May 28, 1942

To "The Boss" -

With my appreciation for the
past years of pleasant association
while working together

Herbert

LECTURES

ON

THE PHILOSOPHY

OF

THE HUMAN MIND.

BY THE LATE

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LECTURES

ON THE

PHILOSOPHY OF THE HUMAN MIND.

LECTURE I.—(Introduction.)

Gentlemen,

The subject on which we are about to enter, and which is to engage, I trust, a considerable portion of your attention for many months, is *the Philosophy of the Human Mind*,—not that *speculative* and *passive* philosophy only, which inquires into the nature of our intellectual part, and the mysterious connexion of this with the body which it animates, but that *practical* science, which relates to the duties, and the hopes, and the great destiny of man, and which, even in analyzing the powers of his understanding, and tracing all the various modifications of which it is individually susceptible, views it chiefly as a general instrument of good—an instrument by which he may have the dignity of co-operating with his beneficent Creator, by spreading to others the knowledge, and virtue, and happiness, which he is qualified at once to enjoy, and to diffuse.

"Philosophy," says Seneca, "is not formed for artificial show or delight. It has a higher office than to free idleness of its languor, and wear away and amuse the long hours of a day. It is that which forms and fashions the soul, which gives to life its disposition and order, which points out what it is our duty to do, what it is our duty to omit. It sits at the helm, and in a sea of peril, directs the course of those who are wandering through the waves." "Non est philosophia populare artificium, nec ostenta-

tioni paratum; non in verbis sed in rebus est. Nec in hoc adhibetur ut aliqua oblectatione consumatur dies, ut dematur otio nausea. Animum format et fabricat, vitam disponit, actiones regit, agenda et omittenda demonstrat, sedit ad gubernaculum, et per ancipitia fluctuantium dirigit cursum." Ep. 16.

Such, unquestionably, is the great practical object of all philosophy. If it increase the happiness and virtue of human kind, it must be allowed to have fulfilled, to human beings, the noblest of earthly ends. The greatness of this primary object, however, perhaps fixed too exclusively the attention of the moral inquirers of antiquity, who, in considering man as capable of virtue and happiness, and in forming nice and subtle distinctions as to his supreme good, and the means by which he might attain it, seem almost to have neglected the consideration of his intellectual nature, as an object of mere physical science. Hence it happens, that, while the systems of ancient philosophy exhibit, in many instances, a dignity of moral sentiment as high, or almost as high, as the unassisted reason of man could be supposed to reach, and the defects of which we perhaps discover only by the aid of that purer light, which was not indulged to them, they can scarcely be said to have left us a single analysis of complex phenomena of thought and feeling. By some of them, indeed, especially by the Peripatetics and Stoics, much dialectic subtilty was employed in distinctions, that may seem at first to involve such an analysis; but even these distinctions were verbal, or little more than verbal. The *analytical investigation* of the mind, in all its complexity of perceptions, and thoughts, and emotions, was reserved to form almost a new science in the comprehensive philosophy of far later years.

If, however, during the flourishing periods of Greek and Roman letters, this intellectual analysis was little cultivated, the department of the philosophy of the mind, which relates to practical ethics, was enriched, as I have said, by moral speculations the most splendid and sublime. In those ages, indeed, and in countries in which no revealed will of heaven had pointed out and sanctioned one unerring rule of right, it is not to be wondered at, that, to those who were occupied in endeavouring to trace and ascertain such a rule in the moral nature of man, all other mental inquiries should have seemed comparatively insignificant. It is even pleasing thus to find the most important of all inquiries regarded as

truly the most important, and minds of the highest genius, in reflecting on their own constitution, so richly diversified and adorned with an almost infinite variety of forms of thought, discovering nothing, in all this splendid variety, so worthy of investigation, as the conduct which it is fitting for man to pursue.

But another period was soon to follow, a period in which ages of long and dreary ignorance were to be followed by ages of futile labour, as long and dreary. No beautiful moral speculations were then to compensate the poverty of intellectual science. But morality, and even religion itself, were to be degraded, as little more than technical terms of a cold and unmeaning logic. The knowledge of our mental frame was then, indeed, professedly cultivated with most assiduous zeal; and if much technical phraseology, and much contention, were sufficient to constitute an elaborate science, that assiduous zeal might well deserve to have been rewarded with so honourable a name. But what reasonable hope of a progress truly scientific could be formed, when to treat of the philosophy of mind was to treat of every thing but of the mind and its affections; when some of the most important questions, with respect to it, were, Whether its essence were distinct from its existence? whether its essence therefore might subsist, when it had no actual existence? and what were all the qualities inherent in it as a nonentity? In morals, whether ethics were an art or a science? whether, if the mind had freedom of choice, this independent *will* be an entity or a quiddity? and whether we should say, with a dozen schoolmen, that virtue is good, because it has intrinsic goodness, or, with a dozen more, that it has this intrinsic goodness, because it is good?

