Introductory lectures, exhibiting some of Mr Hunter's opinions respecting life and diseases, delivered before the Royal College of Surgeons, London, in 1814 and 1815 / by John Abernethy.

#### **Contributors**

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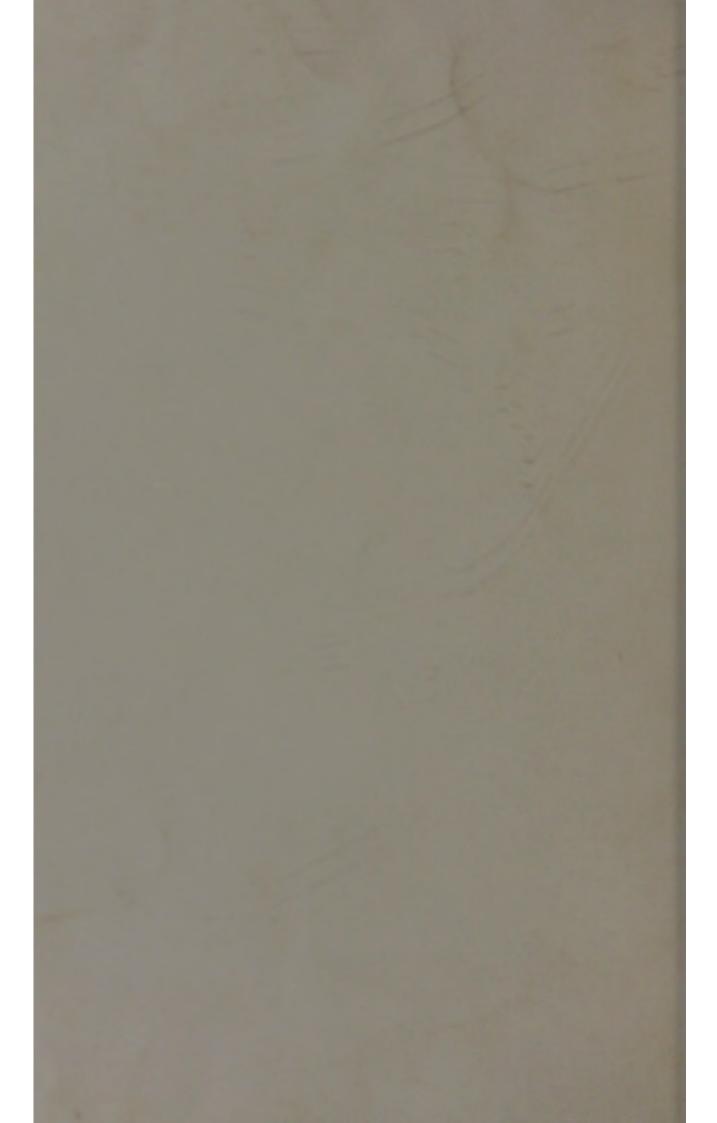
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## INTRODUCTORY LECTURES,

EXHIBITING SOME OF

### MR. HUNTER'S OPINIONS

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RESPECTING

# Like and Diseases,

DELIVERED BEFORE THE ROYAL COLLEGE OF SURGEONS,

LONDON, IN 1814 AND 1815.

## By JOHN ABERNETHY, F.R.S.

PROFESSOR OF ANATOMY AND SURGERY TO THE COLLEGE.

### Mondon:

PRINTED FOR LONGMAN, HURST, REES, ORME, AND BROWN,
PATERNOSTER-ROW.

1815.

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## HUNTERIAN COLLECTION,

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### INTRODUCTORY LECTURES

EXHIBITING

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AND SOME OF THE OPINIONS OF

MR. JOHN HUNTER,

ARE RESPECTFUILY INSCRIBED

BY THEIR OBEDIENT SERVANT,

THE AUTHOR.

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## ADVERTISEMENT.

THE following Sheets comprize only an Extract from the Introductory Lecture of the present year, which is designed to explain some of Mr. Hunter's opinions respecting Diseases.

