

Reflections on John Hunter as a physician : and on his relation to the medical societies of the last century. Part I, John Hunter as a physician / by G. Newton Pitt, M.D. Cantab., F.R.C.P. Lond., assitant physician, senior lecturer on pathology, and demonstrator of morbid anatomy at Guy's Hopsital.

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REFLECTIONS ON
JOHN HUNTER

AS A PHYSICIAN,
AND ON HIS RELATION TO THE MEDICAL SOCIETIES
OF THE LAST CENTURY.

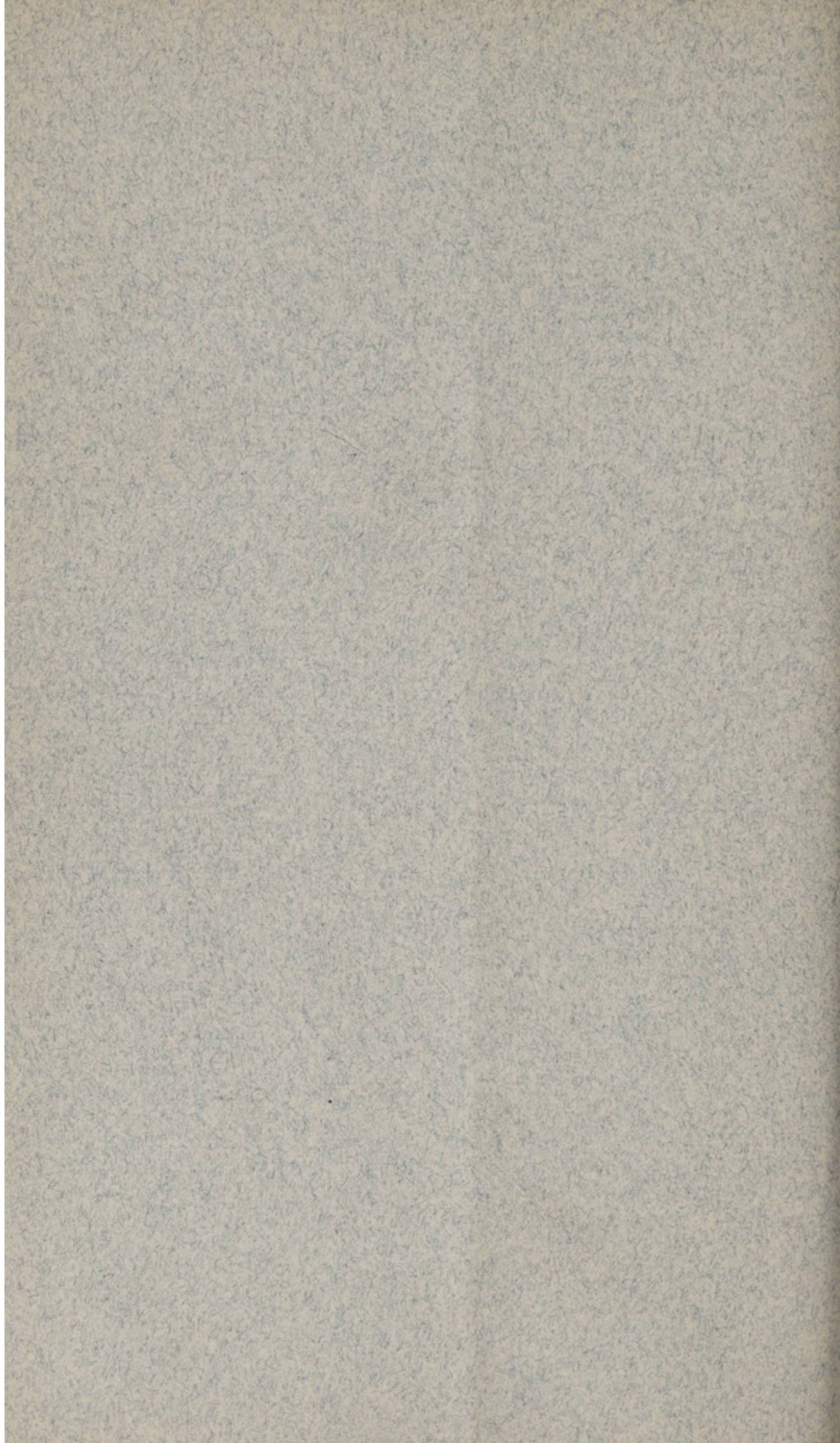
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BEING THE ANNUAL ORATION DELIVERED BEFORE THE
HUNTERIAN SOCIETY, 1895.

PART I.
JOHN HUNTER AS A PHYSICIAN.

LONDON :
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AND ASHFORD, KENT.

1896.





JOHN HUNTER AS A PHYSICIAN,
AND
HIS RELATION TO THE MEDICAL SOCIETIES
OF THE LAST CENTURY.

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(Reprinted from the Transactions of the Hunterian Society.)