In natural theology, questions of equal moment were contested with equal keenness and subtilty; but they related less to the Deity, of whose nature, transcendent as it is, the whole universe may be considered as in some degree a faint revelation, than to those spiritual ministers of his power, of whose very existence nature affords no evidence, and of whom revelation itself may be said to teach us little but the mere existence. Whether angels pass from one point of space to another, without passing through the intermediate points? whether they can visually discern objects in the dark? whether more than one can exist at the same moment in the same physical point? whether they can exist in a

perfect vacuum, with any relation to the absolute incorporeal void? and whether if an angel were in vacuo, the void could still truly be termed *perfect?*—such, or similar to these were the great inquiries in that department of Natural Theology, to which, as to a separate science, was given the name of *Angelography:* and of the same kind were the principal inquiries with respect to the Deity himself, not so much an examination of the evidence which nature affords of his self-existence, and power, and wisdom, and goodness, those sublime qualities which even our weakness cannot contemplate without deriving some additional dignity from the very greatness which it adores, as a solution of more subtile points, whether he exist in imaginary space as much as in the space that is real? whether he can cause a mode to exist without a substance? whether, in knowing all things, he know universals, or only things singular? and whether he love a possible unexisting angel better than an actually existing insect?

"Indignandum de isto, non disputandum est."—"Sed non debuit hoc nobis esse propositum arguta disserere,* et philosophiam in has augustias ex sua majestate detrahere. Quanto satius est, ire aperta via et recta, quam sibi ipsi flexus disponere, quos cum magna molestia debeas relegere?"†—"Why waste ourselves," says the same eloquent moralist; "why torture and waste ourselves in questions, which there is more real subtilty in despising than in solving?"—

"Quid te troques et maceras, in ea quæstione quam subtilius est contempsisse quam solvere?"‡

From the necessity of such inquiries we are now fortunately freed. The frivolous solemnities of argument, which, in the disputations of Scotists and Thomists, and the long controversy of the believers and rejectors of the universal *a parti rei*, rendered human ignorance so very proud of its temporary triumphs over human ignorance, at length are hushed forever; and, so precarious is all that glory, of which men are the dispensers, that the most subtile works, which for ages conferred on their authors a reverence more than praise, and almost worship, would now scarcely find a philosophic adventurer, so bold, as to avow them for his own.

* Argutias serere. Lect. var.
† Seneca, Ep. 102. ‡ Ibid, 49.

The progress of intellectual philosophy may indeed, as yet, have been less considerable than was to be hoped under its present better auspices. But it is not a little, to have escaped from a labyrinth, so very intricate, and so very dark, even though we should have done nothing more than advance into sunshine and an open path, with a long journey of discovery still before us. We have at last arrived at the important truth, which now seems so very obvious a one, that the mind is to be known best by observation of the series of changes which it presents, and of all the circumstances which precede and follow these; that, in attempting to explain its phenomena, therefore, we should know what those phenomena are; and that we might as well attempt to discover, by logic, unaided by observation or experiment, the various coloured rays that enter into the composition of a sunbeam, as to discover, by dialectic subtilties, *a priori*, the various feelings that enter into the composition of a single thought or passion.

The mind, it is evident, may, like the body to which it is united, or the material objects which surround it, be considered simply as a substance possessing certain qualities, susceptible of various affections or modifications, which, existing successively as momentary states of the mind, constitute all the phenomena of thought and feeling. The general circumstances in which these changes of state succeed each other, or, in other words, the laws of their succession, may be pointed out, and the phenomena arranged in various classes, according as they may resemble each other, in the circumstances that precede or follow them, or in other circumstances of obvious analogy. There is, in short, a science that may be termed *mental physiology*, as there is another science relating to the structure and offices of our corporeal frame, to which the term *physiology* is more commonly applied; and as, by observation and experiment, we endeavour to trace those series of changes which are constantly taking place in our material part, from the first moment of animation to the moment of death; so, by observation, and in some measure also by experiment, we endeavour to trace the series of changes that take place in the mind, fugitive as these successions are, and rendered doubly perplexing by the reciprocal combinations into which they flow. The innumerable changes, corporeal and mental, we reduce, by generalizing, to a few classes; and we speak, in reference to the mind, of

its faculties or functions of perception, memory, reason, as we speak, in reference to the body, of its functions of respiration, circulation, nutrition. This mental physiology, in which the mind is considered simply as a substance endowed with certain susceptibilities, and variously affected or modified in consequence, will demand of course our first inquiry; and I trust that the intellectual analyses, into which we shall be led by it, will afford results that will repay the labour of persevering attention, which they may often require from you.

