brother John.

William Hunter was descended from the Hunters of Hunterston. His father had a small estate called Long Calderwood, in the parish of Kilbride, in the county of Lanark. There were ten children born to his parents. Of these William was the seventh, and John the youngest. William was born on 23d May 1718. He went to Glasgow College at fourteen years of age, and studied there five years with a view to enter the clerical profession. But his tastes did not lie this way.

In 1737, at nineteen years of age, he went to reside with Dr Cullen, who had just begun practice in Hamilton. After three happy years with this master, he resolved to go to Edinburgh and London, to prosecute medical studies, with the intention of subsequently joining Dr Cullen at Hamilton, as a partner in the business.

In 1740 he went to Edinburgh, and there he attended the lectures of Alexander Monro.

In 1741, when *æt.* 23, he went to London, and, first of all, resided with Dr Smellie, but soon entered the family of the well-known anatomist Dr James Douglas, as a medical pupil or assistant, and as preceptor to his son. He consulted his father regarding this step, and the old gentleman expressed himself as doubtful of its prudence, and wrote strongly in favour of his adhering to his intention to return to Hamilton to be Dr Cullen's partner, "where," he says, "you may be very comfortably settled and make money; and if you miss the opportunity now, you cannot be sure of it at another time."

About this time he became a surgeon's pupil at St George's Hospital, under Mr James Walker, and a dissecting pupil under Dr Frank Nicholls. This gentleman was a Reader on Anatomy, appointed by the Royal College of Surgeons. He gave his course in from thirty to forty lectures, and used two dead bodies during it.

Hunter's patron, Douglas, died in 1742, but Hunter continued to reside with the family.



In 1743, he communicated to the Royal Society a paper on the Articular Cartilages, which has been highly praised by Brodie.

In 1746, he was fairly launched in his career for life, succeeding Mr Sharpe as Lecturer on Anatomy, in an apartment in Covent Garden, to a Society of Navy Surgeons. He got seventy guineas as fees after his first introductory lecture, and, carrying the money home with pride, told his friend Mr Watson that it was a larger sum than he had ever before been master of.

In 1747, he became a Member of the Corporation of Surgeons. In the same year he went to Leyden, made the acquaintance of Albinus there, and returned home by Paris. In 1748, he was elected Surgeon Man-midwife to the Middlesex Hospital, and in 1749 to the British Lying-in Hospital. He had probably picked up some of the midwifery practice of his late master, Douglas; and his prosperity as an accoucheur was rapid and great. Fortunately for him, the two chief contemporary practitioners in this branch of medicine left the field and made an opening for him. Sir Richard Manningham died, and Dr Sandys retired. At this time he was joined in London by his "uncouth" brother John, who had probably been partly bred a cabinetmaker with his brother-in-law.

In 1750 he got the degree of M.D. from the University of Glasgow, and about the same time he began to practise as a physician<sup>1</sup> and give up surgery. He also now left Mrs Douglas's house, and went to reside in Jermyn Street. In 1751 he revisited his native place, showed particular interest in his paternal estate of Long Calderwood, gave directions for the repair of the house, and for the purchase of any lands adjoining that might come into the market. Riding within sight of the place one day with Cullen, the latter pointed it out to his companion, and remarked its conspicuousness; to which Hunter rejoined, "Well, if I live, I shall make it still more conspicuous." This was the only holiday, or the last holiday, he ever took.

In 1756, he was admitted a Fellow of the Royal College of Physicians.

About this time he had his great quarrel with Monro concerning the anatomy of the lacteals and of the testes; and some time after this dispute came another with his brother, concerning the anatomy of the placenta.

In 1759, Hewson began to assist him in his anatomical lectures, a connexion which ripened into a lecturing partnership in 1762, and which was ultimately and not quite amicably dissolved in 1770. Cruikshank succeeded Hewson. In 1762, he went to lecture in Litchfield Street, and in 1769 he went to the famous locality in Windmill Street.

In 1764, he was appointed Physician Extraordinary to the Queen.

In 1767, he was elected a Fellow of the Royal Society.