MR. PRESIDENT AND GENTLEMEN,

It is with great diffidence that I venture to address you to-night on the subject of such a well-worn topic as that of the immortal Hunter. At first I had proposed instead, to deal with a recent question in Pathology, but having been fortunate enough to discover the Minute Books of the Guy's Physical Society of the last century, which were contemporaneous with, and, I found, frequently referred to Hunter, I thought it might not be without interest to bring before you some information with regard to the societies of his time. The chief incidents of his life have been so frequently detailed, that I do not propose to give any consecutive narrative, but rather to bring forward letters and details, some of which I have gathered from the manuscripts recently acquired by the College of Surgeons since the death of Mr. Hunter Baillie.

It is curious that as many as six different dates have been given, apparently on good authority, as Hunter's birthday. July 14th, the date given by Sir Everard Home in his oration, was only a printer's error for February 14th. This is the day which has always been celebrated by the College of Surgeons, because this is the day Hunter himself accepted as correct.

The College of Surgeons have recently received a small

Bible, which belonged, in the year 1735, to James Hunter, John's brother, as shown by an elaborately decorated page at the end of the book, which is ragged and dirty from constant use. The volume has been carefully rebound this century, and two new blank pages have been inserted at the beginning which contain the family record as given by Mr. Bailey in the B.M.J., December 14th, 1895. I am also indebted to Mr. Bailey for much other information, which he kindly placed at my disposal. The date is herein given as February 7th; the record was apparently written after Dr. Matthew Baillie's death in 1823, as this is filled in and the whole entry is in one handwriting.

Another record which also comes from the Baillie family is that given by Mr. D'Arcy Power in the B.M.J. of December 7th, 1895, from a note-book filled in after 1751, but before the death of Dr. William Hunter, where the date is given as February 9th, 1728. The evidence therefore shows that these dates are not contemporary records and probably arose from the same erroneous family tradition. The correct date is undoubtedly that given by the register of births, viz., February 13th, 1728.

John Hunter was the youngest of a family of ten; his father lived on a small estate at Long Calderwood, eight miles out of Glasgow. As is well known, he was spoilt by his mother and would do nothing but what he liked, and he liked to do neither reading nor writing, nor any kind of learning, but used to ramble about all day among the woods and hills looking for birds' nests, comparing their eggs and noting their peculiarities. His two elder brothers, William and James, attended the classes at the University of Glasgow. Mr. Holden, in his oration at the College of Surgeons, in 1891, showed that a John Hunter matriculated in 1745, and assumed that this was their brother. Dr. Finlayson, however, has, on further examination of the records, proved that this boy was the son of a Glasgow merchant, who was no relation to the others.

His sister Janet, who had refused one good match, married a Mr. Buchanan, who with some others had started a large timber yard in Glasgow, where they stacked not only the wood required for house-building, but also mahogany, walnut, and other woods for making furniture. It appears that at that time there were no upholsterers in Glasgow, and that the timber merchants used also to make bookcases, tables and wardrobes as required.

John, who was at this time about 17, went to stay with his sister ; being dexterous and of an enquiring mind he doubtless thoroughly enjoyed his visit, and very probably tried his hand with the tools and spent his time about the workshops. His sister, however, died before she had been married a year, and John returned home. Two years later, in 1748, he came up to London to his brother William who had already made a name as the best anatomist of the day.

Throughout Hunter's life malevolent people, such as Jesse Foot, used to speak of him as having been a carpenter or wheelwright, whereas there is no evidence in his family that it was ever intended to bring him up to either of these trades. Moreover it appears that this brother-in-law, hitherto described in Hunterian orations as a dissipated carpenter, was really a well-connected, handsome man with a fine voice, who was popular in society, although he spent all his means in entertainments instead of attending to his business. This, no doubt, was foolish and finally compelled him to make his living as precentor in a church, but when older, he married again a lady of good family with a fortune.

John's lack of education was probably due to his own character, and not to the lack of means of his parents.

William Hunter, was the first great teacher of anatomy in this country ; as a lecturer he was remarkable for the clearness of his argument, the wide range of his illustrations and the elegance of his diction. He was an acute observer, the possessor of a fine library and a most enthusiastic collector, who spared no expense to improve and extend his collections.

In 1748 he sent an invitation to John to come up to London when his aptitude was apparent as soon as he tried his hand at dissection. Not only so, but his determination and his enormous capacity for work developed rapidly and never ceased until his death half-a-century later, when he left behind him, as a perennial monument, the magnificent collection now in the College of Surgeons.

In 1759, he had a severe attack of pneumonia with indications of phthisis, the disease from which his brother James had recently died. Accordingly, he availed himself of an opportunity to go as Staff Surgeon with the Hodgson and Keppel Expedition to Belleisle, which sailed in 1761, and the following year he went with the army into Portugal. While there, he studied the coagulation of the blood, and the nature and treatment of gun-shot wounds. The treatment

then, as laid down by Ranby, was to lay open the external orifices and to probe the tracks. Hunter saw the beneficial results of leaving wounds alone, and he very soon differed from his colleagues, and adopted a line of treatment of his own. He put on a dry dressing whenever he could, and as far as possible, even in compound fractures, tried to get repair to go on under a scab. He showed that blood clot could organise and form reparative tissue. Such, however, was Hunter's caution that the results of his investigations were not published until a year after his death, 32 years later.

