

THE
HUNTERIAN ORATION,

DELIVERED IN THE THEATRE

OF THE

Royal College of Surgeons in London,

ON FEBRUARY XIV, MDCCCXXIX.

BY

JOHN PAINTER VINCENT,

SURGEON TO ST. BARTHOLOMEW'S HOSPITAL,

AND TO THE MAGDALEN.

LONDON:

PRINTED FOR HENRY WIX,

41, BRIDGE-STREET, BLACKFRIARS.

1829.

LONDON ;
PRINTED BY R. GILBERT,
ST. JOHN'S SQUARE.

HUNTERIAN ORATION,

1829.

THE character of intellect offers an extensive theme for meditation. But as the pleasure, as well as the utility, of such meditations, may be increased by contemplating the variety and the complexity of the mind, so on the other hand we derive little satisfaction from our reflections on those who only adjust themselves to surrounding circumstances, and who are content with falling in with the popular opinions of their time. We in vain seek among such for that bright feature, originality. But when men are distinguished by the strength, the extent, and the readiness of intellect,—when they

rise above the level of the stream in which they are hurrying forward, then the gratification may be enjoyed of measuring the powers, of scanning the variety, and of contemplating the beauties, of intellectual man.

Hunter has attained so prominent a position in the rank of science, by his enquiries into the laws of nature, that the philosopher must derive gratification in contemplating his character. And the gratitude of his successors can do no less than place upon the altar he has raised, the ample offering due to his merits. It was Hunter who stamped the seal of science on surgery,—it was he who aggrandized the respectability of the profession. It was he who consigned to the votaries of knowledge the most brilliant example of steadfastness in the endurance of labour—of devotedness to the objects of enquiry—and of facility in varying his means. Hunter, simple and retired in

his habits, apportioned his time to the occupation of acquiring facts, of investigating influences, and of weighing conclusions. The aim of his life was to establish principles in Pathology, calculated to alleviate the many sufferings to which the human frame is liable.

What are the bold strides which Hunter made to ascend that eminence, which, by the accordance of all, he reached? To be justified in submitting an opinion on this point, it is proper first to determine where the grasp and power of the energies of man lie, and how the compass and capacity of the mind are declared. It may, therefore, be allowed to dwell upon that condition of the intellectual powers on which science is founded. Hunter has left behind him ample proofs of his claim to the title of a man of science. He was devoted to the enquiry into truths; he was a philosopher. In endeavouring to trace the intellect of

Hunter, some solicitude is felt to show the great disparity between the real man of science, and the person who only simulates this character.

The measure of excellence in man is discovered in his aptitude to be governed by the power of truth. The luminous rays that open to him a path to wisdom, come from those intellectual faculties which prove the ability of enquiring into truth. Truth is the aim and end of every research. It is the point from which we commence—the step by which we advance—the conclusion to which we desire to arrive. Devotedness to perfect, absolute, unbiassed truth, is that which ought alone to regulate our respect and admiration in the character of man. How few possess firmness and disinterestedness enough, to toil up the rugged ascent by which its temple is approached; and ingenuousness enough, to give up the mind to the elevation and chastening, which can

alone be effected by the unerring oracles that are delivered in that noble structure! It is from these that the divine inspiration is imparted to man, which diffuses sublimity into his every action. The quality of truth is to advance to perfection every intellectual endowment. If its voice were not lost in the din of other strains, it would show its influence upon every energy of man. The real lover of truth displays a desire to enquire into it, and a solicitude to obtain it, in every exercise of his powers of reasoning; whether it be in morals, in the philosophy of the mind, or in the economy of the material world. The sophistry of modern times would distinguish two orders of truths, and separate the moral from the scientific man,—a fallacy which the political man readily adopts, to degrade others to the level of his own designs.

Truth is the principle of every moral good. It is the measure and dispenser of

every virtue. It is the spirit that gives firmness, singleness, and vivacity, to every social feeling.

The economy of nature, one great field of science, is the formation and adjustment of things in the order and stability of eternal truth—the state in which they rest unchanged in reference to their habitudes, and the conditions by which they are limited.

All that is created is formed in immutable truth. Immutable truths are discovered in the relations of things to one another. And as demonstration can only proceed upon necessary truths, so these are the proper objects of science. And the adaptation of the powers competent to investigate and to discover the conditions and limitations under which things exist, is that combination of means which is calculated to advance science. He who possesses in the greatest de-

gree the qualities necessary for the investigation, and the energy to employ them, is the best and soundest philosopher. It is the love of truth and the endeavour to acquire it, that marks the philosopher, and forms a necessary condition in the character of the man of science. Is truth the bold, the significant lineament, of the age? Does truth preside at the balance, by which men are appreciated? Is not the estimation of men rather formed by the station they occupy, than by the qualities of those influences which have placed them in it? How often does the passion for effect obscure the splendor of truth!