In 1768, he joined the Society of Antiquaries, and in the same

<sup>1</sup> Nowadays, we would say as an "obstetric physician" or "gynæcologist."



year was made first Professor of Anatomy in the new Royal Academy of Arts.

In 1774, appeared his great work on the Gravid Uterus, which he had begun twenty-four years previously.

In 1781, he was elected President of the Royal Academy of Arts.

William Hunter began, when about fifty-five years of age, to suffer from wandering gout. The disease gradually gained ground on him. Headache and squeamishness made him take to bed on the 15th March 1783. On the 20th, however, he rose to give his introductory lecture. At the close of it he fainted, and was carried to his bed again. He died on the 30th, aged sixty-five years.

On the 5th of April he was buried in the Rector's Vault of St James's Church, Westminster.

"His person," says Adams, "though small, was graceful; his cast of features regular and interesting; his voice musical; his manners attentive and flattering.<sup>1</sup> In short, Dr Hunter was a polite scholar, an accomplished gentleman, a complete anatomist, and probably the most perfect demonstrator, as well as lecturer, the world had ever seen." He was never married. His brother John's son and daughter died without issue, but the family is not extinct even in this branch; for there is at present in Scotland one medical man belonging to it, its sole medical representative. This is William Hunter, the present eminent practitioner in Rothesay, the great-great-grandson of Archibald, the only paternal uncle of Hunter, or whose great-grandfather was the cousin-german of the Hunters.

The estate of Long Calderwood is, I am told, now possessed by William Hunter Baillie, the son of the eminent Matthew Baillie, who was the son of the great Hunter's sister. Through this sister's marriage and descendants the Hunters became further connected with the well-known London medical names of Croft, Denman, and Brodie.

William Hunter's museum is said to have cost him £100,000, and he bequeathed a sum of £8000 to maintain it. His collection of coins cost him £20,000, and an illustrated work descriptive of it has been published by Mr Combe. He purchased for large sums the museums and literary collections of Sandys, of Fothergill, and of Hewson. The Rev. Dr Harwood describes his classical library as "the most magnificent treasure of Greek and Latin books that has been accumulated by any person now living, since the days of Mead."

William Hunter is generally known in the profession as a great obstetrician. This he no doubt was; certainly one of the very greatest that has ever flourished in this country or in any other. He taught midwifery,<sup>2</sup> and MS. notes of his excellent lectures are to be found in many libraries; and in that of our College of

<sup>1</sup> There were exhibited a mask of Hunter's face taken after death; two portraits; his armorial bearings; and a class certificate bearing his autograph.

<sup>2</sup> Probably his special courses of lectures on midwifery were like Smellie's: twenty-eight different courses in twelve months, with from three to five pupils attending each. See the introduction to Smellie's works.



Physicians, there are two distinct and pretty complete volumes of such notes. His celebrity as a teacher of this branch was and is very great, but we know little of his lectures with sufficient authenticity. He published none of them, except those on obstetrical anatomy, and these partially only. His views, and even his words, are frequently quoted, and in my opinion without due caution; for none of us who are teachers would confide the accurate statement of our sayings to tradition through the pens of students. There can be no doubt, however, that he is justly classed by historians with Bœer and with his connexion Denman, who revolted against the polypharmacy and otherwise meddling practice of the physicians of the day. He knew more of nature and of its powers, and revered it and trusted to it more than his contemporaries; he is indeed generally credited with teaching his class that the forceps had been a curse rather than a blessing to lying-in women, had done more harm than good. He wrote a few obstetrical papers of no great importance, and he published his grand work on Obstetrical Anatomy, of which I must speak again at length. It is this work that keeps his name constantly before the profession as a founder of the science of obstetrics. Yet, after all, the strength of his literary, scientific, and teaching power was not given to midwifery.