In one very important respect, however, the inquiries, relating to the physiology of mind, differ from those which relate to the physiology of our animal frame. If we could render ourselves acquainted with the intimate structure of our bodily organs, and all the changes which take place, in the exercise of their various functions, our labour, with respect to them, might be said to terminate. But though our intellectual analysis were perfect, so that we could distinguish, in our most complex thought or emotion, its constituent elements, and trace with exactness the series of simpler thoughts which have progressively given rise to them, other inquiries, equally, or still more important, would remain. We do not know all which is to be known of the mind, when we know all its phenomena, as we know all which can be known of matter, when we know the appearances which it presents, in every situation in which it is possible to place it, and the manner in which it then acts or is acted upon by other bodies. When we know that man has certain affections and passions, there still remains the great inquiry, as to the propriety or impropriety of those passions, and of the conduct to which they lead. We have to consider, not merely how he is capable of acting, but also, whether, acting in the manner supposed, he would be fulfilling a duty or perpetrating a crime. Every enjoyment which man can confer on man, and every evil, which he can reciprocally inflict or suffer, thus become objects of two sciences—first of that intellectual analysis which traces the happiness and misery, in their various forms and sequence, as mere phenomena or states of the substance *mind*;—and secondly, of that ethereal judgment, which measures our approbation and disapprobation, estimating, with more than judicial scrutiny, not merely what is done, but what is scarcely thought in secrecy and silence, and discriminating some element of moral good

or evil, in all the physical good and evil, which it is in our feeble power to execute, or in our still frailer heart, to conceive and desire.

To this second department of inquiry belong the doctrines of general *ethics*.

But, though man were truly impressed with the great doctrine of moral obligation, and truly desirous, in conformity with it, of increasing, as far as his individual influence may extend, the sum of general happiness, he may still err in the selection of the means which he employs for this benevolent purpose. So essential is knowledge, if not to virtue, at least to all the ends of virtue, that, without it, benevolence itself, when accompanied with power, may be as destructive and desolating as intentional tyranny; and notwithstanding the great principles of progression in human affairs, the whole native vigour of a state may be kept down for ages, and the comfort, and prosperity, and active industry of unexisting millions be blasted by regulations, which, in the intention of their generous projectors, were to stimulate those very energies which they repressed, and to relieve that very misery which they rendered irremediable. It therefore becomes an inquiry of paramount importance, what are the means best calculated for producing the greatest amount of social good? By what ordinances would public prosperity, and all the virtues which not merely adorn that prosperity, but produce it, be most powerfully excited and maintained? This political department of our science, which is in truth only a subdivision, though a very important one, of general practical ethics, comprehends, of course, the inquiries as to the relative advantages of different forms of government, and the expediency of the various contrivances which legislative wisdom may have established, or may be supposed to establish, for the happiness and defence of nations.

The inquiries, to which I have as yet alluded, relate to the mind, considered simply as an object of physiological investigation; or to man, considered in his moral relations to a community, capable of deriving benefit from his virtues and knowledge, or of suffering by his errors and his crimes. But there is another more important relation in which the mind is still to be viewed,—that relation which connects it with the Almighty Being to whom it owes its exist-

ence. Is man, whose frail generations begin and pass away, but one of the links of an infinite chain of beings like himself, uncaused, and co-eternal with that self-existing world of which he is the feeble tenant? or, Is he the offspring of an all creating Power, that adapted him to nature, and nature to him, formed together with the magnificent scene of things around him, to enjoy its blessings, and to adore, with the gratitude of happiness, the wisdom and goodness from which they flow? What attributes, of a Being so transcendent, may human reason presume to explore? and, What homage will be most suitable to his immensity, and our nothingness? Is it only for an existence of a few moments, in this passing scene, that he has formed us? or, Is there something within us, over which death has no power,—something, that prolongs and identifies the consciousness of all which we have done on earth, and that, after the mortality of the body, may yet be a subject of the moral government of God? When compared with these questions, even the sublimest physical inquiries are comparatively insignificant. They seem to differ, as it has been said, in their relative importance and dignity, almost as philosophy itself differs from the mechanical arts that are subservient to it. "Quantum inter philosophiam interest,—et cæteras artes; tantum interesse existimo in ipsa philosophia, inter illam partem quæ ad homines et hanc quæ ad Deos spectat. Altior est hæc et animosior: multum permisit sibi; non fuit oculis contenta. Majus esse quiddam suspicata est, ac pulchrius, quod extra conspectum natura posuisset."* It is when ascending to these sublimer objects, that the mind seems to expand, as if already shaking off its earthly fetters, and returning to its source; and it is scarcely too much to say, that the delight which it thus takes in things divine is an internal evidence of its own divinity. "Cum illa tetigit, alitur, crescit: ac velut vinculis liberatus, in originem redit. Et hoc habet argumentum divinitatis suæ, quod illum divina delectant."