The pages are numbered, in continuation with those of the Introductory Lectures of the preceding course, printed last year, in order that the whole may be bound together.

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### INTRODUCTORY LECTURE.

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I PURPOSE on the present occasion, to take a general review of the subjects, which engaged our attention last season; and, to offer some comments upon them.

In the preceding year, I first exhibited the facts I had collected, relative to those general disorders of the system, which are so frequently produced by local disease, injury, or irritation. These Mr. Hunter considered to be the result of universal sympathy, of that sympathy which the whole system seems to have with its seve-

ral parts. In each of these disorders, indeed, it is evident that the whole system is affected; the nervous functions are impaired or disturbed; as are also those of the digestive organs, and of the sanguiferous and secerning systems. Yet we denominate these general disorders from their most prominent character. Thus, when the sanguiferous and secerning organs are chiefly affected, and the temperature of the body is subject to considerable variations, we call the disorder fever. Of fevers, some are violent or inflammatory, but of short duration; some more languid and continued, becoming as it were, habitual or hectical; and there are others, in which the actions are vehement, though the powers are feeble; these cannot be long continued, for they are speedily destructive of life: the last also frequently so strikingly resemble Typhus as not to be distinguishable from that fever when it arises from other causes. I also further shewed that the same local excitements would produce intermittent and rheumatic fevers; and occasion still more diversified and unexpected disorders.

Now, here I would ask, to whom do we owe the first luminous demonstration of this subject; who, first with the eye of a physiologist, surveyed the reciprocal sympathies of the several organs of the body, and shewed how the most complex disorders may and do arise from simple causes? Was it not Mr. Hunter? Allow me, further to enquire, does no good result, from this physiological exhibition of the subject? Its utility might be explained by numerous instances, but I shall restrict myself to one. When we see that a compound fracture, in a susceptible and debilitated patient, may so disorder the

and parts of the body are affected as in that complicated malady a typhus fever; can we longer feel surprized that disorder of the digestive organs and poisonous miasmata should equally and similarly impair and disturb the energies of the nervous system, and occasion this identical fever. Does not this discernment of the causes and nature of diseases, lead to a just appreciation of various remedies, and to judicious practice?

Whilst considering the constitutional effects resulting from what Mr. Hunter called universal sympathy. I further shewed that the nervous disturbance, induced by local irritation of remote parts, might produce effects more or less general upon the nervous and muscular systems, without so materially affecting the other organs of the

body as to engage the attention of common medical observers: and here I spoke of pain, sickness, swooning, rigors, convulsions, delirium, and tetanus.

Lastly, in considering the effects resulting from these sympathies, I shewed how
the nervous disturbance might affect the
feelings and functions of the digestive organs, and how the disorder so induced, might
by a reflected operation, augment the
former and greatly and variously disturb the
whole system.

This subject had indeed particularly attracted the attention of Mr. Hunter, who believed that the stomach had a direct sympathy with remote organs and parts of the body; whilst he equally observed, how it might reciprocally affect and be affected by the head. It was on this account, probably, that he was led to call the stomach the

center of sympathies, a term, which such observations, if correct, would render particularly apt and expressive.

The full importance of this subject, could not, I think, have been discovered by the most acute physiological observation. It has been, however, manifested by the results of medical practice, which shew that if the disordered feelings and functions of the digestive organs be removed, the greatest degrees of nervous disorder, will sometimes suddenly cease; at others, will be greatly mitigated, and gradually subside; clearly proving, that in such cases, the one derangement ith e cause of the other.

To this subject, I particularly claimed your attention, because, it seems to me perfectly demonstrable, that the continued and aggravating irritation which the brain and abdominal viscera, when disordered,

impart to each other, is productive of a state of constitution, of which, (to express my notions in the briefest way I could,) I said, that it proved the fruitful parent of a numerous and dissimilar progeny of local diseases. On this account, the disorders of the digestive organs should become an especial object of attention, in the treatment of local diseases; for it is in vain to expect that such diseases, which may be considered as effects, should admit of cure, whilst the causes that produced them, are left to operate in force sufficient for their maintenance or their production in other parts of the body.