William Hunter was a great practitioner of midwifery. When he left Hamilton and his master Cullen to improve himself by a visit to London, he probably left behind him a country midwifery practice. In London he is said to have resided first with Smellie, a Scotchman from Lanark, recently settled there, an enthusiast in the science and practice of midwifery, a genius of obstetrics, whose works are even now recognised to have such value as to demand republication at the hands of the New Sydenham Society, which has secured for the congenial service of editor the great Dublin accoucheur Dr M'Clintock, a gentleman who is known to be also engaged in writing his biography. It must be surely in Smellie's house that William Hunter received the bias to midwifery practice that he afterwards showed. Smellie never had a fashionable connexion, and in this respect Hunter far surpassed him, being not only fashionable, but enjoying the distinction of accoucheur to the Queen of the reigning Sovereign, a sufficient passport everywhere to distinguished and lucrative employment. It has been often said that there was ill feeling or jealousy between the two Scotchmen; but while there is not sufficient or indeed any good proof of this, it is very remarkable that we find little evidence of any kind to show that they had even frequent intercourse one with another.<sup>1</sup>

This conjunction of obstetrical practice with anatomical teaching and study, is well worthy of consideration;<sup>2</sup> and, did time permit,

<sup>1</sup> That they met, and, at least once, held consultation we learn from Smellie's works. See *Collection* xx. No. ii., Case 1; also *Collection* xxxvi. Case 4.

<sup>2</sup> The great Harvey also conjoined the teaching of anatomy and the practice of midwifery.



would suggest many reflections arising from the circumstance that it would not be tolerated in our time.

We know, then, that William Hunter was a fashionable practitioner and a great author in obstetrics; that as a practitioner his methods were simple, and characterized by great reliance on nature; that, as an author, his chief obstetrical work was anatomical. William Hunter, however, did not give his great and sustained powers to midwifery, but to anatomy. His abilities, his zeal, his great fortune, were devoted to this. To use his own phrase, he made a great figure in anatomy. We know from his own mouth that it was as an anatomist that he claimed eminence and expected fame; and although his reputation has latterly become too exclusively obstetrical, it has not even in this respect been too highly exalted. Yet it is necessary, with a view to justice, to point out that his obstetrical fame is chiefly anatomical, and that his greatest claim on our admiration and gratitude arises from his anatomical work and influence.

William Hunter may, indeed, be said to be in many respects the founder of the modern London School of Medicine as a good place of education. There were, indeed, teachers before him, as his respected master, James Douglas, another Scotchman, in whose family he resided in his early days, whose children he had charge of as tutor, of whom he speaks with affection, and whom he assisted in a projected work of plates of the bones. But William Hunter first gave a systematic, complete, illustrated course. "Some people," says he, "thought even my former courses too long. Why? They had been used to see a course of anatomy finished in thirty or forty lectures, and therefore imagined that when it took up four months it must be unnecessarily minute or prolix." . . . "It has been objected, likewise, that a lecture of two hours' continuance is too much: the attention must flag, and the memory cannot carry the substance of it away. My answer," says he, "to this is, that if there be useful business enough for two hours a day through the proper season, so much time nearly must be given up to each lecture, otherwise a number of material things must be omitted. And," he adds, "there is enough of useful matter."

William Hunter was Professor of Anatomy in the Royal Academy. His enthusiasm as an anatomist knew no bounds. Anatomy was the passion of his life; and it was strong in death, for while just dying he expressed a wish that he could once more return to his anatomical theatre, to realize the happiness he had enjoyed there. "I wish now," said the dying man, "that I had but strength to bear being carried into my theatre, that I might tell my pupils how much comfort and happiness I feel." "Anatomy is," he says, "the only solid foundation of medicine. It is to the physician and surgeon what geometry is to the astronomer. It discovers and ascertains truth, overturns superstition and vulgar



error, and checks the enthusiasm of theorists and of sects in medicine, to whom perhaps more of the human species have fallen a sacrifice than to the sword itself, or to pestilence." Speaking of the improvement of anatomical teaching in London, he said it was "owing to one," meaning himself, "who, with very moderate abilities, happened to have an uncommon love for the study, and who therefore took uncommon pains both to inform himself and inform others. Hence it is that London has been for some years one of the best schools for anatomy; and hence the London teacher is become possessed of a collection both of preparations and books inferior perhaps to none in Europe. He wishes to teach anatomy to the best advantage of his pupils while he enjoys life and health, and to perpetuate the spirit for anatomy in this country as far as human institutions can receive perpetuity." Latterly he lectured for six months in winter, and declined lucrative employment, to give him more time for his teaching, thinking "he could do infinitely more good to the public by teaching his art than by practising it." This noble and enlightened zeal led him to spend, it is said, about £100,000 on his museum; and at the close of his life he made a vain attempt to secure the royal patronage and assistance for his plan of founding an anatomical school or school of medicine at his own expense, offering to lay out £7000 from his own pocket, and intending to give in addition his museum and labour.