I have thus briefly sketched the various important inquiries, which the philosophy of mind, in its most extensive sense, may be said to comprehend. The nature of our spiritual being, as displayed in all the phenomena of feeling and thought—the ties which bind us to our fellow-men, and to our Creator—and the prospect of that unfading existence, of which life is but the first dawn-

* Seneca Nat. Quæst. Lib. 1. Præf.

ing gleam; such are the great objects to which in the department of your studies committed to my charge, it will be my office to guide your attention and curiosity. The short period of the few months to which my course is necessarily limited, will not, indeed, allow me to prosecute, with such full investigation as I should wish, every subject that may present itself in so various a range of inquiry. But even these few months, I flatter myself, will be sufficient to introduce you to all which is most important for you to know in the science, and to give such lights as may enable you, in other hours, to explore, with success, the prospects that here, perhaps, may only have opened on your view. It is not, I trust, with the labours of a single season that such inquiries, on your part, are to terminate. Amid the varied occupations and varied pleasures of your future years,—in the privacy of domestic enjoyment, as much as in the busier scenes of active exertion,—the studies on which you are about to enter must often rise to you again with something more than mere remembrance; because there is nothing that can give you interest, in any period or situation of your life, to which they are not related. The science of mind, is the science of yourselves; of all who surround you; of every thing which you enjoy or suffer, or hope or fear: so truly the science of your very being, that it will be impossible for you to look back on the feelings of a single hour, without constantly retracing phenomena that have been here, to a certain extent, the subjects of your analysis and arrangement. The thoughts and faculties of your own intellectual frame, and all which you admire as wonderful in the genius of others,—the moral obligation, which, as obeyed or violated, is ever felt by you with delight or with remorse,—the virtues, of which you think as often as you think of those whom you love; and the vices, which you view with abhorrence, or with pity,—the traces of divine goodness, which never can be absent from your view, because there is no object in nature which does not exhibit them,—the feeling of your dependence on the gracious Power that formed you,—and the anticipation of a state of existence more lasting than that which is measured by the few beatings of a feeble pulse,—these in their perpetual recurrence, must often recal to you the inquiries that, in this place, engaged your early attention. It will be almost as little possible for you to abandon wholly such speculations, as to look on the fa-

miliar faces of your home with a forgetfulness of every hour which they have made delightful, or to lose all remembrance of the very language of your infancy, that is every moment sounding in your ears.

Though I shall endeavour, therefore, to give as full a view as my limits will permit of all the objects of inquiry which are to come before us, it will be my chief wish to awake in you, or to cherish, a love of these sublime inquiries themselves. There is a philosophic spirit which is far more valuable than any limited acquirements of philosophy; and the cultivation of which, therefore, is the most precious advantage that can be derived from the lessons and studies of many academic years:—a spirit, which is quick to pursue whatever is within the reach of human intellect; but which is not less quick to discern the bounds that limit every human inquiry, and which, therefore, in seeking much, seeks only what man may learn:—which knows how to distinguish what is just in itself from what is merely accredited by illustrious names; adopting a truth which no one has sanctioned, and rejecting an error of which all approve, with the same calmness as if no judgment were opposed to its own:—but which, at the same time, alive, with congenial feeling, to every intellectual excellence, and candid to the weakness from which no excellence is wholly privileged, can dissent and confute without triumph, as it admires without envy; applauding gladly whatever is worthy of applause in a rival system, and venerating the very genius which it demonstrates to have erred.

Such is that philosophic temper to which, in the various discussions that are to occupy us, it will he my principal ambition to form your minds; with a view not so much to what you are at present, as to what you are afterwards to become. You are now, indeed, only entering on a science, of which, by many of you, perhaps, the very elements have never once been regarded as subjects of speculative inquiry. You have much, therefore, to learn, even in learning only what others have thought. But I should be unwilling to regard you as the passive receivers of a system of opinions, content merely to remember whatever mixture of truths and errors may have obtained your easy assent. I cannot but look to you in your maturer character, as yourselves the philosophers of other years; as those who are.

perhaps, to add to science many of its richest truths, which as yet are latent to every mind, and to free it from many errors, in which no one has yet suspected even the possibility of illusion. The spirit which is itself to become productive in you, is therefore, the spirit which I wish to cultivate; and happy, as I shall always be, if I succeed in conveying to you that instruction which it is my duty to communicate, I shall have still more happiness if I can flatter myself, that, in this very instruction, I have trained you to habits of thought, which may enable you to enrich, with your own splendid discoveries, the age in which you live, and to be yourselves the instructors of all the generations that are to follow you.

LECTURE II.

RELATION OF THE PHILOSOPHY OF MIND TO THE SCIENCES IN GENERAL.

In my former Lecture, Gentlemen, I gave you a slight sketch of the departments into which the Philosophy of Mind divides itself, comprehending, in the *first* place, The physiology of the mind, considered as a substance capable of the various modifications, or states, which constitute, as they succeed each other, the phenomena of thought and feeling; *secondly*, The doctrines of general ethics, as to the obligation, under which man lies, to increase and extend, as widely as possible, the happiness of all that live; *thirdly*, The political doctrines, as to the means which enable him, in society with his fellow men, to further, most successfully, and with the least risk of future evil, that happiness of all, which it is the duty of each individually to wish and to promote; and, *fourthly*, The doctrines of natural theology, as to the existence and attributes of that greatest of Beings, under whose moral government we live, and the foundations of our confidence that death is only a change of scene, which, with respect to our mortality indeed, may be said to be its close; but which, with respect to the soul itself, is only one of the events of a life that is everlasting.