Having thus considered the nature and treatment of constitutional maladies, so far as the subject is applicable to the practice of Surgery; I proceeded in the next place, to speak of local diseases, and first, of those which often arise spontaneously, though they

may sometimes be induced by external injury, and which also may occur in almost every part of the body.

Here too, it may be observed, that the whole of the local affected district is disordered; that the nervous functions and vital energies of the part, are either impaired, excited, or disturbed, and that the functions of the vascular systems of the part are also deranged. Yet here, likewise, we denominate the disorder from its most prominent character; thus, when the sanguiferous system is chiefly affected, we name the disease Inflammation. Of inflammations, as of fevers, it may be observed, that some are violent and of short duration; some languid and continued, or chronic; whilst in others, the actions are vehement, though the powers are feeble, and the latter cannot be long continued, for if they do not soon

subside, they destroy the life of the affected part.

We seem to consider violent or phlegmonous inflammation, to be simply the result of an increased action of vessels, though, probably this disease has its varieties; in the other species of inflammations, the varieties, are evident and numerous. In chronic inflammation, we sometimes see the substance deposited in consequence of the increased action of vessels, such as is usually poured out in cases of simple excitement, and the subsequent organization, is also of the common kind; whilst in other instances, we observe the deposited substance to be very various in quality, either not admitting of, or not acquiring organization. Again, in other cases, when organization takes place, we observe, the structures produced, to be very various in their appearances and nature, and thus monstrous

growths are formed, such as had no existence in the original compages of the body. When such morbid growths occur in the different organs of the body, their apparent bulk becomes enlarged; but their natural structure and functions are diminished, and may ultimately be destroyed.

As we find the same sorts and varieties of growths, taking place from the same causes in the midst of the common tissue, that connects the various parts of the body, I was led to speak of Tumours, though, by this means, it became necessary to consider several diseases, which might, perhaps, with more propriety have been reserved, for discussion at a future period. Here, however, the natural connexions of subjects were so strong, that no artificial concatenation, appeared so well adapted to fulfil the chief object of arrangement, that of preserving and displaying every fact relating to the subject,

I next described what I called irritative inflammation, of which there are many varieties, and they were briefly noticed. Erysipelas was separately spoken of, because we usually distinguish it as a readily recognizable species of inflammation, allied in its nature to those of the irritative kind.

Lastly I spoke of Mortification as an event like suppuration peculiar to no individual disease, but a common termination to many. It is the result of simple weakness; of want of action; of excessive action; and of other causes; and consequently requiring a proportionate variety of treatment. On this subject, I could not forbear starting an opinion, which some may think whimsical, and others absurd, even before this critical and learned assembly. I asserted, that mortification was not unfrequently the result of nervous disorder in the affected part, and further affirmed that I was well ac-

quainted with the family from which this disorder, with the subsequent alarming disease, was descended; that it was one of the numerous and dissimilar progeny of the common parents of local diseases; that it was a short lived bantling, engendered by the reciprocal and aggravating irritation of disordered states of the digestive organs and nervous system on each other. It therefore followed that local applications were of little avail in this species of mortification, and that the removal of the exciting causes were the chief means of procuring a diminution and ultimate cessation of such effects.

In various parts of the lectures, I endeavoured to impress a distinction between disorder and disease. In disorder, the vital energies of parts are impaired, or excited and disturbed, as is manifested by errors in their feelings and functions. Disorder may therefore be said to be nervous, and parts may thus perish without struggle or reaction; without inflammatory processes, or with so trivial a degree of them as could not by itself destroy vitality.

To support these opinions by additional evidence, I would direct your attention to what happens in a disordered state of the stomach. Are not its feelings and functions disordered? By feelings, I do not mean those of actual pain; there may be inquietude without the patient's observing it, though, in general, uncomfortable sensations are remarked, particularly if the attention be excited to them. In such à disordered condition of the stomach, are not the secretions deficient or vitiated; and is it not, therefore, incompetent to perform its functions? We now know, for of late it has been demonstrated, that secretion is regulated by the nervous energies.