I give here, two letters written, at this time, to his brother William. The first shows the involved and obscure character of his sentences, but brings out that dogged determination which was so marked a feature in his character and the vigour with which he determined that however much his opponent, Mr. Maddox Cone, might try to obtain the ear of the Admiralty, he would still forestall him.

As he said many years later to one of his pupils, "Any man who will set about a business and do it as you have done, may do anything he pleases in London."

The second letter shows the distinguished position he at once made for himself, but, unfortunately, he was not friendly with his colleagues.

"DEAR BROTHER,

When I received your letter at Bellisle informing me that the Secretary at War had promised me the deputy directorship, I was in hopes of getting it ; and when I came to Lisbon Mr. Young told me I was the person. I had no sooner heard of this, than Mr. Maddox Cone (one of our surgeons) produces a warrint for the imployment, granted by my Lord Trelawley ; and at the same time Lord Loudon's promise that he should keep it. Upon inquiry, we were told by the Surgeon, that it was only granted conditionally, viz., if I came from Bellisle it was to have no effect, which shows they knew of my being appointed or approved of. From this declaration of the surgeons he was led to give up all pretensions to it ; and even to write Lord Loudon a letter to that effect, when Lord Loudon was asked what he chused to do he put us off till he saw Lord Trelawley. They met, but this meeting determined nothing ; only that the person should be appointed at home by the Secretary at War ; and he received advice of it from thence. Now as there has been so many promises of the surgeons to give it up, and that my Lord Trelawley allowed him to do it, but yet it is never done ; and my Lord Loudon leaving it to be done in London, makes me suspect that they want to cheat me out of it, because Lord Trelawley and the surgeon goes home in the same ship with this letter, and (most likely) will make immediate application to the Secretary at War for a warrant, which will

determine it at home (as they call it). This I suspect to be their drift, and I would, therefore, disappoint them by being beforehand with them. From what has happened in London concerning my being the person, I should suppose that I am looked upon there as the person that has it. If this is the case I should look upon it as an easy thing to get a warrant, or an acknowledgment from the War Office, that I am the person appointed ; now all this must be done before Lord Trelawley gets to London. If you could have time to wait upon Mr. Tyrwitt, Deputy Secretary at War and ask to see Mr. Young's return of those that were to act under him ; if Mr. Townsend has seen it, it proves he approved of me by his not contradicting it, and if has approved of it he cannot be against granting a warrant or fixing it for me. From what I can learn Lord Loudon would be my friend if he would appear in it. Mr. Young is my stance friend and does everything in power to serve me. I wish I could get it as it makes a vast difference with me here.

I am, dear Brother,

Yours

Lisbon, July 25, 1762."

"If we are ordered home, and a surgeon is to stay here, I propose staying (if there is any chance of another expedition), and if I do stay I propose applying for the deputy governorship, which is ten shillings a day, and if I get that I can give my prentice a place of five shillings a day, so that I can make it worth my while, this is my present plan. Thank God I have succeeded in everything that I have attempted, but my practice in gun-shot wounds has been in a great measure different from all others, so that I have the eyes of all upon me both on account of my supposed knowledge and method of treatment. My fellow creatures of the Hospital are a damned disagreeable set. The two heads are unfit for their employment as the devil was to reigne in Heaven, but more of all this hereafter.

Bellisle, Sep. 28, 1761."

Hunter was a master in all the arts of injecting and displaying specimens, and nothing gave him a more exquisite delight than the successful dissection of some minute connecting thread between two nerves or vessels in a specimen. At work, every morning at dawn, he dissected away patiently for hours, and a greater part of the 14,000 specimens he left had been prepared by himself during the last 30 years of his life.

Yet we know that his far greater delight was to think over and meditate on the bearings of all these new facts he was discovering, and we learn from Clift that while he was working in the evening and late into the night, it was not at dissecting, but in thinking over and writing out his observations. Clift uses this as an argument to show the amount of MSS. Sir Everard Home must have burnt after Hunter's

death, as the notes of only three P.M.'s made after 1784 were returned by Home; and Clift asks where is all the work written out each night during those last years of his life?

Hunter, although a short man (only 5ft. 2in. according to Clift, who was nothing if not accurate), was uncommonly strong and active, very compactly made, and capable of the greatest bodily and mental exertion. Sharp's splendid engraving of Reynold's portrait has made his appearance in mature life familiar to all of us, while the recent present from the Baillie family, a portrait now hanging in the entrance hall of the College of Surgeons, enables us to realise his presentment as a young man, with his locks of light reddish hair, suggestive of the gout of his mature life.

When young he was active, frolicsome and boisterous, and as became the student of those days he often led the gods. He seems to have had a considerable sense of humour, which appears not infrequently in his notes and writings.

In 1771, as soon as his means allowed, he married Miss Home, to whom he had been engaged for some years. The following is the letter he wrote to his brother on the occasion of his marriage.

