WILLIAM AND JOHN HUNTER[1]

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THE story of these brothers reads like a romance and is unique in the history of medicine. Two young men come to London without any special advantages, except their being Scotch, which perhaps is sufficient advantage in itself, and reach the top of their profession, one at his death being the leader in his field of work and the other perhaps the foremost surgical figure in the world.

The brothers had striking similarities and perhaps equally marked differences. Both had the spirit of the investigator; both were unsatisfied if they did not see things for themselves; both were keen for facts; both were great anatomists; both realized the unity of nature and that the departments of natural history could not be separated from one another; both were great natural philosophers; both were collectors and accumulated many treasures of various kinds; both influenced medical thought and advanced knowledge; both had remarkable pupils; and both have left their names deeply carved on the tablets of medical history. They differed in their education and hence to some extent in their interests. William, with a university education and more polished in the ways of the world, showed wider interests and in addition to his medical museum had a magnificent library and a wonderful collection of coins. As has been said, "he drank the cup of intellectual life with both hands." John with little education, as the term is commonly used, was rather scornful of books and his collections were concerned almost entirely with anatomy and natural history. Nothing in nature was without interest to him.

There has been much discussion as to which of them was the greater, but such controversy does not seem worth while in view of the fact that both were great. Undoubtedly the majority verdict would be for John Hunter and there seems little question that his influence on science and medicine, using the term in a broad sense, was much greater than that of his older brother, but there seems no question that John owed much to his brother, who took him to London and started him on the path which led to such great success and attainment. It seems also fair to consider that John owed a great deal to Williams' influence, for there is a striking similarity in their methods of work, habits of thinking, and the realization of the unity of nature. It would seem altogether probable that John absorbed a great deal of this from the older brother. Much has been made of the quarrel which parted them and its occurrence is naturally a matter of regret. At this day it seems very difficult to arrive at any absolute judgment as to where the blame should be placed; perhaps it should be divided. Reading the evidence, it has always seemed to me that the greater part of the fault was probably with John Hunter. They were reconciled shortly before the death of William Hunter.

William Hunter, born in Scotland in 1718, received the greater part of his education at Glasgow University, from which he carried away a store of solid scholarship. He subsequently became associated with Cullen, with whom he had evidently a very close friendship, and a plan of partnership was formed by which each in turn should look after the practice for a year while the other studied away from home. William Hunter carried out the latter part of the agreement by spending a year in Edinburgh, but in

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place of returning to the practice, decided to go to London in 1741. He was fortunate in being associated with John Douglas, one of the leading obstetricians in London. He aided Douglas in his studies in anatomy and in preparing illustrations for a work which was never published.

In 1748 he visited the Continent and was particularly influenced by Albinus in Leyden, in whose work on injections Hunter took especial interest. Later he studied for a time in Paris. On his return to London, he found the field open, success came rapidly and he was appointed physician to the court. His special success was in obstetrics, but he also practiced as a physician.

WILLIAM HUNTER
(1718–1783)

One does not feel that either of the Hunters was a man who would be satisfied with success in practice and nothing else. The greatest interest in William's life seems to have been to teach. He was first and last a teacher, beginning with lectures to naval surgeons in surgery in 1746 and later in anatomy. His last lecture may be said to have been given while he was dying. He showed throughout a complete comprehension of the unity of the laws of nature and of the importance of comparative anatomy. He was constantly carrying on investigations, of which those relating to the lymphatics, embryology, structure of the gravid uterus, and malformations may be mentioned as the most important. His work on the cellular membrane is worthy of mention. It has been said that he sometimes failed to see things but was rarely wrong in what he did see.