The most ennobling occupation of man is the research into first truths. And for this enquiry the philosophy of the mind will make known the compass of his ability, and the estimate of his means, for conducting the investigation to that point where certainty commences, and immutable truths, or

axiomata, are established, on which rests the foundation of every science.

We are endowed with senses to connect us with the external world. They are the medium of our intercourse with things ; but it is so far as these produce either pleasure or pain, and warn us of the good or evil tendency of that which surrounds us. That acquaintance of things, which they introduce us to is indirect, and therefore imperfect. They are not pre-eminent in man, and, therefore, if the research depended on them, he has not the best means of arriving at truth. They vary in every individual in acuteness and in distinctness, and, therefore, information derived from them, must be fluctuating and uncertain, and incompetent to disclose the real nature of things. If the senses be assumed as the standard of truth, in the research into the nature of things, what is the proof of the organ being most perfect for conveying the information ?

What is the measure of perfection in the organ that is to fix the standard? Whose eye, in reference to the objects of vision, is to be taken as a standard? Does not this sense vary in keenness in different individuals? But even if a standard were obtained in the unaided organ, yet the happy direction of art may carry the range of its powers still further, as in the application of the lens to the eye, and then another standard is to be assumed. And may not invention proceed still further, and then where will the series of standards end? Has it happened that the true knowledge of things has been obtained by the senses alone? Their assistance is not disputed. Would astronomy have ever advanced to that perfect state it now presents (and man, who boasts of his intellect, may well reflect with exultation on its progress) if Copernicus and other great astronomers had limited their pursuits to the bare notice of the celestial bodies,

and confined their labours to the perfection of their instruments ?

It is true, that our intercourse with the external world brings to the understanding ideas of things, which become the subjects on which the intellectual powers are exercised. But the mind must be exercised in a series of operations, to arrive at truth. In the Pythagorean theorem it might be made obvious by inspection, that an equality subsisted between the squares of the legs and that of the hypotenuse ; but it is geometry alone that can establish this proposition upon unerring certainty. The real nature of things is unattainable by the senses.

The only real knowledge of things that we are capable of obtaining, is by directing our research into their habitudes and relations ; by knowing which we arrive at the conviction, that things cannot be otherwise

than they are from their position in the universe; and by which their identity and individuality are established. This is the only way by which first or immutable truths are evolved, and the principles of science expounded.

If it be admitted that the senses are insufficient for completing an investigation into the nature of things, the question will arise, What has man, besides the senses, that is calculated for this purpose? He has the glorious gift of intellect; the perfection of which is wisdom. And it is in the energies he displays in the endeavour to reach that exaltation, which the possession of wisdom confers, that man may boast of the splendor of his endowments, and find a scale, by which the range of his utility in the creation is measured.

The true, the delightful, the most sublime occupation of man, ought to be the

exercise and appropriation of the powers of the mind for the evolution and declaration of immutable truths. As truths can be only discovered by tracing relations and determining conditions, so the faculties of the intellect, their power of combining and comparing, are the only means by which the problems of science can be conducted. The arrangement of these powers, and the proper combination of them, in the adaptation of them to an enquiry, become the canons of science.

It is in the advance that is made in establishing first truths, and, therefore, in the degree in which these faculties of the mind are exercised in any department of knowledge, that the mode of enquiry is, or is not, to assume the title of science. And no exercise of the mind that falls short of this scope, or that rests satisfied with positions that are not absolutely true, can justly receive this name. It is to the glory of

Hunter, that his labours were directed to place physiology and pathology in the elevated rank of sciences.

The qualification for advancing science is the power of exercising the higher order of faculties of the intellect upon any subject for investigation. The science which is termed the strict, the mathematical, indisputably determines this question. The application of the mind here is to quantity and number, and it has the ablest means of grappling with the subject. The intellect here throws its penetration much further than it commonly does in other researches, and thus produces a certainty elsewhere unknown. It is, perhaps, because the intellect, unencumbered, as when the senses interpose, grasps the subject in all its relations, and is able, as it were, to dispose it in every possible view, and subject it to every sort of combination and comparison, and bring out all its properties. It is the in-

telleet, and not the notice of the figure by the senses, that conducts the steps in the solution of theorems. No hand can describe the circle of which the intellect determines the properties. The real circle is in the mind of the geometrician, for the sensible one does not answer his purpose. Figures and symbols in mathematics, are expedients to assist the memory. The intellect alone produces all the magnificent results of this science.

