The Hunterian Oration for the year 1819 / delivered before the Royal College of Surgeons in London by John Abernethy.

(P)

ABERNETHY, J.

From the Author

THE

HUNTERIAN ORATION,

FOR THE YEAR

1819.

THE

HUNTERIAN ORATION,

FOR THE YEAR

1819.

DELIVERED BEFORE

THE ROYAL COLLEGE OF SURGEONS,

IN LONDON;

BY

JOHN ABERNETHY, F.R.S., &c.

SURGEON TO ST. BARTHOLOMEW'S AND CHRIST'S HOSPITALS.

LONDON:

Printed by Strahan and Spottiswoode, Printers-Street;

FOR LONGMAN, HURST, REES, ORME, AND BROWN,

PATERNOSTER-ROW.

1819.

HUNTERIAN ORATION,

1819.

It is the expressed intention of the founders of this oration, that it should be rendered contributory to the honour of surgery, and of its intelligent professors; which design cannot, in my opinion, be better accomplished, than by showing what surgery really is; the nature and extent of the knowledge requisite for its clear comprehension; the intellect and talent necessary for its successful practice.

Had surgery and surgeons been merely what their names imply, handywork and handicrafts, I never would have appeared before you, Gentlemen, to do them honour. For honour is due alone to intellect, and can be paid to nothing else. Why do we

honour those whose literary labours stand pre-eminent; or those who have exposed, or sacrificed their lives in the cause of their country, or in that of moral obligation? Is it not on account of their having evinced superior powers, or firmness of mind? They have thus done honour to the whole human race, and can only be repaid in the same coin; we return to them the tribute of honour, in proportion as they have conferred it on us. We indeed honour rank, but then it is either in blind obedience to the laws of custom, or because we associate the opinion of superior intelligence and elevation of mind with the possession of a dignified station. *

Now, to show what surgery really is, it becomes necessary to divest it of that garb with which it has been clothed and obscured in times of ignorance; and it is useful to revert to the history of former times, in order to observe the circumstances which have promoted or retarded the progress of the medical sciences, or communicated to

* The good qualities of the mind excite and engage our respect or esteem.

them that bias, by which they have been directed to their present situation.

Medicine, or the science which has for its object the prevention and cure of diseases, was held in the highest respect by ancient nations, and its most eminent professors were even venerated. But, surely, it was the beneficent object only of the science that attracted their applause and gratitude; for the means by which the object was to be accomplished were either not contemplated, or were merely supposed to be known. Various sovereigns have, doubtless, greatly promoted this science by their patronage, and encouragement ought to be given to it, as I shall afterwards show, not only by the government of countries, but also by the people in general. The successors of Alexander of Macedon first resolutely opposed the natural feelings and prejudices of mankind, by patronising the dissection of human bodies at Alexandria; which city they had made the great depository of knowledge, by the collection of an immense library, and which they also strove to make a splendid seat of science, and source of instruction.

It was at Alexandria, that persons in general first possessed the ready means of knowing what others knew and thought, by consulting their writings collected in its stupendous library. How different must have been the state of learning and learned men in ancient and in modern times! What surprising changes has the invention of printing produced! An ancient student of any subject of nature or science must have sought for the information which others possessed, by distant visits, to procure the perusal of any work of celebrity, or the conversation of those engaged in the same pursuits. His knowledge, therefore, must chiefly have resulted from his own exertions, and if he deemed it worthy of being recorded for the benefit of others, he knew that it must be communicated to them very gradually and slowly. His fame, as a discoverer, or improver of science, could never spread so as to reverberate to his own ears. His reputation must necessarily be of slow growth, and therefore his endeavour would be to make it lasting. As he could not compare his knowledge with that of others, he would strive to make his own perfect,

by completely mastering the subject he had engaged with, so that none should be able to do more. But now, when, by an industrious education, any one may possess himself of the knowledge of the whole world with respect to any subject of nature, art, or science; now, when every accession of knowledge is published at annual, quarterly, or monthly periods; every little discovery is at once proclaimed, lest its author should be anticipated; and persons in general become desirous of contending for superiority more with one another, than with the subject, or with themselves. Yet this ready communication of knowledge greatly tends to its increase, by exciting general emulation and co-operation.

It was at Alexandria, also, that persons of the medical profession first possessed an opportunity of studying the subject-matter of medical science, the structure and functions of the parts of the human body. How absurd should we deem the conduct of a mechanic, whose business it was to rectify the errors of any complex machine, should he merely provide himself with the finest and fittest

tools for the purpose, and neglect to learn its mechanism, by which alone he can be able to discover the causes of the error, or stoppage of its different movements, and consequently what is wanting to be done, to render it again perfect or useful. Yet equally absurd would be the conduct of medical men, were they to study botany, pharmacy, chemistry, and natural philosophy, searching indeed through all the paths of nature, and the stores of art, for means of cure, and yet neglect anatomy, by which alone they can be able to distinguish the nature of the difference between health and disease, and consequently what is requisite to reconvert the latter into the former; which is the only circumstance that can render medicine a science.

It seems to be my fate, Gentlemen, whenever I address you, to be doomed to speak of the importance of opinions; yet I cannot avoid it, the necessity of the case absolutely demands it; for the reasoning powers of man, which, when well directed, lead to the discovery of truth, and the formation of useful opinions, when misemployed, elicit

nothing but error and pernicious notions. It is a very great but very common misemployment of our reasoning powers, to draw inferences from facts belonging to different subjects, which are incommensurate with one another. Such irrelevant facts have been often designated by the whimsical and contradictory expression of false facts. We are indeed sometimes induced to reason from analogy, but then the similarity of the facts is so precise, as to warrant us in believing that the subjects, concerning which we thus comparatively reason, are essentially alike.

Now without any knowledge of anatomy, or the animal economy, persons of the medical profession, by drawing inferences from mixed facts, might suppose, that a fire was kindled throughout the body to warm and cherish it, which, if in excess, might set our juices into fermentation, and thus produce partial or general disorder; they might suppose, that there were elements in the body, which ought to be combined in definite proportions, and that different diseases might result from the excess or deficiency

of one or other of these elements. They might suppose, that diseases were of an acid or of an alkaline nature; they might say, that there were powers, capable of performing functions, nay even poetically imagine essences endowed with such powers, and speak of animæ presiding over the different functions, and of an archæus or master-workman superintending the whole. You know, Gentlemen, that all this and more of the same kind has been thought and said by reputed sages of the medical profession.

Since, then, reasoning from false, insufficient, or irrelevant premises is productive of error, we cannot wonder, that when medical men in general first began to reason on the causes and nature of diseases, and the effects of remedies, if their speculations were wild, and the conduct which such opinions gave rise to, highly injurious. We can feel no surprise, therefore, that a large party of the medical profession should segregate themselves, and resolutely interdict the use of reasoning in medical practice, steadfastly resolving, in their conduct to be guided solely by the dictates of experience.