"MY DEAR WILLIAM,—To-morrow morning, at eight o'clock and at St. James' Church, I enter into the Holy State of Matrimony. As that is a ceremony which you are not particularly fond of, I will not make a point of having your company there. I propose going out of town for a few days, when I come to town I shall call upon you. Married or not married, ever yours,

Jermyn Street,
Saturday morning."

JOHN HUNTER.

His wife was tall, handsome, and singularly attractive. She had a cultivated mind, particularly with regard to poetry and music, and acquired some celebrity for her receptions (in giving which her sister, Miss Home, who had a beautiful voice, was of assistance) where Madame d'Arblay, Lord Orford, Mrs. Elizabeth Carter, and Mrs. Montague might frequently be met. Mrs. Hunter was the author of "My mother bids me bind my hair," which was set to music by Haydn. She had her own carriage and footman, and gave her entertainments without troubling her husband, who was dreadfully bored by general conversation and, on one occasion at any rate, broke in on her entertainment and dismissed the company abruptly.

At his death he left his wife and children without any

provision, with the exception of the money ultimately realised by his museum, &c. ; but through the kind offices of Dr. Garthsore, Mrs. Hunter was appointed to take charge of two wealthy wards of his, in which post she received a handsome salary until her death.

Throughout his life he appears to have lived up to, and not infrequently beyond his income, as was the case all the six years Blizard lived with him.

Steadily Hunter's income from practice increased and his establishments developed accordingly ; in 1772 he bought two acres of land at Earl's Court, where he built a large house and kept a most miscellaneous collection of animals of all kinds. In 1783 he took the lease of another house in Leicester-square, where he erected a large museum and lecture rooms.

Hunter was very hospitable and frequently entertained his friends, opening his house to his medical acquaintances every Sunday evening. He himself was very temperate and for the last twenty years of his life only drank water.

Hunter opened his new museum to the medical profession in October, and to any nobleman or gentleman interested in such subjects, when they came to town in May.

An amusing story is told of the fright of a party of Esquimaux, who, in 1773, has been brought over by Cartwright from Labrador, and were entertained by Hunter to dinner. One of them, Attuiock, went out of the room by himself, but soon returned with such evident marks of terror, that it was thought he had met with some accident or had been insulted. He seized Mr. Cartwright by the hand, dragged him out to a room in the yard, where there stood a case containing many human bones. "Look there," said he with more horror and consternation than I had beheld in the face of man before, "Are those the bones of Esquimaux, whom Mr. Hunter has killed and eaten? Are we to be killed? Will he eat us and put our bones there?" The others became equally alarmed, until we roared with laughter and explained that they were the bones of our own people, who had been executed for certain crimes, and the bones were preserved so that Mr. Hunter might know better how to set the bones of the living, should they break them, which is not uncommon in a populous country.*

An interesting MSS. of W. Clift's was found in 1872, when

* B.M.J., 1893 ; vol. 2,

the Offices of the Company of African Merchants in Sierra Leone were being cleared out, but it is difficult to explain now how it got there. It has now been placed in the Library of the Faculty of Physicians and Surgeons at Glasgow, by Dr. J. Finlayson.

This paper gives some idea of the enormous establishment which Hunter latterly kept up, of the many large and perhaps reckless expenses in which he indulged, and of the great weakness he had for bargains of all kinds, *e.g.* a splendid but unfinished air-pump, and a grand chemical furnace belonging to the Earl of Bute, a magnificent turning lathe which had been made for the Duke of Cumberland, armour of all kinds, Chinese Josses, and nodding Mandarins were among his curios which were sold at Christie's. In 1792 it is stated that there were never fewer than fifty persons daily provided for at his expense, besides the house pupils who paid for their board. The family, including the six house pupils, amounted to ten, while Monsieur St. Aubyn, the draughtsman; Mr. Dupré, the secretary, and Mr. Walker, tutor to his son, lived with them. At the houses in Leicester Square, Castle Street and Earl's Court there were 23 servants, the remainder being composed of the carpenters, bricklayers, painters, farriers and printers, who were in constant work on his buildings and collections.

In the latter part of Hunter's life all the money he could obtain was spent upon his collections, and if he determined to have a specimen the cost was immaterial. He is said to have given £500 for the skeleton of the Irish giant O'Bryne, and at the sale of the anatomical preparations of Mr. Blackall, a young and very promising teacher of anatomy at Thavies Inn, who died of phthisis in 1781, we note that Hunter paid fifty guineas for a specimen of a double vagina and uterus. Although reckless and always in want of money, Hunter was extremely liberal to poor patients, and several instances of great generosity to his friends are recorded.*

The reasons why John Hunter commands our admiration and regard have been so often set forth, that it might be thought they were many years ago exhausted, but so original was his work and the lines upon which he went that, even at the present day, there are many aspects worthy of study which have not hitherto been dealt with. His claims as a

* B.M.J., 1890; vol. 1, p. 738.

physiologist, as a naturalist, as an anatomist, as a pathologist have each in turn been the theme of orations both at the College of Surgeons and before this Society. The originality of his views, the power of marshalling innumerable facts to compel conclusions, the keen eye for fallacy, the marvellous patience required for his minute dissection have all been laid before you. We realise that he was the founder of the sciences of surgery, of biology and of dentistry when we read such an oration as that of Sir James Paget, when we read Owen's volumes on Hunter's Essays and Observations, and when we study the museum with his published and M.S. works.