But good-will and zeal and liberality are not sufficient to complete William Hunter's title to fame as an anatomist. Let us, then, consider what there is of a more substantial kind to found this upon.

What were the great things that William Hunter effected during his life which make him much more noteworthy than most other medical men of his day? There are great things done in medicine which are not, at least not easily, shown to have any special connexion with the time at which they were made known; neither demanded by the time, nor the natural product of the time. They appear suddenly, abruptly, and remain isolated in science. Of such are the introduction of vaccination and of artificial anæsthesia. Other great things are done in medicine which are not indeed called for by the time of their appearance, but which are in many senses its product, and which have great influence. Of such are the great philosophical or speculative systems. The great Cullen's chief work was in this class. But the greatest thing in medicine is that scientific work which, like Newton's in physics, may in many senses be said to be demanded by the time and to be the product of the time. Of such was the discovery of Harvey. William Hunter's work was in this category. His was the great mind which saw what was most wanted in medicine, what was demanded, what the time was ready to produce if properly urged by a fitting genius.

When William Hunter settled in London, medicine, and espe-



cially medical education, was in a wretchedly imperfect condition, not flourishing. The education of a student consisted of an apprenticeship, a course of lectures on anatomy, and a few months of walking an hospital. The course of lectures varied from twenty-three to thirty, or perhaps forty, prelections of an hour each. The number of bodies used in dissection was, in a course which Hunter attended, only two. This scanty supply was eked out by using dogs for some of the demonstrations. Students never, or rarely, dissected parts, as at present. It is difficult for us now to conceive the importance of the course of anatomical lectures. It was all that most students had, on not anatomy merely, but physiology, medicine, surgery, and midwifery. William Hunter at this juncture devoted himself to teaching with all his powers, stimulated by all his heart. He expanded the course to four months, giving daily (and not omitting Saturdays) a two hours' lecture, forming thus a course much surpassing our longest courses at present. He founded the Windmill Street School. He was an excellent lecturer, and we have ample testimony that he carried out his purpose expressed in his own words, as follows:—"I . . . shall never aim at showing what I know, but labour to show, and describe as clearly as possible, what the students ought to know. This plan rejects all declamation, all parade, all wrangling, all subtlety. To make a show, and to appear learned and ingenious in natural knowledge, may flatter vanity; to know facts, to separate them from suppositions, to range and connect them, to make them plain to ordinary capacities, and, above all, to point out the useful applications, is, in my opinion, much more laudable, and shall be the object of my ambition." His course was copiously illustrated by preparations. He advised his students to take notes, not during a first, but during a second course. He recommended them to spend time in the practical rooms during the first year, but not to dissect till the second year of study.

I have not time to enter on the large subject of preparations, as they are called, and it is not necessary, for all the world knows and acknowledges what our hero and his brother John did in this way. They may almost be said to have commenced the era of great medical museums. William Hunter's own collection, including those of Sandys and of Hewson, is now in the University of Glasgow, having been taken there in 1807, after having been long used by Baillie, his nephew and successor. The collection formed by Wilson and Sir C. Bell, to fill the place of William Hunter's, removed from Windmill Street, is, with numerous additions, the museum of our College of Surgeons. The immense collection of John Hunter is, as is well known, the chief part of the great museum of the College of Surgeons of England. "I have collected," says William Hunter, "such an anatomical apparatus as was never brought together in any age or country."