Neither indeed can we wonder, that even erring reason still found advocates in the minds of men. Now you know, Gentlemen, that not very long after the formation of the Alexandrian school, in the beginning of the second century, before the Christian æra, Serapion and Phillinus, pupils of Herophilus, were the founders of a sect called the empiric, which was numerous, highly respectable, and which long continued to flourish, whilst the remaining party of the medical profession were distinguished by the appellation of the dogmatic or rational sect. In the very feeble and almost blind state attendant on the infancy of medical science, a caution not to attempt to advance, unless supported and conducted by an unerring guide, seemed really requisite, yet to prohibit such endeavours in the present vigorous and enlightened state of medical science, would be as preposterous as to recommend the conduct proper to be pursued in infancy, to be continued during the whole state of manhood. Though much might be said on this subject, it really seems unnecessary to do more than to remind you, Gentlemen, that the sagacious Lord Bacon has,

in this respect also, well displayed the results of different dispositions or powers of mind, by the following simile. "The empirics," says he, "like ants, only lay by stores and use them; the rationalists, like spiders, spin webs out of themselves; but the bee takes a middle course, collecting her matter from the flowers of the field and garden, and digesting, and elaborating it by her native powers."

It was shortly after the establishment of the Alexandrian school, that, as Celsus informs us, the practice of medicine was first separated into three parts, and each part consigned to a different person, one of whom was supposed to cure diseases by compounds of drugs and other substances; another by regimen and plans of diet; and the third by manual operations and instruments. This partition seems to have been both an effect and a cause of that confusion betweeu the object of medicine, and the means of accomplishing it, which has obtained more or less ever since that period. The bulk of medical knowledge, was, however, at that time too diminutive, to permit

this subdivision to be continued, and we find succeeding authors treat equally on all these curative measures.

The advantages which we derive from anatomical knowledge are, that it enables us to judge of the nature and probable event of injuries and diseases, by the exact information we possess of the situation and connexions of every part of the body; that it enables us to perform the operations of surgery with confidence in ourselves, and security to our patients; moreover, a correct knowledge of structure is the only foundation of all knowledge of function, without which, we can never be able to distinguish the nature of the difference between health and disease, nor consequently what is requisite to reconvert the latter into the former, which, I repeat, is the only circumstance that can render medicine a science. Now, though the dissections at the Alexandrian school, were by no means so perfect as to produce any of the important consequences derivable from anatomy, yet they led the way to the general investigation of structure and function, and to the for-

mation of opinions deduced from the facts belonging to the subject under consideration. The body of the monkey so much resembles that of man, that a moderately good idea of the latter may be obtained by the examination of the former; the desire to understand function would also lead to experimental enquiry; and consequently we find Galen, whom they say had passed several years at the Alexandrian school, making various experiments on animals, to determine the office of different parts of the body.

Medicine was, doubtless, much promoted by the opportunities of information which the Alexandrian school afforded; and it seems to have proceeded as prosperously as could be expected, in the still very deficient state of elementary knowledge, for several centuries; when a revolution happened, by which all the sciences of southern Europe were in common overthrown, and their lights extinguished, so that a great district of the world was involved in darkness and ignorance for many ages. As the account which I am giving of the causes that pro-

moted, retarded, or variously affected the progress of the medical sciences, will not be clearly intelligible, without adverting to this revolution, I may be excused if I briefly endeavour to revive it in your remembrance. It was towards the latter end of the fifth century, that the hardy nations of the north of Europe burst like a deluge into the Italian territories of the degenerate Romans, bearing down before them the ancient seat of their government, which, having previously removed to Constantinople, was still able to oppose a mound that checked the further progress of this inundation. In the beginning of the seventh century, Mahomet established his religion and dominion in the East, subduing all Arabia; and his successors extended their empire over Palestine and Persia, Egypt, and the northern coast of Africa, from whence their influence was continued over those Moors, who had invaded and subdued the kingdom of Spain: such was the extent of the Saracen dominion. But the Mahometans were prevented from entering Europe on the east by the Roman government at Constantinople. The territories of the Romans were much di-

minished, and were assailed on various parts of their frontier. The empire, however, was still superior to these attacks, and according to the simile of a late elegant writer, it seemed like the trunk of an old tree, which still remained vigorous and unshaken by the winds which assaulted it, and had stripped it of its branches. In the territory protected by the last exertion of the Roman power, science and art still survived, though in a state of rapid decline. Here the works of the Grecian and Roman writers on medicine, were chiefly preserved, and their languages were spoken. Here too, when the people in general had become illiterate, ecclesiastical scholars, who had read these authors, took upon themselves to give medical advice, but refused to shed blood, or dress wounds or sores, which task devolved on their servants. It was here, therefore, that surgery first made its public appearance, clothed in the garb of a menial.

Anatomy was wholly neglected by the Arabians, nor was it till the beginning of the fourteenth century, that Mondini made public dissections in Italy, and by

degrees, other nations acquired " that useful boldness." The zeal of the great painters, who began to flourish towards the close of the next century, and the patronage afforded to them, greatly contributed to the suppression of the public prejudice against dissection in Italy. Michael Angelo, Raphael, Leonardo da Vinci, and Albert Durer, were all either frequent dissectors, or draftsmen of dissected bodies. It is curious to observe, how speedily in general we reconcile our minds to that which custom has rendered familiar. The dissection of the bodies of persons who die in the hospitals of Paris, produces at present no indignation, no sensation in the public mind. Yet even in the time of Haller, the laws and prejudices against purloining a dead body, were so strong, that he left France with all possible speed, lest the receiver should be considered as bad as the thief.

It was not, however, until the sixteenth century, that anatomy made any considerable advances, when some great anatomists distinguished themselves, particularly Eustachius and Fallopius in Italy, Sylvius and

Vesalius in France. Vesalius pursued his anatomical enquiries with so much ardor and constancy, that he was able to publish seven large folio volumes on the anatomy of the human body, before he was 29 years of age (1542). These books, which entitle him to the greatest gratitude of posterity, were to himself, however, the cause of much vexation and trouble. Even at that time, the authority of Galen was held in such high respect, that when Vesalius showed his errors, and his ignorance of the structure of the human body, the hatred of all was turned against the defamer. People could not bear to be set right by so young a man, and even his preceptor Sylvius denounced perpetual enmity against him. I need not tell my present auditors what scrapes Vesalius got into, or what injuries he sustained, in consequence of the public prejudice against dissection.

After human anatomy had become moderately well known, the different nations of Europe were involved in war, and the same attention was not paid to the support of academical institutions, for teaching

anatomy and medicine. Therefore, anatomists again had recourse to the dissection of animals, from which, however, they derived very important advantages. They were thus led to an extensive knowledge of the comparative structure of living beings in general, and to make observations and experiments illustrative of function. So that by these means, were all the paths leading to medical science fairly thrown open to enquirers.