I do not propose to refer to any of these familiar topics, which are still worthy of discussion and are by no means exhausted. I wish this evening to bring Hunter before you as a Physician, and to show that he really was in advance of his contemporaries in much of his knowledge on medical questions, and that by reason of his sound common sense, his treatment also was often superior.

In looking through Hunter's notes of cases we find accounts of apoplexy, hemiplegia, aphasia, asthma, ague, angina pectoris, lead colic, cerebral tumours, uraemia, indigestion, deafness, gout, syncope, writer's cramp, heart disease; fever with enteric ulceration, doubtless typhoid; cerebral abscess in association with middle ear disease, &c., clearly showing the very large number and the great variety of medical cases in which he was consulted. Specialism was non-existent in those days, and we know that later on, both Astley Cooper and Abernethy had a large medical practice superadded to their surgical. We must also bear in mind that in the last century medical and surgical cases were mixed together in the same wards and not separated as is now the case.

When we see the large amount of accurate and minute knowledge Hunter had accumulated about the heart and vessels, and the study he had devoted to the blood, it is not surprising to find he was interested in diseases of the heart, and that his opinion was sought for. We may select the following from his notes on cases of heart disease.*

"Bulstrode even in childhood used, when excited, to become cyanosed. On exertion, severe palpitation ensued, he became black in the face, and was often several days

* Casebook vol. 5, p. 80.

before he recovered ; yet when he grew up he used to hunt and take violent exercise, which frequently led to most disastrous attacks. Sir George Baker and Dr. Herberden apparently looked upon the symptoms as due to spasms or nervousness, whilst I thought there was something wrong with the construction of the heart, and reversed the treatment which had been ordered. I advised he should rest, be bled gently, eat moderately, keep the body open and the mind easy." Ultimately he died œdematous. *P.M.*—We learn, *inter alia*, that the aortic valves were found to be shrivelled up and were thicker and harder than normal. The heart was enlarged.

Hunter then proceeds to discuss whether this enlargement was mechanical and due to the blood being thrown to and fro, which would give the heart extra work ; or whether it were due to a primary enlargement of the viscus, such as he had noticed in other cases. He also discusses whether the shrivelling of the aortic valves was congenital or the result of disease, and noted that if so, it had developed much earlier in life than was usual.

We read of a man, aged 30, who had had palpitation since the age of 11. The symptoms are so violent that the bed-clothes can be seen to move ; the pulse is very irregular and the breathing difficult ; from the description of the inspection it appears that there was acute pericarditis with aortic incompetence. He then discusses the question as to whether we ought to attribute the symptoms to the increased size of the heart or to the disease of the aortic valves, and again notes how early in life this disease may come on. These observations are of the greatest interest because they show that Hunter realised from the symptoms that the organ at fault was the heart, and that there was some structural lesion ; and he evidently was clear that the depressing and violent treatment generally adopted was injurious ; the sensible advice he gave could not be improved upon at the present time.

In both the diagnosis and the treatment of many medical cases, he appears to have been ahead of the leaders of the College of Physicians. It is remarkable that although he was aware that the heart sounds sometimes produced thrills, which were audible and also that the heart increased in size and could move the whole chest, it did not occur to him, when he examined his patients, to listen to the sounds of the heart or to attempt to determine its size.

He was called to see a girl, aet. 16, who had had a fever followed by palpitation. The pulsation of the heart was forcible and expansive, and the carotids beat violently. There was a strong thrill in the impulse between the fifth and sixth spaces. She had attacks in which the fingers, etc. became cyanosed. The palpitation was so strong that it could be easily heard by others and still more by herself.

Girl, aet. 13, with heart disease. She had orthopnoea with violent pulsation, a sallow complexion, abdominal pain, cough, dyspnoea and oedema of the legs. Dr. Matthews, my colleague at St. George's Hospital, could not make anything of the case, and only wished to remove her more pressing symptoms. He ordered her to be cupped and scarified for her palpitation. The tension and pain in the abdomen he in some degree attributed to ascites and ordered her *Haust. Salin. cum aceto Destill. t.d.s.* And lest worms should have any share in her present complaints, he ordered her to be purged, twice a week, with *Pulv. Basilic gr. XV.*, and *Pulv. Jalapae gr. V.* Hunter slyly remarks, 'she nevertheless steadily became worse and died.'