The scientific progress in anatomy and physiology directly



effected by William Hunter was very considerable. He contributed to the Transactions of the Royal Society, and to the "Medical Observations and Inquiries," at least twenty papers, of which the following is a list, for the compilation of which I am indebted to Dr Underhill:—

1743. On the Structure and Diseases of the Articulating Cartilages. (Philosph. Trans., vol. xlii. p. 514.)
1756. The History of an Aneurysm of the Aorta, with some Remarks on Aneurysms in general. (Medical Observations and Inquiries, by a Society of Physicians in London, vol. i. p. 323.)
1757. The History of an Emphysema. (Ibid., vol. ii. p. 17.)
1757. Remarks on the Cellular Membrane and some of its Diseases. (Ibid., vol. ii. p. 26.)
1761. An Account of a Diseased Tibia. (Ibid., vol. ii. p. 303.)
1761. Remarks on the Symphysis of the Ossa Pubis. (Ibid., vol. ii. p. 333.)
1761. Further Observations on a particular Species of Aneurysms. (Ibid., vol. ii. p. 390.)
1768. Observations on the Bones, commonly supposed to be Elephants' Bones, which have been found near the River Ohio, in America. (Philosph. Trans., vol. lviii. p. 54.)
1770. Remarks on some Bones found in the Rock of Gibraltar, in a Letter to Dr Maty, Sec. Roy. Soc. (Ibid., vol. lx. p. 414.)
1770. Introduction to a Paper on the Insensibility of Tendons, by Mr John Teckel, Surgeon. (Med. Observations, etc., vol. iv. p. 343.)
1770. Postscript to an Account of a Case of Varicose Aneurysm, by Mr Thomas Armiger. (Ibid., vol. iv. p. 385.)
1770. Appendix to a History of a Fatal Retroversio of the Uterus and Rupture of the Bladder in Pregnancy. (Ibid., vol. iv. p. 400.)
1771. An Account of the Nyl-Ghau, an Indian Animal not hitherto described. (Phil. Trans., vol. lxi. p. 170.)
- 1774 (or '5). Essay on the Origin of the Venereal Disease. (Read at Roy. Soc. Never published. See Life by Simmons.)
1776. Summary Remarks on the Retroverted Uterus. (Medical Observations, etc., vol. v. p. 388.)
1777. A Short Account of Dr Maty's Illness, and the Appearances in the Dead Body, which was examined on 3d July 1776, the day after his decease, by Dr Hunter and Mr Henry Watson. (Phil. Trans., vol. lxxvii. p. 608.)
1778. Reflections on the Section of the Symphysis Pubis. (Read before Roy. Coll. of Phys., and then published. See Life by Simmons.)
1780. Letter to Royal Society in Answer to John Hunter, claiming the Discovery of the Anatomy of the Placenta. (Unpublished. See Life by Simmons.)
1783. On the Uncertainty of the Signs of Murder in the Case of Bastard Children. (Posthumous. Med. Observ., vol. vi. p. 266.)
1783. Three Cases of Malconformation of the Heart. (Posthumous. Med. Observ., vol. vi. p. 291.)
1783. The Successful Cure of a Severe Disorder of the Stomach by Milk taken in Small Quantities at once. (Med. Observ., vol. vi. p. 310.)

Besides these papers, he published a volume, and subsequent supplement, of "Medical Commentaries," and projected a series of such, but never produced a second. His discoveries regarding the lymphatic system, its distribution and uses, he believed to be the greatest, "both in physiology and in pathology, that anatomy has suggested, since the discovery of the circulation." This great work, he says, he completed with the assistance of his brother



John, of Hewson, and of Cruikshank. He counted also among his great works the description of the varicose aneurism, and of the retroverted uterus, with methods of treatment. His successor in Windmill Street, and I believe also his relative through Denman, the late Sir Benjamin C. Brodie, signalizes his early work on the synovial membrane as anticipating all that Bichat wrote on the subject sixty years afterwards; and he mentions his paper on the uncertainty of the signs of murder in the case of bastard children as a remarkable display of intellectual penetration, great good sense, and power of argument. After his death, his nephew Baillie brought out a volume, consisting of two lectures introductory to his last course of anatomical lectures at his theatre in Windmill Street, as they were left corrected for the press by himself; to which are added some papers relating to his plan for establishing a museum in London. Baillie also brought out a little imperfect volume on the anatomy of the gravid uterus, which had been probably intended as a descriptive text for the plates.