Of these great divisions of our subject, the *Physiology of the Mind*, or the consideration of the regular series of phenomena which it presents, simply as states or affections of the mind, is that to which we are first to turn our attention. But, before entering on it, it may be useful to employ a few Lectures in illustrating the *advantages*, which the study of the mind affords, and the *principles of philosophizing*, in their peculiar application to it—subjects, which, though of a general kind, will, I trust, leave an influence, that will be felt in all the particular inquiries in which we are to be engag-

ed; preparing you, both for appreciating better the importance of those inquiries, and for prosecuting them with greater success.

One very obvious distinction of the physical investigations of mind and matter, is, that, in intellectual science, the *materials* on which we operate, the *instruments* with which we operate, and the *operating agent*, are the same. It is the mind, endowed with the faculties of perception and judgment, observing, comparing, and classifying the phenomena of the mind. In the physics of matter, it is, indeed, the mind which observes, compares, and arranges; but the phenomena are those of a world, which, though connected with the mind by many wonderful relations of reciprocal agency, still exists independently of it—a world that presents its phenomena only in circumstances, over most of which we have no controul, and over others a controul that is partial and limited. The comparative facility, as to all external circumstances, attending the study of the mental phenomena, is unquestionably an advantage of no small moment. In every situation in which man can be placed, as long as his intellectual faculties are unimpaired, it is impossible that he should be deprived of opportunities of carrying on this intellectual study; because, in every situation in which he can be placed, he must still have with him that universe of thought, which is the true home and empire of the mind. No costly apparatus is requisite—no tedious waiting for seasons of observation. He has but to look within himself to find the elements which he has to put together, or the compounds which he has to analyze, and the instruments that are to perform the analysis or composition.

It was not, however, to point out to you the advantage which arises to the study of our mental frame, from the comparative facility as to the circumstances attending it, that I have led your attention to the difference, in this respect, of the physics of mind and matter. It was to show,—what is of much more importance,—how essential a right view of the science of mind is to every other science, even to those sciences, which superficial thinkers might conceive to have no connexion with it; and how vain it would be to expect, that any branch of the physics of mere matter could be cultivated to its highest degree of accuracy and perfection, without a due acquaintance with the nature of that intellectual medium, through which alone the phenomena of matter become visible to us, and of those intellectual instruments, by which the objects of

every science, and of every science alike, are measured, and divided, and arranged. We might almost as well expect to form an accurate judgment, as to the figure, and distance, and colour of an object, at which we look through an optical glass, without paying any regard to the colour and refractory power of the line itself. The distinction of the sciences and arts, in the sense in which these words are commonly understood, is as just as it is familiar; but it may be truly said, that, in relation to our power of discovery, science is itself an art, or the result of an art. Whether, in this most beautiful of processes, we regard the mind as the instrument or the artist, it is equally that by which all the wonders of speculative, or practical knowledge, are evolved. It is an agent operating in the production of new results, and employing for this purpose the known laws of thought, in the same manner as, on other occasions, it employs the known laws of matter. The objects, to which it may apply itself, are indeed various, and, as such, give to the sciences their different names. But, though the objects vary, the observer and the instrument are continually the same. The limits of the powers of this mental instrument, are not the limits of its powers alone; they are also the only real limits, within which every science is comprehended. To the extent which it allows, all those sciences, physical or mathematical, and all the arts which depend on them, may be improved; but, beyond this point, it would be vain to expect them to pass; or rather, to speak more accurately, the very supposition of any progress beyond this point would imply the grossest absurdity; since human science can be nothing more than the result of the direction of human faculties to particular objects. To the astronomer, the faculty by which he calculates the disturbing forces that operate on a satellite of Jupiter, in its revolution round its primary planet, is as much an instrument of his art, as the telescope by which he distinguishes that almost invisible orb; and it is as important, and surely as interesting, to know the real power of the intellectual instrument, which he uses, not for calculations of this kind only, but for all the speculative and moral purposes of life, as it can be to know the exact power of that subordinate instrument, which he uses only for his occasional survey of the heavens.