I must now relate some ridiculous circumstances, which, however, gave a considerable bias to the progress of the medical sciences. The priests, merely because they were able to read the Greek and Roman authors on medicine, were the principal physicians, during the dark ages, as I may call them, of these sciences. They became intimate with the barbers, because the latter were frequently employed to shave the heads of the priests, according to the uniform of their order. The priests also frequently employed the barbers to shave the heads of patients, before they prescribed washes to cool the fever of the brain, or

blisters to draw the peccant humours from the surface. Finding these fellows handy with edge tools, the priests taught them to bleed and perform such little operations as they were competent to direct, as well as to make salves and poultices, and to dress wounds and sores. Such was the origin of barber-surgery. When, however, the Popes perceived that the medical practice of the priests took them from their proper calling, and obliged them after various edicts, reluctantly to relinquish it, the office of physician was then adopted by other scholars upon the same claim or pretension, that of being able to read the Greek and Roman writers on medicine; and ever since, scholastic learning, and academical honours, have been considered as essential attributes to the character of a physician.

In the fourteenth century, these barbers and reputed surgeons pushed themselves forwards into the practice of surgery in France, to a degree that induced the surgeons in ordinary to petition the legislature to interfere, and an order was obtained that the barbers should not be permitted to prac-

tise, except in slight cases. In process of time, however, the barbers attended lectures, and became as well informed as the inferior class of surgeons, and being still patronised and instructed by their old friends the learned doctors, they at length obtained an establishment as regular practitioners in France, under the title of barber-surgeons. Of this order was Ambrose Paré, a man of original observation, great candour, and abundant experience, whose works were well calculated to correct the bad and cruel surgery of those times.

Wherever the priests practised as physicians, the barbers performed the offices of surgeons. As, likewise, medical knowledge radiated from Italy to the northern nations of Europe, so they must have received the information mixed with any absurdity which it might have taken up in its passage; and this, if we had even the discernment to distinguish, we seem to have wanted the resolution to reject, for the copartnership between surgery and shaving has been but newly dissolved in this country. "Would heart of man e'er think it,

but you'll be silent." This foolery was continued so nearly to the present time, that even I myself have often doft my cap to barber-surgeons. Edward the Fourth, in the year 1461, granted a charter of incorporation and privilege to barber-surgeons; and though the distinct nature of the two professions gradually became more and more apparent, yet they were not separated till nearly three centuries had elapsed, till the year 1745.

The legitimate practice of surgery did not, however, remain uncultivated nor unpatronised by different sovereigns. My time does not permit me to relate various instances, and I question if more than one can be adduced, in which the means adopted were judicious and efficient. Louis the Fourteenth, from being continually engaged in war, seems first to have clearly discerned the nature and importance of surgery, and the proper measures by which it might and ought to be promoted. He established hospitals, colleges, and professorships; he ordered that lectures on surgery should be given by surgeons of acknowledged ability,

and that bodies for dissection should be liberally supplied. By these means, he produced such a spirit of enquiry and emulation amongst the members of our profession, that the French surgeons soon surpassed those of all other nations, and pupils from every part of Europe flocked to Paris to learn anatomy and surgery. As a further consequence of this patronage, I may mention that it gave rise to that very excellent work, the Memoirs of the French Academy of Surgery, the contributors to which were laborious students of their profession, who regularly registered and arranged all the knowledge promulgated by preceding authors, to which they added their own observations and experimental enquiries.

It would, in my opinion, be honourable to the surgeons of any nation to combine and produce a rival work (due allowances being made for the progressive improvement of the science of surgery); for to me, these memoirs seem, even at present, to stand as it were alone, and in a state of lofty superiority. Let me not, however, omit to mention that before these memoirs came

forth, a similar publication was set on foot in this country under the patronage of the first Professor Monro of Edinburgh. * It is unnecessary for me to tell you, Gentlemen, of the number and importance of the periodical publications of our own country. The facility of publication, which such works afford, prevents useful information from being lost, whilst they keep alive amongst the members of our profession in general a spirit of enquiry, emulation, and co-operation.

Having thus adverted to the principal circumstances which have influenced the progress of the medical sciences, it seems only necessary to show the improvements made by the two late eminent physiologists Haller and Hunter, in order to place distinctly within your view the present state of these sciences in our own country, which is my chief object in this address; for indeed it would be but of little use to look back, except in order to determine the di-

* The Edinburgh Medical Essays and Observations were first published in 1732. The Memoirs of the French Academy of Surgery in 1743.

rection and means by which we are likely to proceed with the greatest advantage.

Albert Von Haller was born at Berne, in Switzerland, in 1708, and died there in 1777. He possessed a well proportioned assemblance of vigorous intellectual faculties. His memory was surprisingly quick and retentive, scarcely any language was unknown to him, and all those in which medical records are written he both read and wrote with facility. He had great industry, and made himself acquainted with all that others knew or thought relative to our professional studies. He had great method and discrimination, and regularly registered all the knowledge he obtained by reading or otherwise. Of his talents in selecting, condensing, and arranging information from successive publications, his numerous bibliothecæ afford ample evidence. Haller went to Leyden in 1725, where he became a favourite pupil of Boerhaave, and a fellow-student of Albinus. He also took opportunities of visiting Ruysch, to observe his anatomical labours. After he had finished his studies and his travels, he returned to Berne, and in 1734 he taught

anatomy in an amphitheatre which the republic had established for that purpose; he was also physician to an hospital, and entrusted with the care of the public library, and cabinet of medals. In the first year that he undertook the latter office he formed a regular catalogue of all the books, and arranged and described in chronological order more than 5000 antique medals. King George the Second being desirous of promoting the reputation of the University of Göttingen, invited Haller to accept of an anatomical, surgical, and botanical professorship, which he established for him; and Haller accepted this invitation. The opportunities of information at the school of Berne were too small for the mind of Haller, and he there met with the usual difficulty of procuring bodies for dissection.

Haller resided in Gottingen seventeen years, and made physiology his principal study. He found the knowledge of this subject encumbered and perplexed with false and absurd assertions and doctrines, which he removed, and endeavoured to make physiology as much like science as possible. He saw the necessity for an exact

knowledge of anatomy, both human and comparative; for any reasoning with respect to function which is incompatible with the facts relating to structure must be invalid. He saw no mode by which function could be scientifically investigated, except by experiments made on living animals; yet in detailing these, we find frequent evidences of his being disturbed by those "compunctious visitings of nature" which every good mind must necessarily feel at inflicting sufferings on unresisting or subdued sensitive creatures, over which nature has given us dominion. He examined all the principal vital functions with particular attention, yet he found no spring of vital action except in irritability, which he believed to be a property of the muscular fibre alone. He investigated the process of formation, both in the growth and reparation of bones, and in the formation of the embryon in the egg, which he believed to be developed. It was not, however, till after thirty years of labour that he thought himself warranted to publish his Elementa Physiologiæ, a work that certainly contains all that was then known on physiology, together with the alterations and improvements made by his

own enquiries and reflections; and its supreme excellence, at the time of its publication, was testified by the applause of every nation, and by proffers of invitation and reward to its author by various governments. The Nostalgia of Haller, however, induced him after seventeen years' residence in Göttingen to return to Berne, where he became a magistrate and politician, without relinquishing his former studies. Such was the esteem with which Haller was regarded, wherever the sciences were cultivated, that most foreigners of distinction, and even princes, in passing through Switzerland, paid homage by their visits to the illustrious Haller.