It is usual to regard that knowledge which is to disclose the economy of nature, as incapable of attaining to the certainty of abstract science. But this view should not be taken, until it is proved that the intellect has been allowed the full exercise of its powers upon the subject. That this department of knowledge may be carried to absolute certainty, is shewn in the perfection to which the natural philosophy of the solar system has been brought; manifested

in its luminous proofs and firm conclusions. Every thing created is founded in truth, and therefore, may be the subject for science. And thus a vast field for scientific pursuits is presented to the mind, to prove its vigour and to try its compass.

The aptitude of the intellect to exercise its powers, is doubtlessly subject to inclinations. And thus the energies of its operations are thrown into some one department of knowledge, by which the mind, feeling the satisfaction of acquiring truths by the exercise of its own powers, becomes riveted to the subject on which its research is employed. But this affection of the mind to some one subject, is not enough to designate real Genius. There must also be that condition of the intellect, by which it is competent to the research, and to the discovery of truths; which is Invention. Mr. Hunter presents no common example of the man of Genius.

If the advancement of science depend upon the intellectual powers, and mind be the possession of man, how is it that such tardy advances have been made to improve the scientific character of the knowledge of nature? Why have we not oftener Hunters? What obstacles seclude the light of truth, and keep man lingering in his puny exertions? It is owing to the narrow scope he gives to the influence of the powers of the mind. He turns from the brilliant prospect that would open to his view, and only occupies himself with impressions that are derived from that which surrounds him. He fails to discriminate sophistry from wisdom, as he does the visionary phantom of popular opinion, from the less imposing quality of sound judgment.

Bacon saw, that simplicity and singleness were necessary to render minds sufficiently unsophisticated, to receive the luminous

expositions of wisdom. He knew all the opposing influences that beset the really dignified nature of man; and, therefore, despaired lest the light that he himself had produced would properly shine forth, until man was changed in his sentiments, and in his motives to action. Intellect most readily expands when least encumbered, or biassed, by sentiments, that are developed by inclinations not founded in the desire of truth. The best preparation is required for clearing the soil, where true wisdom is to take root, to flourish, and to blossom.

One of the powerful influences that retard the advancement of science, is Opinion. Opinion is the admission of a proposition without proof. And in order to fill up that vacuity, which the absence of truth leaves, the support of Authority is called in. The minds that are content to see things only in the same view that others do, can never be original, nor possess invention. Genius re-

quires the cultivation and the exercise of the highest order of faculties, for the purpose of Invention ; such as we find in Hunter.

Nothing should have the force and sanction of a principle, but that which true science has actually proved. As authority gives the tone and currency of a principle to mere opinion, it is calculated to keep back the progress of science. Authority gives stability to error ; it blinds little minds, and weakens the inclination for inquiry in all ; it inflates the vain, and prevents their seeing, that the region of real wisdom lies beyond their own attainments.

The diffusion of information has been regarded in almost the same light, as the advancement of science. It is not in supplying the memory, but in the exercise of that combination of intellectual powers, which is best calculated by their operation to discover principles, that science can alone be ad-

vanced. This quality is altogether distinct from information : it is not by the attainment of what is known, but by the exercise of the mind upon what is attained, that science must be improved. It is not only necessary to get the ore, but it must also be committed to the furnace, to prove its richness in metal.

A word has found a place in the language of the day, which does not seem to have appropriated to it any defined meaning : it seems rather to refer to the probability of an undefined character, that prominence of position before the public may be supposed to possess, than to any positive excellence of the mental powers. The character of Hunter's mind was of the highest order ; and it is not enough to declare him to have been a man of Talent ; for this term is as often applied to those who cannot conduct the steps of an ordinary proposition, as to those of the best arranged and most acute minds, and

who can pursue the closest reasoning to the utmost limits of perfect truth.

The great Bacon, who has explained every order and adjustment, by which the powers of the mind can be brought into operation for the advancement of science, has divided the distinctions of nominal philosophers into three heads; but the division may be justly applied to the qualities of the minds of those, who aspire to the rank of men of science.

The first, the lowest in the scale, are those who resemble the ant; their life is occupied in accumulating knowledge, but their exertions end with the accumulation; they add nothing to the stores of science.