There is no evidence that in Hunter's time physicians in England recognised or diagnosed lesions of the heart. Taking, *e.g.*, the first lines of the practice of Physick by Cullen, the subject is never hinted at in his four volumes, except under the heading 'Palpitation,' where there are a few vague generalities, but not the slightest attempt at diagnosis as to the cause. Nor in E. G. Clarke's *Modern Practice of Physic* is there any hint as to the possibility of organic disease of the heart. Now I have shown that Hunter had diagnosed structural disease of the heart, that he had suspected it in other cases, had thought over the causation of the increased action and size of the heart, and realised that incompetence of the valves was a sufficient cause, but was puzzled by those cases of large heart, which he had not infrequently met with, the cause of which was not apparent, but which were probably due to the kidney lesions, which he, as all his contemporaries, had overlooked. His treatment was sensible and characteristic, viz., rest, laxatives, and gentle bleeding; these certainly could do no harm, and were the antithesis of that of the Physicians of the time, who recommended vigorous exercise, or of his colleague, who acknowledged he could make nothing out of a case, but to make up for this was extremely vigorous in his treatment. It is clear from many

of his notes that he frequently realized that the heart was the organ which was at fault.

His notes on a patient, Boyde, whose sight failed suddenly, are most acute, and his description of Cheyne Stokes' respiration is one of the earliest. The patient probably was uraemic. He says "he was sensible enough to pay attention to immediate impressions and gave sensible answers to questions, but quickly relapsed into a dose. His breathing was peculiar, he would breathe for 10 to 30 seconds, and then begin to breathe softly, which increased until he breathed extremely strong or rather with violent strength, which gradually died away till we could not observe that he breathed at all. There was a kind of stare in his eyes, and although he could not see, yet the pupils were not dilated; therefore I suspected that he did see, but from all the trials I could make, it was plain he did not, nor did they water by varying the light." This shows careful observation, and he was obviously familiar with the fact that usually when patients are blind, the pupils are dilated.

He refers in his notes to the following cases of nervous disease, which show that he was familiar with the paralysis of one side of the body due to a cerebral lesion on the opposite side, and at once was struck by a case contradicting this rule. He realised that a case of aphasia without paralysis was probably due to apoplexy. He drew a distinction between the paralysis of voluntary and involuntary muscles and distinguished between paralysis and anaesthesia.

Apoplexy.—"Lord Weymouth's servant had a fit which deprived him of his senses; he recovered with right hemiplegia and died two days later in another fit. An extravasation of blood was found over the right side of the cerebellum beneath the pia. The paralysis was on the same side as the injury.

Why were there two attacks due to the same cause and only the same parts affected? Why was not the first continuous with the last attack?"

Aphasia.—A man, aet. 59, a drunkard, was seized with a violent pain on the left side of his forehead and down the cheek, with total loss of memory and of the meaning of sounds or names of things. The pain and the loss of meaning of sounds were at first the only things that the mind was sensible of. I imagined the case to be one of apoplexy. Two hours later he became comatose and died after six hours.

P.M.—I found haemorrhage on the surface of the brain : it then immediately struck me that the trepan might have cured him. On cutting off the upper half of the brain I found a cavity which communicated with the ventricle : both ventricles also contained blood, yet there had been nothing like paralysis or hemiplegia.

W. Sharp, aet. 65, had loss of power in the voluntary muscles, but not in the involuntary. The arm was worse than the leg, but he had not lost the sensation of the skin, although he did not know when he made water or went to stool.*

Hunter noted that the acute symptoms of cerebral tumours may be the result of chronic disease.

In a case of cerebral tumour in the Earl of Haddington's son. After giving the symptoms, which were of very short duration, he says : 'It is astonishing that it did not produce earlier effects. The symptoms were constant and increased regularly from the first till death. This case shows that the brain can suffer very much mechanically before its uses and actions suffer ; but when it comes to that period, when the brain is become affected, why the course should be so quick is not easily accounted for.'

It would appear that to say that a patient had palsy summed up all that was to be known and more than most people could be expected to discover, if we may judge by the vagueness of the ideas generally held at this time.

'Dr. Pitcairn was called in to see a patient who was found in the morning in her bed, without motion and speechless. He called the disease palsy, but from her then apparent situation, it seems to others that the attack bore more the resemblance of apoplexy.'

Minute and careful physical examination of a patient was, as we are aware, not practised in the last century, yet what can be more thorough and careful than the following description of an abdominal tumour ?

P. 107. Boy, aged 10, with a congenital stenosis ani. "His belly was found to be swollen, and there was a hard mass in the interior, whose limits above were very sharply defined. It reached higher than the navel, and came nearly as high as the sternum, but terminated above at once, which, in some degree, determined it not to be the liver. It receded when he was laid on his back, and returned when the parietes

* Casebook ; vol. 1, p. 53.

came in contact with the tumour. This showed that it was not in the abdominal muscles nor did it adhere to the peritoneum, but belonged to the contents of the abdomen. I conjectured it was the epiploon, become scirrhus ; or, perhaps, some mesenteric glands. But I also supposed that if it was the last, his constitution at large would be much worse than it was."

The tumour ultimately turned out to be of faecal origin. Hunter remarks : This is the first time I have ever felt faeces through the parietes similar to a circumscribed tumour, and it shows that we should be attentive to a variety of circumstances in many diseases, before we form an opinion of its nature.

We note with interest that Sir Joshua Reynolds, who died with hypertrophis cirrhosis of the liver, was attended in his last illness by Hunter, Sir George Baker, and Mr. Home.