John Hunter was born in the county of Lanark, in Scotland, in the year 1728, and he died in London in 1793. He had received but little education; his mind had not been taught to act in imitation of others; he disliked to read, as much as he liked to think. When Mr. Cline addressed the College on this anniversary, he said, "Much as Mr. Hunter did, he thought still more. He has often told me, his de-

light was, to think." Mr. Hunter did not begin to learn anatomy till he was eighteen years of age; but when the book of nature lay exposed to his view, he read it with facility, interest, intelligence, and diligence; and the idle youth became a most industrious man. Like Haller, he devoted himself to physiology. Such minds could not but be highly sensible of the interest and importance of this study: they could not be contented with the mere notation of facts, without enquiring into their probable causes and uses. Like Haller, he became an exact and comprehensive anatomist. No structure, nor substance wanting structure, yet possessing life, escaped his strictest scrutiny. Like Haller, he investigated the nature of function by experiment, yet how different is the conclusion of the labours and reflections, or the principles of the physiological doctrines of these almost contemporary and very extraordinary characters;—the one enriched from the possessions of all others, and endowed with great degrees of intellectual powers; the other, rich only in natural genius and talent.

Although I have not now to speak of Mr. Hunter's physiological opinions, yet it seems proper to observe on the present occasion, that he was not satisfied with those of Haller, which he had heard delivered in his brother's lectures; and therefore he examined every subject for himself. He seems also to have wrought like an ancient student, not striving for victory with others, but contending with the subject, and with himself. In the whole of his labours and reasonings, we may perceive a most diligent search for every fact belonging to the subject he was investigating, to form the basis on which he reasons; the most anxious solicitude to describe facts with accuracy, and to avoid the least misrepresentation of them; and in his reasonings, I can perceive no inference deduced from insufficient or irrelevant premises. It is this mode of proceeding only, as I have formerly observed, which can give value and currency to the opinions of any one. Mr. Hunter was convinced that life was not the result of organization; and though many may have conjectured life to be something not dependent on structure,

Mr. Hunter was the first who deduced the opinion, as a legitimate consequence of legitimate facts, that life actually constructed the very means by which it carried on its various processes, and that it could operate in semifluid and even fluid substances. His intelligent mind further perceived that no system of physiology could be perfect that did not equally explain the morbid as well as the healthy actions of life. I may say, that he discovered a vital principle in physiology active in producing correct pathology. Therefore, he appears to me as a new character in our profession; and briefly to express his peculiar merit, I may call him the first and great physionosologist or expositor of the nature of disease.

Haller was a physician, Hunter a surgeon. both were anatomists and physiologists, both therefore equally qualified, as far as their knowledge of the animal economy extended, to discern the nature and mode of cure of the diseases in either department of medical science; yet, doubt-

less, each most competent to decide upon the best means for effecting the latter purpose in that to which he had been educated, and his attention chiefly directed. Medicine is one and indivisible: it must be learned as a whole, for no part can be understood, if studied separately. The physician must understand surgery, and the surgeon the medical treatment of diseases. Indeed, it is from the evidence afforded by external diseases, that we are enabled to judge of the nature and progress of those that are internal; which appeared so clearly to Boerhaave, that though his object was to teach his pupils the practice of medicine, he began by teaching them surgery.

Yet as medical science is so very extensive, and such accurate knowledge of its various subjects is required, the division of it into two principal departments, which custom has established, may be continued with great propriety and advantage. So much knowledge and talent is requiste in the division of surgery, for the correct re-adjustment of parts which have been severed and separ-

ated by violence; for ensuring their unvarying motionless position, so essential to their tranquillity and re-union; for suggesting and applying suitable means to soothe or correct the morbid actions of susceptible surfaces; for discriminating the great variety of external local diseases; and for performing the various and complicated operations of surgery; that it requires the whole time and ability of any individual to attain even moderate perfection in this department of medical science. Whilst the no less extensive and important task of unravelling the intricacies of the symptoms produced by internal diseases, so as to trace them to their several sources, and consequently to decide upon their proper treatment; and of modifying the remedies employed, so as to adapt them to the varieties of circumstances and constitutions; equally demands the concentrated observation and reflection of the physician. Indeed the division of medicine into two principal departments, which custom has established, seems also to have received the fullest sanction of experience; and if we were not to acquiesce in it, we should subvert the institutions of society,

and throw the whole profession into confusion. So much, also, is to be known and done in either department, that if we invade each other's province, we must neglect properly to cultivate and improve our own.

There are those who think that a still further subdivision of the subjects of medicine might lead to a more perfect knowledge of them. Yet the ultimate structure of all parts of the body being the same, their diseases must be similar, and treated upon the same general principles. If also, to investigate and understand any subject in nature, art, or science, a great deal of collateral knowledge be required, which serves like light shining from various points, to illuminate the object of our attention; when we examine particular diseases by the lights emanating from others, here such lights will indeed be found to be most apposite and illustrative. It is by comparing the nature and treatment of diseases with one another, that we improve our knowledge and practice with respect to those of particular organs, or

portions of the body. If, however, after an enlarged education, if after knowing the whole, our observations were exclusively directed to a part, it is probable that increase of knowledge might result from such concentration of attention. Yet those, in general, who study the diseases of particular organs or portions of the body, think that they may save themselves the trouble of more extensive research, and thus their views become as circumscribed as the objects of their attention.

It is both evident to reason, and manifested by the history of medical science, or by experience, that it can only be attained and improved in one way. We must understand structure and function, and the changes produced in each by disorder and disease. There is no short cut, nor "royal road," to the attainment of medical knowledge. The path which we have to pursue is long, difficult, and unsafe. In our progress, we must frequently take up our abode with death and corruption; we must adopt loathsome diseases for

our familiar associates, or we shall never be thoroughly acquainted with their nature and dispositions; we must risk, nay even injure, our own health in order to be able to preserve or restore that of others. Yet if we do this, our profession will be held in the highest respect; not as in ancient times, merely on account of the beneficence of its object, but because it will be further perceived, that the means are adequate to its accomplishment.