To the philosophy of mind, then, every speculation, in every science, may be said to have relation as to a common centre. The

knowledge of the quality of matter, in the whole wide range of physics, is not itself a phenomenon of matter, more than the knowledge of any of our intellectual or moral affections; it is truly, in all its stages of conjecture, comparison, doubt, belief, a phenomenon of mind; or, in other words, it is only the mind itself existing in a certain state. The inanimate bodies around us might, indeed, exhibit the same changes as at present, though no mind had been created. But science is not the existence of these inanimate bodies; it is the principle of thought itself variously modified by them, which, as it exists in certain states, constitutes that knowledge which we term *Astronomy;* in certain other states, that knowledge which we term *Chemistry;* in other states our Physiology, corporeal or mental, and all the other divisions and subdivisions of science. It would surely be absurd to suppose, that the mixture of acids and alkalies constitutes *Chemistry*, or that Astronomy is formed by the revolution of planets round a sun. Such phenomena, the mere objects of science, are only the occasions on which Astronomy and Chemistry arise in the mind of the inquirer, Man. It is the mind which perceives bodies, which reasons on their apparent relations, which joins them in thought as similar, however distant they may be in sphere, or separates them in thought as dissimilar, though apparently contiguous. These perceptions, reasonings, and classifications of the mind must, of course be regulated by the laws of mind, which mingle in their joint result with the laws of matter. It is the object indeed which affects the mind when sentient; but it is the original susceptibility of the mind itself, which determines and modifies the particular affection, very nearly, if I may illustrate what is mental by so coarse an image, as the impression which a seal leaves on melted wax depends, not on the qualities of the wax alone, or of the seal alone, but on the softness of the one, and the form of the other. Change the external object which affects the mind in any case, and we all know, that the affection of the mind will be different. It would not be less so, if, without any change of object, there could be a change in the mere feeling, whatever it might be, which would result from that different susceptibility becoming instantly as different, as if not the mind had been altered, but the object which it perceived. There is no physical science, therefore, in which the laws of mind are not to be considered together with the laws of

matter; and a change in either set of laws would equally produce a change in the nature of the science itself.

If, to take one of the simplest of examples, the mind had been formed susceptible of all the modifications which it admits at present, with the single exception of those which it receives on the presence of light, of how many objects and powers in nature, which we are now capable of distinguishing, must we have remained in absolute ignorance! But would this comparative ignorance of many objects be the only effect of such a change of the laws of mind, as I have supposed? Or rather, is it not equally certain, that this simple change alone would be sufficient to alter the very nature of the limited science of which the mind would still be capable, as much as it narrowed its extent? Science is the classification of relations; varying, too, in every case, as the relations observed are different; and how very differently should we, in such circumstances, have classed the few powers of the few objects, which might still have become known to us, since we could no longer have classed them according to any of those visual relations, which are always the most obvious and prominent. It is even, perhaps, an extravagant supposition, that a race of the blind, unless endowed with some other sense to compensate the defect of sight, could have acquired so much command of the common arts of life, or so much science of any sort, as to preserve themselves in existence. But though all this, by a very strong license of supposition, were taken for granted, it must surely be admitted, that the knowledge which man could in those circumstances acquire, would be not merely less in degree, but would be as truly different from that which his powers at present have reached, as if the objects of his science, or the laws which regulate them, had themselves been changed to an extent, at least as great as the supposed change in the laws of mind. The *astronomy* of the blind, if the word might still be used to express a science so very different from the present, would, in truth, be a sort of *chemistry*. Day and night, the magnificent and harmonious revolution of season after season, would be nothing more than periodical changes of temperature in the objects around; and that great Dispenser of the seasons, the Source of light, and beauty, and almost of animation, at whose approach nature seems not merely to awake, but to rise again, as it was at first, from the darkness of its original chaos, if its separate

existence could be at all inferred, would probably be classed as something similar, though inferior in power, to that unknown source of heat, which, by a perilous and almost unknown process, was fearfully piled and kindled on the household hearth.

So accustomed are we, however, to consider the nature and limits of the different sciences, as depending on the objects themselves, and not on the laws of the mind, which classes their relations, that it may be difficult for you at first to admit the influence of these mere laws of mind, as modifying general physics, at least to the extent which I have now stated. But, that a change in the laws of human thought, whatever influence it might have in altering the very nature and limits of the physical sciences, would at least affect greatly the state of their progress, must be immediately evident to those who consider for a moment on what discovery depends; the progress of science being obviously nothing more than a series of individual discoveries, and the number of discoveries varying with the powers of the individual intellect. The same phenomena which were present to the mind of Newton, had been present, innumerable times before, not to the understandings of philosophers only, but to the very senses of the vulgar. Every thing was the same to him and to them, except the observing and reasoning mind. To him alone, however, they suggested those striking analogies, by which on a comparison of all the known circumstances in both, he ventured to class the force which retains the planets in their orbits, with that which occasions the fall of a pebble to the earth.