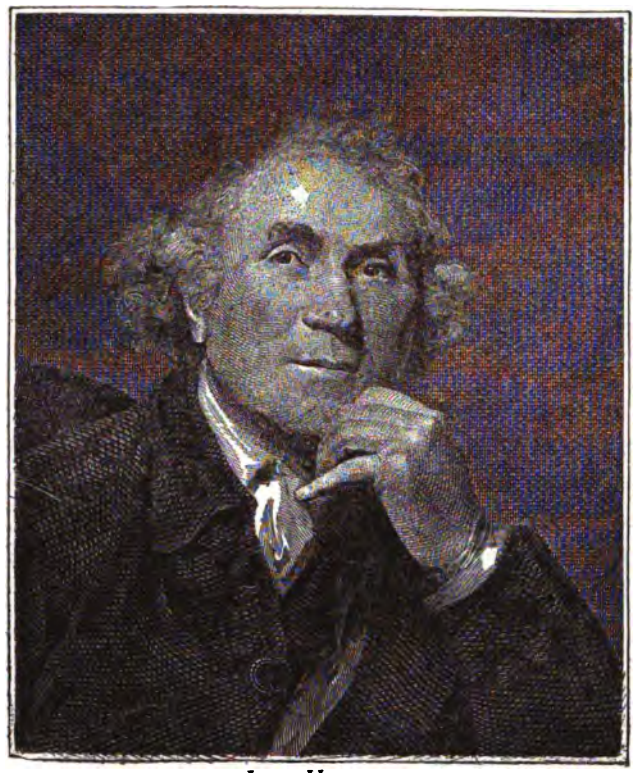
His interest in teaching led to the establishment in 1770 of a school in Great Windmill Street. This was primarily for the teaching of anatomy, but in connection with it there was a large museum and a remarkable library. He made a strong effort to make the school a permanent institution—a sort of Anatomical Institute—but did not succeed, as the Government was not sympathetic. At this time in London teaching was poorly organized and the student had to receive his education in many different places. Had William Hunter's plans been adopted it might have been that around his anatomical school as a nucleus a great teaching institution would have developed.

Along with his practice, his investigations and his teaching went the habit of the collector not only of anatomical and natural history specimens, but also of rare books and coins. The number of treasures in his library is really surprising. There are 2,345 works published before 1600. The library is rich in pamphlets, records of the medical controversies of the day and in publications pertaining to American affairs, as well as in the classics and in examples of the progress of early printing.

William Hunter died in 1783, leaving his museum to his nephew, Matthew Baillie, for twenty years, after which time it was to go to the University of Glasgow. Anyone will be richly repaid by a visit to the Hunterian Museum in Glasgow. Particular attention should be given to the anatomical specimens and especially to those concerned with the uterus. The injections are most

wonderfully done and it is difficult to imagine how they could be improved upon. In recent years much has been done to put the specimens into proper condition and properly catalogue the library and collection of coins.

William Hunter's professional life was especially concerned with obstetrics and in this he rose to be the foremost authority in London. It seems curious to us to find the foremost obstetrician and one of the foremost anatomists of the day in the same man. Doubtless it was his specialty which made him take the particular interest which he did in the investigation of the gravid uterus. In this field of work he added greatly to knowledge and this is usually regarded as his best anatomical contribution. Whatever opinion we hold as to the position of William Hunter himself, there is no question of the men who studied under him. He was a "man midwife" in a sense other than that in which the term was usually employed. He brought great men into the intellectual world of medicine.



JOHN HUNTER
(1728–1793)

John Hunter, born in 1728, and ten years younger than his brother, had a very different life in youth. He took no interest in the acquirement of knowledge, neglected school and did not acquire a satisfactory education. All attempts to induce him to become interested in books were useless. Throughout his life he jeered at book learning and gloried in the fact that he had kept free of it. One cannot help feeling that sometimes under this lay a deep regret for his lack of education. There may have been other reasons, however, for his rather biting comments on book learning, because many of the profession of that day knew little else and were more concerned with what had been written about disease than what they could observe themselves.

John Hunter's lack of general education undoubtedly affected his literary output, but in no way influenced his powers of observation and investigation. For him investigation and the collection of facts were all important; teaching apparently did not especially appeal to him, at any rate in the form of lecturing, and an early invitation from his brother William to give lectures on anatomy was declined. In later years his lectures on surgery were a trial to him and he apparently never became fluent in delivery.

He came to London in 1748 at the invitation of his brother and at first was associated with him in his anatomical work. This opened up new interests for him, and for the rest of his life he was constantly engaged in investigations and trying to find out new things. He worked energetically at anatomy and did some hospital work under Cheselden and Pott. The next year he was giving demonstrations in anatomy, a testimony to his ability and industry. In the next few years he attended the hospital practice of Cheselden and later at St. Bartholomew's he studied under Pott. In 1754 he entered St. George's Hospital, with which he was associated for the rest of his life. William had plans to make up for John's lack of

education and persuaded him to go to Oxford. But to the investigating mind of John Hunter, Oxford held no attraction and his stay was brief. The Oxford atmosphere of that day was not a congenial one for a man of Hunter's interests.