If, however, we are disposed thus to labour for the public good, some concession, co-operation, and encouragement on the part of the public, may be by us reasonably expected. Anatomical knowledge is the only foundation on which the structure of medical science can be built. Without this, we should but increase the sufferings of those afflicted with diseases, and endanger their lives. Opportunities of dissection should therefore be afforded to us. The bodies of persons dying in the hospitals abroad are given to the surgeons for dissection, and even with the acqui-

escence of the public. In other countries it is considered, that those who have been supported by the public, when unable to support themselves, die in its debt, and that their remains may therefore, with justice, be converted to the public use. In England, however, the indigent who suffer from illness and injury are supported and relieved chiefly by the liberality of that benevolence which is so creditable to our national character; and much as I wish for the promotion of medical knowledge, I should be sorry if the bodies of the poor were to be considered as public property without reserve in our own country. For better would it seem to me, that medical science should cease, and our bodily sufferings continue, than that the natural rights and best feelings of humanity should not be equally respected in all classes of society; or that merely because persons are poor, they should be prevented from paying the last tribute of respect and regard to their departed relatives by attending their remains to the grave. Yet if the directors of

hospitals, poor-houses, and prisons, were to establish it as a regulation, that the body of any person dying in those institutions, unclaimable by immediate relatives, should be given to the surgeon of the establishment for dissection, upon his signing an obligation so to dispose of it, as to give no offence to decency or humanity, I am convinced, that it would greatly tend to the increase of anatomical knowledge amongst the members of our profession in general, and consequently to the public good. Or indeed it might be established as a law, that the body of any person of whatsoever rank or fortune, unclaimable by immediate relatives, should be subjected to dissection; and thus a great public good might be obtained, without any infringement on the equality of rights. Other and better expedients may indeed be devised; and the subject is so important as to deserve general consideration.

Yet, upon mentioning the foregoing suggestions to various persons, I have been uniformly answered, that the public would

never consent to such regulations; for their effect would be, to deny the body the rite of Christian burial. But that the funeral service availeth not to the dead is made manifest, even by that sublime ritual itself, which places before our view the valueless nature of the dead body by the most emphatic language. We therefore commit the body to the ground; earth to earth, ashes to ashes, dust to dust. That is to say, confident it must, according to the laws of nature, resolve itself into other forms, and become again an undistinguished part of the common constituent matter of the universe. Religion also "doth teach us for to render the deeds of mercy" and benevolence to those that want them, which deeds cannot be properly administered to such as suffer from illness or injury, unless in consequence of our obtaining an accurate knowledge of the structure of the human body.

There is also another point on which some concession on the part of the public is required for the promotion of medical know-

ledge. We are sometimes called upon to examine the bodies of the dead, in hopes of our being able to discover the cause of death for the satisfaction of their relatives, when such examination affords us no additional knowledge; for we see only the common appearances of disease with which we are familiarly acquainted: and yet we are frequently denied the same opportunity when we most earnestly solicit it, from the belief that we shall obtain important information by the investigation. Wishing to exhibit the effect of such refusal by some striking instance, I am tempted to relate an anecdote of Mr. Hunter, even though some may not think it to his credit. Mr. Hunter, who was never afraid of speaking his mind, had attended, in concert with another surgeon, a fatal case of disease in the child of a gentleman of opulence and worldly consequence. Mr. Hunter had been much interested by the case: he had considered it, as he was wont to do, deliberately and intently; and believing that much good might result from ascertaining its nature, he had requested permission to examine the body,

which was refused. He went to the house of the father, in company with the other surgeon, and tried all his art of rhetoric and persuasion, but in vain. When he became convinced that his object was unattainable, he was standing, said the relator of this anecdote, with his back to the fire, and he put his hands into his pockets. "I saw," continued the narrator, "by his countenance, that a storm was brewing in his mind." Mr. Hunter, however, gravely and calmly addressed the master of the house in the following manner: "Then, Sir, you will not permit the examination to be made."— "It is impossible," was the absurd reply. "Then, Sir," said Mr. Hunter, "I heartily hope, that yourself, and all your family, nay, all your friends, may die of the same disease, and that no one may be able to afford any assistance;" and so saying, he departed. Such a wish could never, I am convinced, have originated in his benevolent mind; as indeed is manifested by the very terms of it, which involve the innocent with the offending. Temporary irritation alone incited him to adopt this mode of expressing his strong conviction of what it became

equally his duty to perform, and theirs to permit, for the attainment of knowledge, the most important to humanity. It is easy to perceive the causes of reluctance in general to such examinations. Persons question if their departed relative would have approved of it; they think it disrespectful, or that some unnecessary or indecent exposure of the body may take place; they suspect that we perform these acts with levity, or in a frame of mind discordant with their present feelings. It is for us to convince them by our manners and conduct, that we only seek for knowledge; and that we do so with dispositions suitable to the solemnity of the occasion, and in sympathy with their feelings, and distress.

Having thus told you, gentlemen, what appears to me chiefly necessary to be done, on our part and on that of the public, for the promotion of medical science, I take the liberty of further observing, that to some it might seem strange that persons in general do not take more concern about it, when it is manifestly of vital importance to them. This College, sensible of the great injury

which the public sustains from the ignorance and fraud of empirics, petitioned parliament to grant it a power of control, by process of law, over those who set up to practise surgery, without having undergone an examination, to testify their education or ability: a power not likely to be exercised except in cases of flagrant offence; a power also determinable in its degree and effect by impartial judges, by the judges of the land. To some of the members of the House of Commons, however, this petition appeared like an attempt to procure a monopoly of surgical practice, and it was rejected. The College still persevering in its endeavour to prevent a great public evil, and desirous of freeing itself from all imputation of being actuated by interested motives, brought forwards a new bill, entirely of a public nature, which was also rejected; so that, in these transactions, the College may be said to have lost every thing but its honour.

The whole history of medical science affords no instance of its promotion by any individual, at all comparable with that

produced by the man whose natal day we are now met to commemorate. It is indeed a surprising example of the scarcely to be expected improvement which may be effected by the industry of an individual when exerted in a right direction, and aided by that intelligence which reviews accumulated facts, compares, discriminates, combines, and arranges them; whilst it also draws cautious inferences from them, and suggests new subjects of enquiry, and new modes of research.

Of the genius, reflection, talents, and industry of John Hunter I have already spoken; but to commemorate him on the present occasion, I will tell you what I observed relative to the peculiar and distinguishing characters of his mind. Surely the lineaments of the mind must be more interesting than the form and features of the body. It is the character and conduct of the former which chiefly excite our interest respecting the latter; and if any one were desirous of knowing what manner of man Mr. Hunter was, I could not wish to refer them to a better resemblance

of him, than that drawn by Sir Joshua Reynolds. Perhaps my knowledge of Mr. Hunter's character may aid my imagination; yet when I look on that picture, I feel as if I saw before me an old man, a shrewd man, aye, and a benevolent man too, in the act and attitude of habitual thought.