Am I not then warranted in asserting, that disorder is nervous, and that it is manifested by errors in the feelings and functions of the affected parts? Such a disordered state of the stomach as I now allude to, is also competent to induce sympathetic disorders in other important organs, and greatly and variously to affect all parts of the body.

Now here I beg leave to enquire, who first led the way in noting the various sympathies of the different organs and parts of the body? Was it not Mr. Hunter? Many of my audience may not know that three or four of his lectures were occupied in recording the different facts he had collected relative to such sympathies. They were arranged under heads, as Sympathies of Life with Life; of Sensation with Sensation; of Action

with Action; including all their changes and combinations. I candidly acknowledge the reflection which these lectures induced in my mind. How extraordinary a man, thought I, is this, who could bestow such surprising labour on so hopeless a subject. I also candidly acknowledge that I now think, as probably the comprehensive and discerning mind of Mr. Hunter then perceived, that much good may eventually be derived from patient and accurate observation with respect to this subject. We find many disorders and consequent diseases arise from sympathy, and that the organ sympathetically disturbed, often suffers more than that originally affected. Yet its disorder may not be susceptible of cure by medical treatment, whilst the cause remains. Our attention ought, therefore, to be directed in such cases to appeasing irritation, and giving tone and tranquillity to an organ of which

the patient perhaps makes no complaint, but which is the cause of the more evident and important malady.

To me the philosophical turn of Mr. Hunter's mind is demonstrated by his caution; with all his facts relating to sympathy, he formed scarcely any general conclusions. He distinguishes it into the continuous, contiguous, and remote. The two former are readily explicable. Of the latter, I, who have less caution, or more facts of a certain description than Mr. Hunter might have possessed, do not hesitate to say, that when injuries or disease of limbs bring on fevers, delirium, convulsions, or tetanus, or disturb the feeling and functions of the digestive organs, that these effects are produced through the medium of the brain. Whether sympathies can take place in a more direct or less circuitous manner, may be proposed as a

question which I should thus answer. When organs are supplied from the same plexuses or ganglia, it is reasonable to suppose they may participate in each others disorder; on this principle, the whole of the digestive organs might rationally be supposed to sympathize with one another, and also the whole of the organs contained in the pelvis; disorder of the stomach might be supposed likewise to affect the æsophagus, lungs, larynx, and tongue, in consequence of those nervous communications with which we are well acquainted. But it may further be enquired, can sympathetic feelings occur between parts where we have not been able to trace such nervous communications, or how do those strange sympathies occur, and become established in disorder and disease, which we never observe in health? To me it is evident, as it was to Mr. Hunter, that the stomach has a direct sympathy with the most distant parts of the body; and that the heart sympathizes with the stomach; but in what manner such sympathies are produced, or how the morbid and irregular sympathies which occur in diseases are occasioned, we presume not to explain. Yet if Mr. Hunter's opinions of the nature of life be true, none of these facts can well be considered as surprising.

Disorder, which is the effect of faulty actions of nerves, induces disease, which is the consequence of faulty actions of vessels. There are some who find it difficult to understand how similar swellings or ulcers may form in various parts of the body, in consequence of general nervous disorder, and are all curable by appeasing and removing such general disorder. The fact is indisputable. Such persons are not so much surprised, that general nervous

disorder should produce local effects in the nervous and muscular systems; yet they cannot so well understand how it should locally affect the vascular system. To me there appears nothing wonderful in such events, for the local affection is primarily nervous, and the vascular actions are consequent. Yet it must indeed be granted that there may be other circumstances leading to the peculiarities of local diseases, with which, at present, we are unacquainted. Disorder excites to disease, and when important organs become in a degree diseased, they will still perform their functions moderately well, if disorder be relieved; which therefore ought to be the alpha and omega of medical attention.