The greatest of his works is his well-known Plates of the Gravid Uterus; so well known, indeed, that I shall say little about it. Upon this he lavished his mind and his purse, and it embodies his great discoveries as to what he termed the decidua, and as to the structure of the placenta, and regarding the retroverted uterus. "They make," says he in a letter to Cullen, "thirty-four large plates. It will be a very considerable work for expense and show. Perhaps it will be the most considerable in that way that will ever be published, so few men can have the same opportunities or better than I have had. After that, if I am in health, I shall publish many other things. I only want time, and in less than two years I hope to be doing *only a little* business." In another place he expresses his obligation to Mr Strange, "for having by his hand secured a sort of immortality to two of the plates." I could give much more evidence, were it necessary, to show how he availed himself of the highest talents to be reached in Europe, in order to secure perfection in this book, and his attention ranged over all the departments, from dissecting to drawing, engraving, printing, and paper. The excellence of Hunter's Latinity has often been remarked. The work is indeed, as yet, an unrivalled performance.<sup>1</sup>

I have already spoken of William Hunter's museum and preparations as among his anatomical works, and I might have enlarged upon other improvements in anatomical apparatus and method which he introduced or modified, especially the art of injecting. But I am myself too little acquainted with these practical details to do them any justice. I cannot, however, pass on without asking attention to the great progress of anatomy and

<sup>1</sup> On this subject there ought, had time permitted, to have been much more said. The author may refer the reader to some criticism on W. Hunter's work, in his book entitled "Researches in Obstetrics," p. 222. But that criticism does not fully supply the deficiency in this part of the discourse.



physiology, which we owe partly or indirectly to William Hunter, through the instruction of assistants, the direction of their labours, and the communication to them of his own enlightened enthusiasm. William Hunter takes merit for himself in this department of activity, and, when the matter is inquired into, there can be no doubt of the justice of the claim. Among his followers or scientific descendants in the Windmill Street School, which he founded, were Matthew Baillie, James Wilson, Sir Benjamin Brodie, Sir Charles Bell, and Herbert Mayo. It is not to these we refer, but to those whom he trained and guided under his eye, John Hunter, William Hewson, William Cruikshank, and John Sheldon.

John Hunter, the youngest of his father's family, an ill-educated, rude lad, he brought to London, and set to work as an anatomical assistant, especially in making preparations. With what ultimate result all the world knows. "On the same principle," says Sir Benjamin Brodie, "on which Ulysses is made to lay claim to part of the glory belonging to the achievements of Achilles, William Hunter deserves to be honoured on account of those of his brother John—

‘Ergo opera illius mea sunt.’

He brought the uncouth Scotch lad to London, who afterwards became one of the greatest philosophers of this country, but who might otherwise have remained to be a farmer in his native county of Lanark. It was as his pupil that John Hunter pursued his earliest studies in his profession; and it was under the influence of his example that he learned to cultivate as a science what was before little more than a practical art and trade. I am inclined to believe," he adds, "that I should not at all exaggerate what we owe to John Hunter, if I were to assert that, with the exception of Sir Isaac Newton, there has been no individual, in these latter times, who has done so much as he has done towards altering and elevating the character of the peculiar sciences to which he devoted his attention." . . . "By teaching us when we are not to interfere with the ordinary course of events, he has contributed more towards the advancement of the healing art than all the inventors of remedies who had gone before him."

These last words of Brodie's evince their author's penetration and wisdom, and express very aptly the tenor of the praise which is given to William by obstetricians as it is here given to John by this distinguished surgeon.

I shall conclude this part of my eulogium on William Hunter by quoting his own words regarding his three great and famous assistants.

"My brother, Mr John Hunter, whom I bred to practical anatomy, and who worked for me, and attended my dissecting-room, and read some lectures for me many years."