Sir Everard Home, who had great opportunities of knowing Mr. Hunter, has represented him as an honest, independent, perfectly candid, and most industrious man, indifferent about money, and much attached to science. Now though I believe this sketch to be perfectly correct, yet there were finer traits of character requiring to be depicted ere I should recognise the intellectual resemblance of John Hunter. Those who make the study of nature, and of science, or the attainment of moral good, the ultimate object of their endeavours, are candid, disinterested, benevolent, and humble minded. They openly avow their designs, solicit the assistance of others, and assist them in return; they note the slow degrees by

which they advance in knowledge, their frequent failures, and the imperfection of their own powers; they also compare the aggregate of their advances with the illimitable nature of those objects to which they have merely approximated. Whilst those who make power, wealth, or any species of notoriety, the object of their ambition, are secret, selfish, suspicious, cunning, and conceited. In general, they are ashamed or afraid of avowing their designs, and therefore obliged to enveigle the co-operation of others. They suspect that they may be counteracted; and in proportion as they attain their ends, they feel elated with their own abilities, from the belief that no one but themselves could have atchieved them in the like manner and degree. The choice of our objects manifests the natural dispositions of our minds, which are confirmed and augmented in their pursuit.

Mr. Hunter was an excellent example of the former class of men. My desire to know why a man of such intellectual powers did not display them in a manner

more advantageous to his reputation first induced me to propose to him questions, merely in order to learn how he would answer them: yet this seeming desire of information on my part, acting on his benevolent mind, induced him to pay me much more attention than I had been accustomed to receive from others. He invited me to come to his house, to sit and converse with him. I now regret that I profited so little by the opportunities he offered me; but I was at that time ignorant of the value of the information which I might have derived from him. That benevolence was a predominant sentiment of Mr. Hunter's mind may be inferred from his fondness for animals, his aversion to operations, and from the zeal with which he assisted every poor man of merit. Upon mentioning my conviction on this point to a surgeon who knew him intimately, he replied, "I am sure I have reason to think so, for I was ill, and he kindly and diligently attended me: nay, he brought those of his medical friends to visit me in whose judgment he placed most confidence. My illness being, however, tedious, I was at

length obliged to go into the country for the recovery of my health. Mr. Hunter called on me before my departure, and said, 'I have been thinking, that you might want a little money; if so, I can procure you 200l.; though, in general, I am the most unlikely person in this town to have money at command.' I thanked him," continued the surgeon, "but told him, I had been more provident than might perhaps have been expected, therefore I did not want money. On my return to town, and re-establishment in business, which did not take place for a considerable time, I took an opportunity of expressing to Mr. Hunter, my continued sense of gratitude for his kindness in attending me, and for his offer of pecuniary assistance. 'Hah,' said he, 'I offer you money! that is droll, indeed; for I am the last person in this town to have money at command. I have entirely forgotten it. But of this I am assured, that what I offered, I meant to perform.'" Now, Gentlemen, I must restrict myself to a single instance in proof of the several propositions that I wish to substantiate,

instead of numbers which I could adduce.

The candour of Mr. Hunter's character was evident in all his actions. He readily told all he knew or thought upon every subject; and was pleased in assisting others to acquire knowledge. It is indeed highly improbable, that a wise and good man should be otherwise than candid. For wisdom teaches him not to form opinions but on sufficient grounds and consideration; and these he would freely reveal, being equally desirous that they should be corrected, if wrong, and acknowledged, if right. Sir Everard Home has said, that Mr. Hunter's disposition was "free from reserve, even to a fault; for it sometimes made him appear harsh." Yet harshness, I am convinced, could never have proceeded from a mind attuned like that of John Hunter. I do not wish to deny or conceal, that occasionally the candour and susceptibility of his character might incite him to express his vexation and indignation with a degree of energy and openness that would give offence, and fail to

produce the good resulting from mild remonstrance and explanation. Yet for this occasional want of temper many, and perfectly exculpatory causes may be stated.

Mr. Hunter's life was one of continual exertion, perplexity, and irritation. He was constantly engaged in the search and consideration of new facts. "My mind," said he to me, "is like a bee-hive;" and the simile struck me, on account of its correctness. For, in the midst of buz and apparent confusion, there was great order; regularity of structure; and abundant food, collected with incessant industry, from the choicest stores of nature.

It will be generally admitted, that the want of money would be an adequate cause of perplexity. Yet to Mr. Hunter, the very means by which the necessary supplies were to be procured proved sources of irritation. The search for money led him from the more congenial pursuit of knowledge. It broke into his arrangements; distracted his attention;

and we find him complaining of this, like one who had felt it sorely.

Those who far precede others must necessarily remain alone; and their actions often appear unaccountable, nay even extravagant, to their distant followers; who know not the causes that give rise to them, nor the effects which they are designed to produce. In such a situation stood Mr. Hunter with relation to his contemporaries. It was a comfortless precedence, for it deprived him of sympathy and social co-operation; and he felt that his labours and merits were not known, or fairly estimated.

None of these causes of irritation, however, in general disturbed the patience and good-humour of John Hunter, who found ample consolation, in thinking of what he had already done, and might still do, for the attainment of knowledge, the most important to humanity.

That Mr. Hunter had a very susceptible mind can scarcely be doubted. Sir Everard

Home informs us, that he would weep at the recital of a generous action; and when shame cannot prevent us from doing this, neither will fear deter us from expressing our indignation at one of an opposite nature. We are apt to misjudge one another. Few have the penetration of Sterne, and are capable of discerning how circumstances, trivial in themselves, by links of connection with the finer feelings of the mind, may produce the extremes of pain or pleasure. Mr. Hunter had befriended and professionally attended the family of a poor man of much talent as a painter. He afterwards requested him to paint the head of an animal. When the portrait came home, Mr. Hunter was delighted with it; but when he found it was accompanied with a bill to a much greater amount than would have been charged by any other artist, he was highly incensed. Can it be supposed, that it was the necessity for paying so much money, that made Mr. Hunter angry? No; it was ingratitude, which worse than the viper's fang had wounded him, and produced this paroxysm of irritation.

As a contrast, however, to that occasional want of temper which some may consider as a fault in the character of Mr. Hunter, I may mention that his habits of investigation, and his slowness in communicating his own opinions, had given him an admirable degree of patience and perseverance in accomplishing whatever he undertook, and this was conspicuous even in the common practice of his profession. In one of the cases which he has published, he says, — "After about an hour's conversation with the patient, I made out a few simple facts." If pressed for time, he was often known to say, "I cannot tell at present what to recommend: I must think of it." For to Mr. Hunter almost every case was a study, and so indeed it must be to all those who practise their profession as a science. I will here relate one out of many instances that I could adduce of the pains which he took, from benevolent motives, to convince persons of what seemed to him essential to their welfare. A strong ruddy-faced farmer had a disease, which induced Mr. Hunter to enjoin a total abstinence from fermented liquors. "Sir," said the farmer, "I assure

you that I am a very temperate man; I scarcely ever exceed three pints of ale in the day, and I never touch spirits." "But," said Mr. Hunter, "you must now drink nothing except water." "Sir," said the farmer, "that is impossible, for I cannot relinquish my employment; and you know, Sir, it is impossible to work without some support." Mr. Hunter perceiving that his patient was not likely to be readily convinced, enquired how many acres of land he cultivated, and what number of them was arable? He next asked, how many horses were kept upon the farm? and then boldly asserted, that they were too few in number for the quantity of land. The farmer maintained that they were sufficient, but was at length brought to confess, that they were worked hard. Allow me then, said Mr. Hunter, to enquire what it is that you give them to drink? — You see, gentlemen, that John Hunter, like Socrates, was well aware of the advantage of that mode of conducting an argument, by which the disputant is made to convince himself: though, I dare say, that he had never heard of its being employed by that philosopher. I have heard many patients speak of Mr.