Such were the subjects I endeavoured briefly to explain during the preceding season. I have thus led you to the place where we stopped, and from which we are

now to proceed. Previously, however, to our advancing, allow me to enquire, who first explained in a physiological and satisfactory manner the diseased processes I have refered to, the formation of abscesses; the secretion of pus; the intersticial and other growths; the causes and circumstances of mortification? Was it not Mr. Hunter? We now hear no more of those ancient metaphors concoction and erosion, but we find all the morbid changes accounted for by the perverted action of the ordinary powers and structures of parts; clearly perceiving that the same powers and organisation, which by their natural and common actions produce health and beauty of appearance, do, when perverted, occasion disease and deformity.

Again, too, when we survey the infinite diversity of local diseases, how can we express ourselves, but in the language

of Mr. Hunter, by saying, that they are the result of peculiar or specific actions? To explain my meaning with respect to this subject, I must request you to advert - to the labours and opinions of preceding physiologists. Were they not looking for mechanical contrivances, to account for the peculiar secretions which different glands produced? Ruysch displayed the pennicillous, the stellated, and contorted arrangements (called the acinous structure) of the minute and probably secerning vessels of different glands. I also am persuaded that Mr. Hunter, when he put the pieces of talc within the tunica vaginalis of a ram, and withdrew them successively to ascertain how soon the secreted fluids acquired the puriform character, did, when he afterwards examined the parts, observe them with particular attention, in order to discover whether some peculiarity of structure had not preceded this peculiarity

of secretion. Baron Haller, however, expressly asserts the opinion, that actions, living actions, have a great share in causing the peculiarities of secretions, and the changes we observe in them. But the direct proof of this fact remained to be exhibited to the public by Mr. Hunter. It was by observing the peculiarity of the local actions, and consequent secretions resulting from the application of different morbific poisons, that this subject was placed in a clear and distinct point of view. In such cases the same structure may be very variously affected, producing different forms of disease, and various kinds of secretions. I do not dwell upon the subject, because the facts and inferences have not as yet been laid before you.

I bring forwards Mr. Hunter's opinions on these subjects, at present, merely to shew what notions we are warranted in forming, relative to the causes of such an extreme diversity of local affections, either of an inflammatory or other character. If actions can be peculiar and specific, if the effect of them can be that of producing various forms of disease, and qualities of secretions, when such actions are excited by peculiar stimuli; is it not probable that the actions which occur in parts, the feelings and functions of which are disordered, may spontaneously assume a peculiar character, and thus give rise to the diversity of diseases. We have, as I shall afterwards shew you, in some cases positive evidence in proof of this proposition.

Now when the terms specific and peculiar actions were employed by Mr. Hunter, to designate facts which have not, and as I believe cannot be otherwise expressed, persons, who seem to me to employ their minds rather in preventing than in pro-

moting the progress of science, who object to every thing new, and suggest nothing, boldly asserted them to be absurd. They sagely observed it was impossible that there could be any peculiarity of action; because ves\_ sels could only act more or less forcibly or frequently. Now when Mr. Hunter makes use of the phrase peculiar action of vessels, I am sure he meant more than he expressed, and employs it only on account of brevity. For he thought that life was the cause of the actions of vessels; that it pervaded the fluid blood, and the gelatinous and albuminous solids; that it built up the very organisation by which it effected its subsequent functions; that the life of vessels could modify their contents: that life was the cause of the various secretions, and the forms and phenomena we observe both in health and disease.

I am persuaded Mr. Hunter's notions of

disease cannot be apprehended, unless his opinions respecting life be previously understood, and, therefore, did I deem it necessary, in the first place, to endeavour to explain his doctrines on that subject. There is an obscurity in his writings, and his meaning cannot always be perceived, unless by that kind of illumination which is derived from a continual reference to his elementary opinions concerning vitality. With such elucidation, however, it may be discerned that in the lectures I last year had the honor of addressing to you, I did little more than deliver Mr. Hunter's opinions respecting diseases. Surely, He must have been a strong and clear sighted man, to see so far through obscurity; for till very recently no light had ever shone upon these subjects, but of late the vital functions have been so far illuminated, that any one who pleases may see that Mr. Hunter has

pourtrayed them, both in health and disease, with a distinctness and accuracy highly creditable to his penetration and discernment.