Hunter himself was evidently a victim to migraine. (Case book Vol i, p. 121). He says : "At certain intervals, perhaps of two or three months, I feel a remarkable dazzling or convulsive motion of the eyes ; when this happens, besides the external visible object, there seems to dance before me somehow internally a kind of vibratory and undulating collection of rays, somewhat like the representation of lightning in prints."

We may, not unreasonably, take the observations upon his own illnesses as having been mainly made by himself. After a series of attacks of gout each spring for some years, in 1773 he had an attack of colic (very probably hepatic colic, as stones were present *P.M.*) with great cardiac failure. From 1785 onwards he suffered with anginal attacks brought on by the slightest exertion and in many cases associated with flatulence. From a remark in one of his papers, there can be little doubt that he had inoculated himself with syphilis on the finger ; and this may probably help to explain some of his later illnesses. In December, 1789, he had a typical attack of aphasia, with total loss of memory, due to some vascular failure. He did not know in what part of the town he was, not even the name of the street when told it, nor where his own house was ; he had not a conception of any place existing beyond the room he was in, and yet was perfectly conscious of the loss of memory. He was sensible of all impressions of all kinds from the senses, and therefore looked out of window, although rather dark, to see if he could be made sensible of the situation of the

house. The loss of memory gradually wore off, and in less than half-an-hour his memory was perfectly recovered.

Two weeks later he had severe vertigo, with photophobia, and perpendiculars appeared to him to lean to the left, making an angle of sixty ; objects appeared too small, and he misjudged distances. He complained of noises in his right ear and suffered severely with insomnia. Nothing appeared to relieve him until he took a tumblerful of hot water every night, just before going to bed. This gave him a good night's rest. He became so much impressed with the value of this, that he frequently prescribed it for patients with irritable stomachs, and with the greatest success. It is clear that the first boom of the hot water cure was not during the present generation.

He never recovered from this obliquity of vision : his memory evidently remained impaired. His anginal attacks recurred more frequently, and even the act of undressing at night always brought them on. They also came on in the middle of the night, and on the least exertion in conversation, for example, at dinner ; hence he was obliged to avoid dining in large company. His own explanation of his ocular symptoms was, that they were due to the spasms of the superior oblique on one side and of the inferior oblique on the opposite. It is much more probable that he had paralysis of the left inferior oblique, for example, and that the diplopia was not recognised. Post mortem the coronary arteries were calcified so that they were with difficulty divided by a knife. The mitral valves were ossified, and formed an imperfect bony margin, consequently the orifice must have been stenosed.

The aortic valves were incompetent and there was an aneurism of the ascending part of the aorta. The internal carotid and vertebral arteries were calcified, and their branches had opaque white spots on them. At that time the existence of cerebral softening was not recognised, probably owing to the late stage at which inspections were made ; but possibly a small patch may have been present.

His observations upon opening dead bodies are of interest, if merely to show what lesions they recognised. He says, after giving useful directions, "examine the kidneys and gall bladder for calculi, the spinal cord in case there is a hæmorrhage in it, and the base of the skull for an aneurism of the internal carotid." He divided the symphysis pubis in order to obtain more room to take out the pelvic viscera,

an excellent custom even now by no means common.

The following passages are both for power of observation and for sound common sense without an equal among the medical writings of his contemporaries in England :

"The first and great requisite for the restoration of injured parts is rest. When a man has suffered a concussion of the brain, and perhaps a blood vessel has given way, the mind is deranged, becoming either defective or too acute ; and if these symptoms should continue a little while, the medical assistant applies blisters to remove the effect, either forgetting or not rightly judging the cause. This is even carried further : we hardly see a man taken with all the signs of an apoplexy where a paralysis in some part takes place, or a hemiplegia, but that he is immediately attacked with cordials, stimulants, electricity, etc. Upon a supposition that it is nervous debility, etc. the poor body is also tortured, because it cannot act, the brain not being in a condition to influence the voluntary muscles ; we might with exactly the same propriety stimulate the fingers when their muscles were torn to pieces. I must own I never saw one of them which had not an extravasation of blood in the brain when opened, excepting one, who died of a gouty affection of the brain, with symptoms similar to apoplexy. For many years I have been particularly attentive to those who have been attacked with a paralytic stroke forming a hemiplegia. I have watched them while alive, that I might have an opportunity to open them when dead ; and in all I have found an injury done to the brain, in consequence of the extravasation of blood. I have examined them in all stages ; when it was recent, some of weeks' standing, others of months', and a few of years', in which I saw the progress of reparation."*

"When young men of fifteen have gout, which they are said to have inherited from their father," Hunter shrewdly remarks that "most people who have had the gout richly deserved it, and the children had inherited the disposition for the way of living as well as the susceptibility for the disease, and were, therefore, more liable to fall into the disease than children at large."