"Mr Hewson, whom I first bred to anatomy, and then took into



my house to work for me, and under my direction, in practical anatomy, to attend my dissecting-room, and read some lectures as my partner, which he did for a number of years. Mr Hewson, by a continued course of observations and experiments made in this house (in Windmill Street), discovered and fully demonstrated the lymphatics and lacteals, both in birds and fishes," etc.

"Mr Cruikshank, whom I likewise bred to anatomy, and took into my house upon the same plan, with the opportunities which he has had in this place, and by being particularly attentive to the lymphatic system, at my desire, has traced the ramifications of that system in almost every part of the body; and from his dissections, figures have been made, which, with what I had before, will enable us to publish (we hope in a little time) a full account of the whole system, illustrated by accurate engravings."

To William Hunter's great success in practice, and especially as an accoucheur, I shall only briefly allude; for no amount of lucrative practice, no consideration of the exalted station of patients, can establish for their fortunate and rich possessors one tittle of claim to posthumous glory, or entitle them to be the subject of a Harveian address. In the words of Holy Writ, "They have their reward." Their pockets are full, and they have during life crowds of gaping admirers. Contemporary fame and fortune come to many a worthy and to many an unworthy man. William Hunter deserves admiration, but not as a successful practitioner in the vulgar sense. One of his highest distinctions is the use he made of success in practice. The kind of prosperity in practice which he coveted is well given in a passage of one of his introductory lectures, when directing the attention of students to the close of their lives; he says, "I am certain the most diligent, the most conscientious, and the most humane among you all, will most ardently wish that you could have done still more service to the cause of your poor distressed fellow-creatures." We know that he regarded the advance of science as the best means of promoting the healing art, and his life was devoted to this, as its whole history, and the posthumous destination of his great fortune, abundantly demonstrate. He repeatedly speaks of curtailing his practice to allow him to spend more time at higher work. I have quoted a letter from him to Cullen, where he says he trusts soon to have "only a little business." "For the future," he says in another place, "money can be of no use to me, but for acquiring and communicating science; which shall be my object as far and as long as I can pursue it." I have repeatedly heard a great and recently deceased teacher of clinical surgery in this School use words almost the same as the following of William Hunter:—  
 "A man may do infinitely more good to the public, by teaching his art, than by practising it. The good effects of the latter must centre in the advantage of the few individuals that may be under his care as patients; but the influence of a teacher extends itself to the whole nation, and descends to posterity."



These just views as to the paramount importance of science and of teaching deserve more attention than is given them, and require to be inculcated on the profession of our day quite as much as in William Hunter's time. Were we to judge, by their conduct, the teachers in some of our greatest schools, we should think practice and money-making the noblest objects of ambition, for we find it the almost invariable custom to give up the pursuit of science and the occupation of teaching as soon as the scent of fees becomes strong. A little devotion to science to get a good position as teacher. A good position as teacher to have introduction to practice. When practice begins to be lucrative, then adieu to science and to teaching also. Such was not the ambitious climax of William Hunter. And the last object of his endeavours was to secure for medicine proper teachers, and to prevent this occupation being entered upon as a stepping-stone to practice. "Without some public and permanent foundation, he foresees that anatomy, and everything that depends upon it, must sink again to its former state. It will be taught," he says, "only by young men, as an introduction to business; the name of lecturer, in newspapers, and in private conversation, never failing to give a man some degree of credit. But such young teachers will generally be very indifferently qualified when they begin; and when they have acquired some ability from experience, that is, when they are just become fit for teaching, they will generally leave it off. They will always find their labour better rewarded (in the vulgar sense of reward) by following the practice of physic or surgery, than by reading lectures."