Hunter, and none without a fond remembrance of his kindness and attention. I have indeed been told, even by them, that he was sometimes in a passion when he was vexed; which, I think, ought to have been excused, as it was the natural and almost inevitable consequence of the best dispositions of the human mind. This short-lived turbulence should, indeed, be treated with pity and indulgence, when it is the legitimate offspring of sensibility and integrity.*

That Mr. Hunter was an humble-minded man, may be inferred from the caution and diffidence which is a striking characteristic of all his scientific investigations. He has, doubtless, suppressed the communication of facts and experiments, manifesting a degree of labour and intelligence sufficient to give reputation to persons of ordinary character. Though he endeavoured to investigate the nature of diseases in order to understand their treatment; yet he never deviated from esta-

* An honest warmth, child of integrity.
SHAKSPEARE.

blished rules of practice without cogent reasons for his conduct. This I mention from being aware, that if we presume on our knowledge of the nature and treatment of diseases, we may, like the ancient dogmatists, do mischief. Mr. Hunter's constant saying was, "we are but beginning to learn our profession." That he was conscious of the importance of his investigations, that he saw by anticipation the good effects that might result from them, cannot be doubted; yet I have heard him declare, and I know he was accustomed to say, that he was not conscious of possessing any peculiar talent, and that if he had promoted professional knowledge, it seemed to him chiefly to have arisen from his disposition to distrust opinions and to examine every subject for himself.

Mr. Hunter was, moreover, a man of very considerable humour. His views of subjects in general were quick and peculiar, and when so disposed he could place them in very ludicrous points of view. I have known him to exert his talents in this way in a very entertaining manner; but though I could produce abundant proofs of my present

proposition, they would be unsuitable to the gravity proper to be maintained on this occasion. I have heard some express their wonder that very sensible men have sometimes condescended to appear foolish; yet it ought not to excite surprise, for it only shows the activity of their minds which occasionally relieve themselves from the uniformity of thoughtful exertion by sportive and irregular actions. They find it "*dulce desipere*," and have no fear, as others might have, to indulge themselves in this propensity. Thus strong and healthy people, after the labour of the day, derive recreation from the continued efforts of a lively dance, or some agile sport.

There is, however, one subject evincing Mr. Hunter's possession of the kind of talents I am now alluding to, to which I may advert on the present occasion, because it is connected with our professional concerns. Yet here also I must restrict myself to one instance selected from a considerable number, and I doubt if it be the best for my purpose. Mr. Hunter's sagacity led him

speedily to discover and detect those impositions which some persons are induced to practise on us. A patient in the hospital feigned to be afflicted with catalepsy, in which disorder, it is said, a person loses all consciousness and volition, yet remains in the very attitude in which they were suddenly seized with this temporary suspension of the intellectual functions. Mr. Hunter began to comment before the surrounding students on the strangeness of the latter circumstance, and as the man stood with his hand a little extended and elevated, he said, you see, gentlemen, that the hand is supported, merely in consequence of the muscles persevering in that action to which volition had excited them prior to the cataleptic seizure. I wonder, continued he, what additional weight they would support, and so saying, he slipped the noose of a cord round the wrist, and hung to the other end a small weight, which produced no alteration in the position of the hand. Then, after a short time, with a pair of scissors he imperceptibly snipped the cord. The weight fell to the ground, and the hand was as suddenly raised in the air by the increased effort

which volition had excited for the support of the additional weight. Thus was it manifested that the man possessed both consciousness and volition, and the impostor stood revealed.

Having thus told you, gentlemen, what appeared to me as distinguishing traits in the character of the man whom I have already eulogized for having made surgery a science; for having the penetration to discern the direct path of knowledge, and the talents and industry to remove all the obstacles which concealed or impeded its entrance; for having conducted us to a certain extent so prosperously, that it must be our own fault indeed if we do not advance to more perfect discoveries of still obscure and remote objects: — I may then conclude, that so long as surgeons feel an interest in the improvement and reputation of their profession, or a value for their own character as men of science, so long will the name of John Hunter be remembered by them with gratitude and respect: or in Virgil's beautiful and often quoted language I may say,

Semper honos, nomenque suum laudesque manebunt.

POSTSCRIPT.

This Oration comprehends the remainder of what I was desirous of saying with respect to the labours, opinions, and character of Mr. Hunter. It has been printed in this form, that it may be bound up with my lectures at the College, which are designed to exhibit Mr. Hunter's opinions of life and its functions in the states of health and disease. Yet, as my conduct in this publication has been lately aspersed by Mr. Lawrence, in a point which I should be always most eager to defend, though, I trust, it is one of the least vulnerable parts of my character, that of honesty and fair dealing; I feel under the necessity of adding a few words, and, for the first time in my life, of speaking of him, before the Public, in other terms than those of commendation. As an introduction to his lectures, just published, he has placed what he has chosen to call an answer to some charges which, he says, I have made against him. But as neither my own, nor Mr.

Lawrence's meaning or feelings can be understood by others without previous information, I must therefore mention, that from a very early period of his professional studies, he was accustomed to decry and scoff at what I taught as the opinions of Mr. Hunter respecting life and its functions. Yet as I could never find that he had any good reasons for this conduct, I continued to teach them in the midst of the controversy and derision of those students who had become his proselytes. As a teacher of young men I felt particularly anxious that they should possess just, benevolent, and honourable sentiments, and therefore was I interested in maintaining those opinions respecting life, which seem to warrant the further opinion of the distinct and independent nature of mind; whilst more particularly did I feel bound to maintain them, when the contrary assertions were unsupported by facts or arguments. *

* I have admitted the assertion that the brain is as much an organ of sensation and thought, as the liver and stomach are organs for the secretion of bile and gastric fluid: but the physiological question in dispute

When I had the honour of being appointed Professor of Anatomy and Surgery

---

is, how do these organs accomplish their respective functions? The opinion that the functions of life are the result of subtile principles commixed with the visible fabric of living beings, will, I believe, be soon generally admitted; and I contend that the liver and stomach prepare their respective fluids in consequence of their vital principles, and not merely as a result of their organization. Yet I cannot suppose that the brain produces our sensations and thoughts in the same manner. Indeed, it is impossible to suppose, as a poetical writer has humorously suggested with regard to Milton,

> That he from the glands of his brain
> Secreted his Paradise Lost.