> "Have ye not listen'd, while he bound the suns
> And planets to their spheres! the unequal task
> Of human kind till then. Oft had they roll'd
> O'er erring man the year, and oft disgraced
> The pride of schools.
> ——He took his ardent flight
> Through the blue infinite; and every star
> Which the clear concave of a winter's night
> Pours on the eye, or astronomic tube,
> Far stretching, snatches from the dark abyss,
> Or such as farther in successive skies
> To fancy shine alone, at his approach
> Blazed into suns, the living centre each
> Of an harmonious system; all combined,

And ruled unerring by that single power,
Which draws the stone projected to the ground."*

It is recorded of this almost superhuman Genius, whose powers and attainments at once make us proud of our common nature, and humble us with our disparity, that, in acquiring the Elements of Geometry, he was able, in a very large proportion of cases, to pass immediately from Theorem to Theorem, by reading the mere enunciation of each, perceiving, as it were intuitively, that latent evidence, which others are obliged slowly to trace through a long series of Propositions. When the same Theorem was enunciated, or the same simple phenomenon observed, the successions of thought, in his mind, were thus obviously different from the successions of thought in other minds; but it is easy to conceive the original susceptibilities of all minds such, as exactly to have corresponded with those of the mind of Newton. And if the minds of all men, from the creation of the world, had been similar to the mind of Newton, is it possible to conceive, that the state of any science would have been, at this moment, what it now is, or in any respect similar to what it now is, though the laws which regulate the physical changes in the material universe, had continued unaltered, and no change occurred, but in the simple original susceptibilities of the mind itself?

The laws of the observing and comparing mind, then, it must be admitted, have modified, and must always continue to modify, every science, as truly as the laws of that particular department of nature of which the phenomena are observed and compared. But, it may be said, we are Chemists, we are Astronomers, without studying the philosophy of mind. And true it certainly is, that there are excellent Astronomers, and excellent Chemists, who have never paid any particular attention to intellectual philosophy. The general principles of philosophizing, which a more accurate intellectual philosophy had introduced, have become familiar to them, without study. But those general principles are not less the effect of that improved philosophy of mind, any more than astronomy and chemistry themselves have now a less title to be considered as sciences,—because, from the general diffusion of knowledge in society, those who have never professedly studied either science, are acquainted with many of their most striking truths.

* Thomson's Poem on the Death of Sir Isaac Newton.

It is gradually, and almost insensibly, that truths diffuse themselves —at first admired and adopted by a few, who are able to compare the present with the past, and who gladly own them, as additions to former knowledge,—from them communicated to a wider circle, who receive them, without discussion, as if familiar and long known; and at length, in this widening progress, becoming so nearly universal, as almost to seem effects of a natural instinctive law of human thought:—like the light, which we readily ascribe to the sun, as it first flows directly from him, and forces his image on our sight; but which, when reflected from object to object, soon ceases to remind us of its origin, and seems almost to be a part of the very atmosphere which we breathe.

I am aware, that it is not to improvements in the mere philosophy of mind, that the great reformation in our principles of physical inquiry is commonly ascribed. Yet it is to this source—certainly at least to this source chiefly, that I would refer the origin of those better plans of philosophical investigation which have distinguished with so many glorious discoveries the age in which we live, and the ages immediately preceding. When we think of the great genius of Lord Bacon, and of the influence of his admirable works, we are too apt to forget the sort of difficulties which his genius must have had to overcome, and to look back to his rules of philosophizing, as a sort of ultimate truths, discoverable by the mere perspicacity of his superior mind, without referring them to those simple views of nature in relation to our faculties of discovery, from which they were derived. The rules which he gives us, are rules of physical investigation; and it is very natural for us, therefore, in estimating their value, to think of the erroneous physical opinions which preceded them, without paying sufficient attention to the false theories of intellect, which had led to those very physical absurdities. Lord Bacon, if he was not the first who discovered that we were in some degree idolaters, to use his own metaphor, in our intellectual worship, was certainly the first who discovered the extent of our idolatry. But we must not forget, that the temple which he purified, was not the temple of external nature, but the temple of the mind,—that in its inmost sanctuaries were all the idols which he overthrew,—and that it was not till these were removed, and the intellect prepared for the presence of a nobler divinity, that Truth would deign to unveil

herself to adoration:—as in the mysteries of those Eastern religions, in which the first ceremony for admission to the worship of the God is the purification of the worshipper.

In the course of our analysis of the intellectual phenomena, we shall have frequent opportunities of remarking the influence, which errors with respect to these mere phenomena of mind must have had, on the contemporary systems of general physics, and on the spirit of the prevailing plans of inquiry. It may be enough to remark at present the influence of one fundamental error, which, as long as it retained its hold of the understanding, must have rendered all its energies ineffectual, by wasting them in the search of objects, which it never could attain, because in truth they had no real existence,—to the neglect of objects that would have produced the very advantage which was sought. I allude to the belief of the schools, in the separate existence, or entity as they technically termed it, of the various orders of universals, and the mode in which they conceived every acquisition of knowledge in reasoning, to take place, by the intervention of certain intelligible forms or species, existing separately in the intellect, as the direct objects of thought,—in the same manner as they ascribed simple perception to the action of species of another order, which they termed sensible species,—the images of things derived indeed from objects without, but when thus derived, existing independently of them. When we amuse ourselves with inquiring into the history of human folly—that most comprehensive of all histories—which includes, at least for many ages, the whole history of philosophy; or rather, to use a word more appropriate than amusement,—when we read with regret the melancholy annals of genius aspiring to be pre-eminently frivolous, and industry labouring to be ignorant, we often discover absurdities of the grossest kind, which almost cease to be absurdities, on account of other absurdities, probably as gross, which accompany them; and this is truly the case, in the grave extravagance of the logic of the schools. The scholastic mode of philosophizing, ridiculous as it now seems, was far from absurd, when taken in connection with the scholastic philosophy. It was indeed the only mode of procedure, which that philosophy could consistently admit. To those who believed that singular objects could afford no real knowledge, *singularium nullam dari scientiam:* and that this was to be obtained only from what they termed