It seemed to me proper on this occasion, to review the subjects which engaged our attention during the preceding year, to lead you to the point where we stopped, and from which we are to proceed. Yet this review has occupied so much time, that I fear I cannot to day finish even one of the subjects next in succession; besides, I suspect it may have disqualified both myself and my audience from paying that close attention to them which is required in order to understand them. There is no class amongst the students of nature that ought more particularly to attend to the advice of Bacon, than that of surgeons. To look closely and intently at the subjects they are engaged in examining, in order

to discern what nature may perform or endure. Yet when the eye has been long employed in viewing distant objects, it does not speedily regain its myoptic powers, and adapt itself for such a scrutiny as we are next to take. I am, therefore, induced still to detain your attention to general topics.

The works and writings of Mr. Hunter have now been long before the public, so that all may be supposed equally qualified to form their own opinions of his merits, and pertinaciously to persist in eulogizing his character, may seem like arrogating to myself a power of judgment, and denying it to others. It is, however, the opportunities I have possessed, that have been the cause of the peculiarity of my sentiments and opinions; for I am old enough to remember the state of surgery and surgeons in this metropolis, previous to the gene-

ral promulgation of the new facts and opinions he added to the stock of professional knowledge, and I believe him to be the author of a great and important revolution in medical science; of this I am certain, that his works produced a complete revolution in my mind. Can I then do otherwise than acknowledge it? If I have to deliver facts and opinions which I am conscious I derived from another, can I appear before any audience, either of students or brethren in the profession, like the vain daw decorated with another's plumes, and liable to be detected and convicted as the very worst of pilferers, the purloiner of another's reputation. I should be ashamed on any occasion to feel either reluctant or afraid to render honor and praise to whom they are due, and in my opinion they are eminently due to Mr. Hunter.

Believing Mr. Hunter to have possessed

that rare combination of qualities, which, whenever it occurs, constitutes an eminent character, I mean genius, reflection, and industry; and that he has made a most important revolution in science; I cannot but regret the obscurity and intricacy of his language, which prevents his merits from being duly appreciated. I have furnished you with the only clue I know of to guide you through the labyrinth.

There are some who possessing great powers of reflection, and accuracy of judgement, yet from deficient knowledge of language, and of the generally received or adapted modes of forming opinions, or from not paying attention to the processes of their own minds in forming conclusions, are unable to explain their thoughts to others. I am ready to grant that there is an obscurity in Mr. Hunter's writings,

the result even of perplexity of thought. I know not how I can express my notions of the cause and effect of this obscurity more briefly and clearly than by a kind of metaphor I have been accustomed to use on this occasion. The products of the fermentation of that mixture of knowledge and talent which there was in the mind of Mr. Hunter, seem to me to have been completely formed. Yet the mass still remained in commotion, and sufficient time had not elapsed to allow of those products becoming perfectly clear. If I have not overrated the value of such products, I may urge some claim to approbation for having carefully collected and filtered them. To express my meaning without metaphor, for having sedulously endeavoured to make out Mr. Hunter's opinions, and tried, at least, to express them more distinctly. I heartily wish, indeed,

that his opinions had met with a better expositor; for I, like him, have been an unpremeditated author, who never learned the art of literary composition.

May I, however, venture to suggest another reason why some do not understand Mr. Hunter. If we wish to learn what another thinks, we must dispose our minds to receive instruction in the very manner it may be conveyed to us. We must relinquish, for a time, all attention to our own opinions, in order to learn those which are to be communicated. The same processes of mind must be gone through, or the same results cannot be obtained; we must follow in exactly the same steps, or we shall never arrive precisely at the same point. It is a very ancient observation, that self-conceit opposes a constant and sometimes an insurmountable barrier to instruction. "Seest thou a man wise in

his own conceit, there is more hope of a fool than of that man." Under the influence of these considerations, I do not wonder that young men, who will not take the pains necessary even to learn what Mr. Hunter thought respecting life, should be unable to understand his general writings, and suppose others to be as incapable as themselves.