The second class is resembled to the spider: these are those who employ all the art they possess to elevate themselves above others: they have knowledge, but it is merely

so much as can serve their interested views, and not to enlarge science.

The third class is resembled to the bee : these are inquisitive, and discriminating ; they collect the elements, which are to be converted into a new product. The labours of these are devoted to benefit the world. In this class we discover the emblems of those, who can be justly entitled men of science.

It is in the delineation of those traits that represent the boldest display, and the freest exercise, of the noblest powers of the mind, and which manifest themselves in Invention, which is Genius, that we recognize the portrait of Hunter ; in contemplating which, we must be led to acknowledge, that he was one of the brightest examples of a man of science.

The philosophy of Hunter's mind was

strikingly exhibited in the check, which he gave to the expectations of his auditors, in the prefatory address to his Lectures : he desired them expressly to understand, that he could not give them real principles for the proper foundation of science. He informed them that he was continually changing his opinions, and probably might do so every year, and therefore they must be prepared to hear him change his views also. This clearly shews the distinction he made between opinions and first truths. He felt that the opinions that he had formed, had not undergone the test of absolute truth, and were therefore unfit to build the structure of science upon. They had not the proper stamp to give them legal currency; and yet he saw the possibility of their getting, by the authority of his name, the value of a genuine coin. The practice of giving the weight of authority to the opinions of lecturers, has the certain effect of shackling and narrowing the minds of students, and of

detaining them from the exercise of their own powers of investigation.

The mind of intellectual man is active, penetrating, and inquisitive. It pursues its operations with rapidity and vivacity, without charging the memory with all the steps of its procedure. To conduct its operations without marking all the minor propositions as it proceeds, is a proof of its vigor and of its capacity of prosecuting a subject to the utmost point of investigation. Superior minds catch at a glance the whole process of a problem : but dull reasoners must have every step in a proposition amply filled up, and find stages to repose at, before they can advance. Newton went beyond all the common mathematicians of his day, and it became the task of humbler men who followed, to comment upon his writings ; and to fill up the intermediate steps which he, in his mighty grasp of mind, did not deem necessary to explain. Hunter

has not been understood always by his writings, and the outlines require to be filled up, to fit his views to the comprehension of the ordinary kind of readers.

All the notions we have of matter combine to convince us that it cannot begin motion; and therefore motion implies the agency of that which must be immaterial. We have by means of the senses some information, although not infallible, of matter; but we have no direct information of any of that which is immaterial. Yet, by the observation of phenomena, and submitting to the intellect the ideas of their habitudes and relations, a system may be formed on the firmest principles, comprising the laws of motion, or action. And thus a just and conclusive solution of all the phenomena of motion may be expounded, although we are unacquainted with the nature of the agent. The real philosopher does not show himself solicitous to know the agent, in the theory

of gravitation. He finds sufficient to gratify his desire for acquiring truths, in contemplating the vast range of the mind, that has evolved, with the perfection of absolute certainty, the laws that regulate the solar system.

Hunter by employing the term vital principle, could not philosophically intend to designate an agent, of which he had a distinct knowledge; but he might adopt it scientifically, to express a system of laws, by which phenomena are governed; and which laws the mind is capable of developing, although the agent be unknown.

One of the most splendid possessions of the mathematics, is the doctrine of Ratios. It has the power of exercising its sway over every region of science. The faculty of comparing, the most luminous endowment of the intellect, if not the ultimate element of all the others, is the greatest light that

ever broke in upon the mind of man. It is the formal mode of bringing all things, by means of ideas, to the analytical powers of the mind. He who does not understand comparison, and analogy, vainly presumes to be a philosopher. Hunter, by continually exercising this faculty, has verified the position, that he possessed this endowment in an eminent degree.

In the investigation of a proposition, it is necessary to state all the elements that enter into it accurately; for this purpose all the terms required, and all the conditions under which they are to be taken, must be carefully noted. The error in the investigations for advancing the sciences of Physiology, and Pathology, is, that there is too great a readiness to be satisfied with terms, which do not comprehend all the elements that ought to enter into the consideration of the proposition, as well as of admitting conditions not properly defined. Hunter has shewn his

solicitude to determine all the conditions under which facts exist, and to state their relations in combination ; thus proving that he possessed a truly scientific turn of mind.