I conclude with a few words on the comparison frequently drawn between William Hunter and his younger brother John. The generally entertained opinion is well expressed by Mr Babington as follows:—"The utility of the comprehensive system adopted by John Hunter cannot be better shown than by comparing him with his brother Dr W. Hunter. Dr W. Hunter greatly surpassed his brother John in education, in method, in clearness of conception, in powers of reasoning, in facility and elegance of expression. He was also eminent for industry, and enthusiastic in the pursuit of science. Yet he has left behind him scarcely anything to perpetuate his memory, except the work on the Gravid Uterus, which, though undoubtedly of great merit, has had no very extensive influence on the progress of knowledge, and cannot in any manner be compared with what has been effected by his brother. The one great distinction was this, that, while Dr W. Hunter confined his inquiries for the most part to human anatomy and human pathology, those of John Hunter were carried through every part of the animal creation." In this statement of contrast every element that detracts from William's merits appears to me to be much overstated, while there is the entire omission of the best and greatest features of his character. I shall therefore cite a more favourable and more just



judgment, that of the late Sir Benjamin C. Brodie:—"In making a comparison," says Sir Benjamin, "between the two Hunters, it seems difficult to avoid giving the pre-eminence to the younger brother; but that pre-eminence did not belong to him in everything. I have described what William Hunter was as a lecturer, but John Hunter did not excel in this capacity. It was not always easy to comprehend his meaning. William Hunter was a man of learning, and an accomplished writer: John Hunter had no learning, in the common acceptation of the term; he composed with difficulty, and no small effort of attention is sometimes required to enable us to comprehend his ill-arranged and involved sentences."

Perfect fairness is scarcely to be expected in these quoted contrasts, for both judgments are given in solemn panegyrics of John. To ascribe to William a superiority merely in matters of taste is no doubt a liberal meed of praise, but I believe I have in this address given sufficient evidence that the comparative merits of William are not fairly stated by claiming for John unrivalled superiority except in this respect. Ever since I began to teach medicine I have taken care to point out how the great and well-earned fame of John has cast an injurious shadow on the reputation of his elder brother. Yet I do not go the length of agreeing with one of the greatest living physiologists, who, in a recent conversation on this subject, avowed his conviction that, of the two brothers, William was the greater. In conclusion, as I have given the views of two men as expressed parenthetically in the praises of a rival, I shall give the unbiassed estimate of a well-qualified judge, Dr Thomson, the biographer of Cullen.

"Few are the individuals, indeed," says he, "of whom it can justly be said, that their labour, their example, and their actual service have conferred so great benefits upon science, and tended in a degree so remarkable to improve and facilitate the means of communicating the correct knowledge of the facts of anatomy and the principles of physiology and pathology, as William Hunter and John Hunter. It may, without exaggeration, be said that both England and Scotland owe to William Hunter, and his brother John Hunter, a debt which has never yet been repaid, and which probably is too great to be repaid. Both were, in the most true sense of that term, benefactors to the human race. Both laboured not only without public encouragement, but in the face of the greatest difficulties and the most chilling and discouraging inattention, in teaching anatomy and physiology, and the just principles of pathology, upon a foundation solid and durable. And both devoted, in the most disinterested manner, the pecuniary means which the exercise of their profession supplied, not in procuring expensive luxuries, not in acquiring large estates and erecting magnificent mansions, but in providing for subsequent generations the means of anatomical instruction upon the same solid foundations on which



they had already taught, and the superior advantages of which they had proved by their own example."

It is for us, Gentlemen, to admire them both, to cherish their memories, and emulate their good deeds.

With these words I draw abruptly to a close my remarks on the life of William Hunter. Much more might be said of this great man on the anniversary of the birth of Harvey, which we are to-day met to celebrate. Yet I hope that, at least, the spirit in which I have addressed you will meet your approval, however imperfectly I may have executed the task I proposed to myself in composing this essay. The spirit which has moved me, and which I have tried to communicate to you, by holding up the great example of William Hunter, is the spirit which guided William Harvey, and which he aimed at perpetuating after his death—the spirit of science and of mutual love. Harvey left funds for the same purpose as brings us here to-day. "To maintain friendship," says he, "there shall be once in every year a general feast, . . . and on the day of such feast shall be an oration." This oration, he says, is to commemorate benefactors; and then come, in his will, the following memorable words, which I most solemnly and sympathetically repeat in your ears. The oration is to be, says Harvey, "with an exhortation to others to imitate, and an exhortation to the members to study and search out the secrets of nature by way of experiment, and for the honour of the profession, to continue mutually in love."