In 1756 he was appointed House Surgeon to St. George's Hospital, but held the post for a few months only. During this time he was improving his knowledge of human anatomy but evidently the realization that this was only a part of comparative anatomy came to him and he widened his field of work. With this was joined the study of physiology and the desire to associate the study of function with that of structure. This is an outstanding fact in Hunter's work—the importance of physiology and the value of the study of principles, so strongly illustrated in his later surgical work. Comparative anatomy became one of his great interests; animals from menageries or anywhere else, whales, birds and fish were sought after. There are many curious accounts of his experiences in obtaining specimens. The practice of surgery had compensations in that it provided the means of acquiring more specimens.

Ill health came later and for the purpose of change, in 1760 he entered the army and saw service abroad. This experience was not wasted time; he continued his studies in natural history and laid the foundation for his work, "Treatise on the Blood, Inflammation and Gunshot Wounds." On his return to London in 1763 he began the practice of surgery with prospects which could not be considered as encouraging. There was no lack of good surgeons. He was more interested in scientific work and was known as an anatomist, while he regarded surgery more as a means to an end. His saying, "I must go and earn this damned guinea," has become one of the favored expressions of the profession. There must have been many guineas, for very soon he established a "laboratory" outside of London. This was "a farm, a menagerie, an institute of anatomy and physiology, and a villa." Dens for dangerous animals, ponds for fish and aquatic life, stables, kennels, cages and hives, were among the diverse furnishings of his estate. The tenants were as diverse. The study of bees engaged his attention for many years.

Success in practice came slowly, but in 1768 he was elected a surgeon to St. George's Hospital, an appointment of the greatest advantage to him. He was able to take "house pupils," among whom were Physick, of Philadelphia, and Edward Jenner. In 1773 he gave his first course of lectures on surgery, but lecturing was never easy for him and cost him much in labor and anxiety. They were new lectures on surgery, for they dwelt on principles rather than practice. Embryology, physiology, pathology and a discussion of the processes of disease and repair were included. But hard common sense was not lacking and always the value of experiment insisted upon, as shown by the celebrated advice to Jenner, "To try and not to think." The days were too short for his labors; one is appalled by the account of what he accomplished. He did an enormous number of dissections and *post-mortem* examinations himself and must have dissected thousands of animals. He had original records of the dissection of 315 different species of animals. His letters are full of appeals for specimens and for reports on points in natural history.

The death of Pott in 1788 left Hunter at the head of the surgical profession. Professional honors had come to him in full measure. But nothing interfered with his work; the learning of new things by observation and experiment was his passion. He died in harness and "with his boots on," which has been termed the death of a gentleman. The occasion was a tragic one. There was a dispute at a meeting in St. George's Hospital over a matter near to Hunter's heart. His anger brought on an attack of angina pectoris, from which he had suffered for many years, and the end came at once at

about the same hour as Marie Antoinette was beheaded in Paris.

His museum remains as a magnificent memorial. It was purchased by the Government and given into the custody of the College of Surgeons. It contained over 13,000 specimens. The museum and library are in the College building in Lincoln's Inn Fields.

To sum up John Hunter's many qualities and activities is difficult. He was a great investigator, an accomplished naturalist, a skilful anatomist, a physiologist, an experimental pathologist, an original thinker and, perhaps greatest of all, a stimulator of thought. He may well be regarded as the founder of scientific surgery and well did Sir William Osler say that he "combined the qualities of Vesalius, Harvey and Morgagni."

To estimate the extent of the influence of the Hunters on American medicine is difficult. There are grateful references in letters to the advice given by William Hunter on the establishment of medical schools in this country. Many Americans studied in London under the Hunters; two should be mentioned, William Shippen, Jr., who gave the first course of lectures on anatomy in Philadelphia, and Philip Syng Physick, one of the most brilliant of early American surgeons. But the influence of the work and teachings of the Hunters must have been greater than can be stated in set terms.

Every medical man who visits Great Britain should make a point of visiting the museums left by the two brothers. The collection of William Hunter is at Glasgow University and that of John Hunter in the College of Surgeons in London. The work of their hands is there for him to see, and speaks, perhaps more plainly than their words could have done, of what they accomplished.