The true position in which the intellectual character of a man is placed, is not always accurately discovered, without estimating the collateral assistance that the state of science in his day may afford him. A long list of labourers might be enumerated, who have traced with niceness and precision, all the beauties of the human frame. How many hands, and how many ages, have been required to bring anatomy to that state it now assumes ! How numerous and how intricate, therefore, must the structure be, that demands such toil and time, to display its excellences ! But anatomy alone does not complete the knowledge of the living body. It is in a higher scale of knowledge than that of mere structure, that the true principles of Physiology and Pathology are

to be acquired ; those powers with which the philosophy of the mind arms the enquirer, can alone lay open the truths of science.

The great man, who is justly entitled the father of medicine, presents by his writings a proof, that it is not the extent of information, but the exercise of the higher faculties of the intellect upon subjects submitted to them, that gives lasting value to the labours of man. He, probably, was not the discoverer of all that is left in his name, but he assuredly was more than a compiler. In spite of the imperfect anatomy in his time, and the monstrous forms which imagination gave to facts, we recognize in Hippocrates a great mind. He has left observations which, on account of their truth and utility, we must both cherish and venerate.

The true application to anatomical pursuits commenced at the period when the powers of the mind developed themselves

in the desire of acquiring first truths, and of knowing generally, the laws by which the phenomena of nature are regulated. This desire of acquiring real truths, leads on the mind to ascertain, by observation and experiment, all the conditions under which facts exist. At this point it would naturally happen that enquiry should go yet further, and that there should be a solicitude to unfold the powers of the mind capable of carrying investigation to the perfection of truth. And thus that gleam which had only occasionally broke in upon mankind, to give a glimpse of the beauty of order, and of the perfection of the creation, might be made to burst into the steady light of day.

Many have exalted their names, and conferred the greatest benefits on posterity, by laying open the principles on which the philosophy of the mind is to be expounded; the only way by which the knowledge of nature can be established on a sure founda-

tion, and its boundaries enlarged. But, before all, pre-eminently great, and proudly superior, was Bacon. His luminous mind has shed a light, that has clearly brought into view all the approaches to the truth of nature's form. Who ventures to connect himself with science, without drawing the pure waters of wisdom from the springs that he has discovered ?

The glory that beams around the brow of Bacon, has, by its light, more distinctly marked the features of Hunter ; who has exemplified in his labours, the enlightened principles of the great philosopher. Hunter undertook to clear the fertile fields of Philosophy and Pathology, of those weeds, that checked the growth of real science. In doing which, he has displayed intelligence in the design, comprehensiveness in the arrangement, minuteness in collecting particulars, closeness in the connection, magnificence in the accomplishment. In the

wonderful work that Hunter has left, the labour of his hands, he has himself constructed the most splendid monument of his fame. In every position in which it is viewed, the character of the greatest mind appears inscribed. It is the production of a great intellectual workman, whose penetrating mind embraced the whole of a great design, and whose acute discernment ranged over every subject that would afford illustration. The best offering of gratitude to Hunter, as well as a great boon to science, is to expound, to confirm, and to enlarge, his principles of philosophy.

The changing scene of life is continually adding to the obituary, the names of those whom we regret. It is a part of my duty to notice, on this occasion, the lamented death of two members of the Council. Mr. John Heaviside died at an advanced age: educated in the school of Pott, he continued, during a long life, the duties of a London Surgeon; preserving the cultivated

manners of a gentleman, and of a professional scholar ; he was highly esteemed for his urbanity and benevolence. Sir Patrick Macgregor, Serjeant-Surgeon to the King, was cut off in the meridian of his career. He was zealous and assiduous in discharging the duties of the situation he filled in this College.

Allow me to encroach a moment upon your time, whilst I indulge the grateful feeling of speaking of one, who once dignified the seat he held in the Council of this College, and who spread the healthful vigor of his strong mind over its deliberations. William Long, Esq., by his urbanity, added grace to social order,—by his taste, diffused around him the warmth of harmony,—by his refined notions of honor, promoted a high tone of moral feeling, —by his silent benevolence, soothed the pangs of misery.

Placidus mores, largumque nitorem
 Monstret—pulchræ studium virtutis.—STATIUS.

He was unequalled in steadfastness of friendship.

Sanctusque pudicæ
 Servat amicitiaē leges amor.—STATIUS.

His information was drawn from every department of knowledge; his penetration was profound; his judgment marked the happy combination of the active and superior powers of intellect; his decisions disclosed the most comprehensive reasoning; his advice was invaluable.

Trepidis ubi dulcia nautis
 Lumina—Pharos.—STATIUS.

Mr. Long was my preceptor, my patron, and my friend.

THE END.

Speedily will be published, by the same Author,

A

COMMENTARY

ON

THE ORATION.