I should not doubt of being able to induce any one, who had previously no decided objection, to think as I do respecting Mr. Hunter. Only a few of the facts on which I found my opinion of his character are at present before you; you must know them all, ere you can think and feel exactly as I do. Conscious that I may tire, nay even displease you, by thus obtruding my individual sentiments, resolving never to trespass on your patience in the same way again; but hereafter undeviatingly to pur-

sue the regular and beaten path of sober tuition, may I now claim your indulgence for a short time, whilst I advert to some other subjects, in which Mr. Hunter has done our profession and mankind in general important service.

When the description of the inflammatory diseases is concluded, the next subject that will engage your attention, is that of Diseases which the absorbing vessels are principally concerned in producing. To detach all the facts and opinions of Mr. Hunter, relative to this subject from the different parts of these lectures, and review them at present would be tedious and unprofitable; suffice it then to say, that in perfecting the knowledge of the physiology of the absorbing vessels, all nations allow great merit to the English. On this ground, even the French seem to admit the triumph

of English physiology. But by whom were we led on to this victory? By whose personal exertions was the laurel won? Surely by Mr. Hunter.

In the next succeeding subjects, the diseases induced by the action of poisons on the animal frame, when I consider the number and importance of the facts first noticed, and the inferences first drawn by Mr. Hunter, together with the consequences which have resulted from them, I must regard him, even if he had done nothing else, as a most important benefactor to our profession, and to the public.

I shall advert to no other subjects but merely add, that there is one sentiment which ought, I think, to attach every English surgeon to the memory of John Hunter. It is that esprit de corps which belongs to all associations of mankind. We should be grateful to him for he has exalted us, he has dignified our profession. Baron Haller commenting on the character and conduct of surgeons in general, expresses his surprize, that no one has been particularly eminent in that profession\*. To me it would have been surprizing had it been otherwise, considering the debased condition into which the profession had sunk, and in which it had remained for ages. I admit, that surgery was gradually rising, and would eventually have obtained its proper level amongst sciences; when Mr. Hunter suddenly raised it to its present ele-

(Bibliotheca Chirurgica Init. Tom. 2.)

<sup>\*</sup> In chirurgicis, nescio quomodo factum est, ut vix unquam perinde ut in aliis medicinæ partibus magnus aliquis vir eminuerit, qui late posteros sequaces habuerit.

vated situation, from which it can never be removed.

Mr. Hunter became a physiologist, and to become such a physiologist as he was, it was necessary that every variety of structure and of function should be surveyed in every variety of living being; that nature and nature's laws should be examined with the most minute attention, and upon the most extended scale; that parts should be observed with microscopic scrutiny, and yet that comprehensive views should be taken of the whole. Afterwards, with the enlightened eye of a physiologist, he surveyed the perverted actions of living bodies in the production of diseases.

Thus did he make surgery a science. It is the knowledge of health that enables us to understand the nature of disease. He connected pathology with physiology, and it is impossible in future ever to disjoin them. He raised a solid and permanent pillar of physiology, and he placed surgery on the top, where it must ever remain equal in rank and elevation to any other science, perhaps superior in utility to all. By so doing, it may, I think, with truth be affirmed of him,

—— opus exegit, quod nec Jovis ira, nec ignes Nec poterit ferrum, nec edax abolere vetustas.

There is no path to scientific improvement in our profession, but that which Mr. Hunter trod. It is the path of physiology. It is now fairly laid open to you. He has been your pioneer. Enter, and in proportion as you pursue it with vigour and constancy, so will you arrive at knowledge, and obtain renown. Do this; and it is

certain, no future Haller will have cause to express surprize, that Surgeons have been undistinguished characters, in the medical profession.

H. Bryer, Printer, Bridge street, Blackfriars, London.