When Hunter was young all that had been written by men of great ability on Surgery was in Latin. Probably when his health broke down in 1755, and it was necessary for him to go and live in the country for a time, he thought it would

* Hunter's Works ; vol. 3, p. 261.

be a good opportunity to enter as a gentleman Commoner at St. Mary's Hall, Oxford, with which College Dr. Pitcairn, a friend of his brother, was connected, this being the only way anyone who was ignorant of Latin could enter; and thus attempt to acquire some knowledge of the language. It is clear that he remained less than two months, and, so far as is known, never made the slightest effort later to learn Latin. Whether this was the sole reason is uncertain, but Hunter did not read or take any interest in the literature of his subjects, and practically ignored what was published by others, but the effect on his character was extraordinary; it induced him to find out everything for himself, invariably to experiment and accumulate the facts bearing on each question, and never to guess nor to waste time in hunting to find out what other people thought.

Given such capacity as he had, coupled with untiring industry, working from daylight till dusk, and writing out his notes at night, he soon developed such a stock of sound information as to contrast strangely with the mystic and vague hypotheses and traditions, on which he found the majority of the medical profession acted. This induced in him somewhat of a contempt for others, and we learn that even at Belleisle he did not get on well with his colleagues and was pursuing a line of his own in treatment, which, judging by the interest which was taken in it by others, was very successful.

These habits grew upon him and it is not difficult to realise how sore his colleagues at St. George's were with him at the time of the quarrel which they had in 1792 and '93 with regard to the question of Hunter's teaching surgery.

"On the subject of lectures," they say, "if they had been practical and contained principles and rules founded upon judgment and experience, with regard to the authority of others as well as our own, they would have been highly useful; if on the contrary they had leaned to physiology and experiment, with a contempt for all other opinions but their own, they would have been pernicious. The good, therefore, arising from lectures, unless under certain regulations, must be at least problematical."*

This characteristic also became very marked in the greatest of Hunter's pupils, viz., Sir Astley Cooper. Throughout his life and in all his publications he pays no attention to the

* *Lancet*, 1888; vol. 2, p. 642.

results of other authors or surgeons, but simply confines himself to his own personal experience.

Previous to the last century surgery was an art or mystery, but not a profession, and it was only when men like Wiseman and Cheselden showed by their more accurate knowledge of anatomy, and of the minute details of surgery that they were superior to the graduates of medicine in the cure of surgical complaints, that the surgeons were able to displace the physicians, although the College of Physicians by their charter still confer the right to perform surgical operations. The teachers of anatomy, however, were still physicians, the best being Dr. William Hunter in the middle of the century. Pott, Sharp and Warner were the three great teachers of surgery. They confined themselves to records of cases, and neglected altogether the principles and processes of disease and repair, yet they did much for the education of the rising generation. After Hunter's time, however, the education of surgeons was no longer confined to acquiring a knowledge of the structure of the human body, and of the operations which may be safely performed upon it, but included a knowledge of the laws which underlie the vital processes in disease, and of the methods by which repair takes place in the animal economy.

Hunter soon realised that this necessitated a thorough knowledge of the processes which take place normally, and that the same general laws apply throughout the animal kingdom. He also discovered that the corresponding organs varied in different animals, and on collecting and thinking over a large number, he found out that there was a reason for every variation, and that the structure of every organ, and every abnormality was due to a definite cause and not to mere chance. In other words, that a change in structure implied a change in function. He then set to work by systematic experiment and by examination of every variety of animal to determine the underlying laws.

He elevated surgery to a science, so that the class of men and the social status of the profession at once improved ; moreover the surgeons soon became the chief anatomists.

The social elevation of the surgeon from the position he held in the last century dates from the time of the permeation of Hunter's influence through the whole of the medical education in London, and how great that influence was I shall show when I come to deal with the Medical Societies.

Hence it is not without justification that Dr. Billings in his classification of all Surgical literature, as given in the Index Catalogue, divides it into two periods, that before, and that after Hunter, taking 1780 as his point of division.

I do not know that Hunter's accuracy and determination were ever more splendidly shown than when he was called upon to give evidence in the trial of Captain Donellan for the murder of his brother-in-law. Sir Theodosius Boughton died half-an-hour after a purgative draught, with which it was supposed the accused had mixed some laurel water, the odour of which was noticed by the mother at the time. The body was disinterred ten days after death, and, as was too common, only some of the organs were examined, the brain and intestines not being investigated.

Four medical witnesses declared from the symptoms and *P.M.* appearances that death had resulted from poisoning by laurel water.

Hunter declared that all the appearances described could be *post mortem* changes, and that the symptoms were compatible with epilepsy or apoplexy, which an examination of the brain might have decided. If he knew that the draught was poisonous, he would probably say that the symptoms were due to it, but on the evidence before him it was impossible to give a decided opinion as to the cause of death.

The Judge ridiculed such caution, was sarcastic, and set his evidence on one side, with the result that the Captain was found guilty and executed.

From other circumstantial evidence, it is very probable that the man had been poisoned in the manner suggested, but Hunter was quite right in refusing to give a positive opinion, and there certainly was not sufficient evidence to justify a conviction. He clearly pointed out other possible causes of sudden death in a young and apparently healthy man.

Part II. dealt with the Medical Societies of the last century and their relation to John Hunter.