Also, from the equal absurdity of supposing that the soft medullary fibres of the brain feel and think, the common sense of mankind will for ever revolt. As we cannot either suppose sensation to result from any motion or arrangement of insensible atoms, as we have reason to believe that all the vital processes are carried on in many instances without sensation, and that when it is added that its district is limited to the brain, so we seem compelled to admit that life influences, through the means of its actions and organization, something having the properties of perception, &c. is acted on by it in return. As Mr. Lawrence's late publication contains but a repetition of assertions which I have in general objected to, as he continues to harp upon words without attending to thoughts, and without even seeming to have noticed what I have said with relation to the subjects under discussion, I have nothing further to add to the foregoing lectures, except upon one point on which he has a little

to the Royal College of Surgeons, I began my lectures, for reasons which I have fully

---

enlarged. He maintains the assertion that the mind, like the body, is imbecile in youth as well as decrepit in age. Now that the processes and evidences of mind should be enfeebled and disturbed by corresponding states of the nervous system would be naturally expected; but that, under other circumstances, any evident difference in the intellectual functions is observable, is an assertion which will, I believe, on examination, be found to be incorrect.

Children are highly susceptible and prone to continual action. They are vividly affected by every impression, most of which also produce on them an effect which novelty gives to subjects even in adult life. Youth is the season for acquiring knowledge: reflection would but retard its attainment, and would be unavailing from deficiency of facts and experience. That the mind is often wayward and irrational in youth as well as in age, is apparent; but that it exhibits as powerful intellect when excited and when it possesses adequate means for its exertion in childhood, as at any period of life, must, I believe, be acknowledged on a full examination of the subject; which has been admirably displayed by the writings of Miss Edgeworth. That children also possess the more energetic qualities of mind, those which chiefly characterize its distinct and superior nature, in as great a degree as at any period of life, will not, I think, be denied by any who has carefully attended to their conduct. Yet surgeons possess particular opportunities of making such remarks, and the communication of instances, which are not to them very uncommon, may be useful in the general consideration of this sub-

explained in them, with an account of what I believed were Mr. Hunter's opinions respecting life; and to me, it would have seemed wise in the opposite party to have suffered these lectures gradually to have sunk

---

ject. When I first attended St. Bartholomew's Hospital, one of the old surgeons was a most benevolent man, whom all the patients loved. There was a little boy of five years old, whom this surgeon was to cut for the stone. The boy complained loudly, and struggled much, during the introduction of an instrument, which was but a preparatory step to the operation. The old man patted the child on the cheek and said, "You know, my good little boy, that I would not hurt you if I could help it." — "I know it, Sir," said the child, "and I will cry no more." He underwent a severe and tedious operation. His teeth were clinched, his lips were working, yet no sound was heard. — A few weeks ago, an emaciated and very sickly child of seven years old was sent into the hospital to have a diseased knee removed. The case was indeed hopeless. When the little patient had become familiar with his new abode and attendants, and certain circumstances known with respect to his health which it was proper should be ascertained, I said to the child, for I knew not whether he had been apprized of his doom, "I suppose, my little fellow, that you would not mind having this knee removed, which has pained you so much, and made you so very ill." — "Oh, no," replied he, "for mammy has told me that I ought." At the time of the operation he manifested neither hesitation nor opposition, nor did the voice of complaint issue from his lips.

into oblivion. On the contrary, however, the opinions which I had promulgated were said to be absurd and untenable, and even ridiculed by a writer in the Edinburgh Review. When, afterwards, Mr. Lawrence began to lecture at the College, he adopted the same line of conduct; nor were his hostile and taunting expressions confined, as he says, to his first lectures. The theme of his exultation and raillery was introduced to enliven many others. In the published lectures will be found a varnished character of myself, in which, however, I clearly distinguish one truth, that of having always acted as his zealous friend; and surely the recollection of such conduct would have induced a generous mind to have glossed over also what it might have considered as my defects. When I heard those lectures, I told Mr. Lawrence, (for I had always spoken my sentiments to him with candor,) that he seemed to me to have done a very foolish thing in attacking my opinions in a place where I felt obliged to defend them; and added, even the consideration of the impropriety of two professors in the same establishment differing with one another,

ought to have restrained him. In my next lectures, which were designed more fully to explain Mr. Hunter's opinions, by showing the manner in which he had deduced them from the consideration of all the vital processes, I carefully concealed Mr. Lawrence from public view, by arguing against a party, by contending against opinions and not against persons: nor did I ever mention his name or words but in order to induce others to suppose that we did not differ in sentiments. The sentence to which I allude ran thus: "Comparative anatomy, also, as my brother Professor very judiciously observed in his introductory lectures, furnishes abundant arguments to the natural theologian, by the evidences it affords of design, and of the adaptation of means to ends." When, however, I perceived that he was hurt by these lectures, I assured him that I did not mean personally to allude to him, and after consideration added, neither could I conceive how he could suppose that I did, unless indeed by identifying himself with those writers from whose works he had copied. I offered also to expunge the sentence above quoted. He

replied, "No; I do not object to it: you may do as you please." I therefore inserted the words without naming the author. Is it then generous in Mr. Lawrence to say, "that the quotation of his own words rendered it impossible for him to shield himself under the pretext of uncertainty," or to suggest that my lectures (which were excited as an act of self-defence) were meant chiefly as an attack upon his conduct and character? Is it becoming in Mr. Lawrence to hold me forth to public view as one blinded by national prejudice to the merits of persons of other countries? On the contrary, I consider all mankind as brethren, yet all brothers have not the same sentiments and dispositions. The sons of science may more particularly be regarded as of one family, and their residence in different countries cannot annul their fraternity. Yet surely it is allowable in me to suppose that the notions of our brother physiologists in France may have been influenced by the state of public opinion in that country. I am aware that what I have termed modern scepticism arose in a great degree from good feelings; from an abhor-

rence of the dreadful consequences of superstition and bigotry, and of those of tyrannical restriction and oppression. Yet in recoiling from one kind of error, the party seem to me to have run into an opposite one, and to have equally deviated from the mid-way path, which is trodden only by the unprejudiced and considerate. With respect to the subject of nationality, however, I wish to submit a sentence, which I remember to have heard in Mr. Coleridge's lectures, to Mr. Lawrence's consideration. There can be no sincere cosmopolitan, who is not also a patriot. Is it becoming likewise in Mr. Lawrence to point out what he considers as the weak parts of my lectures to general observation? Fortunately for me, indeed, he is not to be my judge; for he is strongly prejudiced, and evidently angry: the members of our profession in general are to determine the value of my humble endeavours to promote our professional knowledge and character, and in their decision I am ready respectfully to acquiesce.

THE END.

Printed by Strahan and Spottiswoode,
Printers-Street, London.

Published by Longman, Hurst, Rees, Orme, and Brown, London,

THE

SURGICAL AND PHYSIOLOGICAL WORKS

OF

JOHN ABERNETHY, F.R.S., &c.

Complete in 3 Vols. 8vo.