intelligible species, existing not in external things, but in the intellect itself, it must have seemed as absurd to wander, in quest of knowledge, out of that region in which alone they supposed it to exist, and to seek it among things singular, as it would now, to us, seem hopeless and absurd, to found a system of physical truths on the contemplation and comparison of universals. While this false theory of the mental phenomena prevailed, was it possible, that the phenomena of matter should have been studied on sounder principles of investigation, when any better plan must have been absolutely inconsistent with the very theory of thought? It was in mind that the student of general nature was to seek his guiding light, without which all then was darkness. The intellectual philosopher, if any such had then arisen, to analyze simply the phenomena of thought, without any reference to general physics, would in truth have done more in that dark age, for the benefit of every physical science, than if he had discovered a thousand properties of as many different substances.

Let us suppose, for a moment, that an accurate view of the intellectual process of abstraction could have been communicated to a veteran sage of the schools, at the very moment when he was intently contemplating the tree of Porphyry, in all its branches of species and genera, between the individual and the *summum genus ;* and when he was preparing perhaps, by this contemplation of a few universals, to unfold all the philosophy of colours, or of the planetary movements, would the benefit which he received from this clearer view of a single process of thought have terminated in the mere science of mind—or would not rather his new views of mind have extended with a most important influence to his whole wide views of matter?—He must immediately have learned, that, in the whole tree of genera and species, the individual at the bottom of his scale was the only real independent existence, and that all the rest, the result of certain comparisons of agreement or disagreement, were simple modifications of his own mind, not produced by any thing existing in his intellect but by the very constitution of his intellect itself; the consideration of a number of individuals as of one species being nothing more than the feeling of their agreement in certain respects, and the feeling of this agreement being as simple a result of the observation of them together, as the perception of each, individually, was of its individual pres-

ence. It would surely have been impossible for him, with this new and important light, to return to his transcendental inquiries, into entities, and quiddities, and substantial forms; and the simple discovery of a better theory of abstraction, as a process of the mind, would thus have supplied the place of many rules of philosophizing.

The philosophy of mind then, we must admit, did, in former ages at least, exercise an important influence on general science: —and are we to suppose that it has now no influence?

Even though no other advantage were to be obtained from our present juster views of mind, than the protection which they give, from those gross errors of inquiry to which the philosophers of so long a series of ages were exposed, this alone would surely be no slight gain. But, great as this advantage is, are we certain, that it is all which the nicest mental analysis can afford,—or rather, is it not possible at least, that we may still, in our plans of physical investigation, be suffering under the influence of errors from which we should be saved, by still juster views of the faculties employed in every physical inquiry?

That we are not aware of any such influence, argues nothing; for to suppose us aware of it, would be to suppose us acquainted with the very errors which mislead us. Aquinas and Scotus, it is to be presumed, and all their contentious followers, conceived themselves as truly in the right path of physical investigation, as we do at this moment; and, though we are free from their gross mistakes, there may yet be others of which we are less likely to divest ourselves, from not having as yet the slightest suspicion of their existence. The question is not, Whether our method of inquiry be juster than theirs?—for, of our superiority in this respect, if any evidence of fact were necessary, the noble discoveries of these later years are too magnificent a proof to allow us to have any doubt,—but, Whether our plan of inquiry may not still be susceptible of improvements, of which we have now as little foresight, as the Scotists and Aquinists of the advantages which philosophy has received from the general prosecution of the inductive method? There is, indeed, no reason now to fear, that the observation of particular objects, with a view to general science, will be despised as incapable of giving any direct knowledge, and all real science be confined to universals. "Singulari-

um *datur* scientia." But, though a sounder view of one intellectual process may have banished from philosophy much idle contention, and directed inquiry to fitter objects, it surely does not therefore follow, that subsequent improvements in the philosophy of mind are to be absolutely unavailing. On the contrary, the presumption unquestionably is, that if by understanding better the simple process of abstraction, we have freed ourselves from many errors in our plans of inquiry, a still clearer view of the nature and limits of all the intellectual processes concerned in the discovery of truth, may lead to still juster views of philosophizing.

Even at present, I cannot but think that we may trace, in no inconsiderable degree, the influence of false notions, as to some of the phenomena of the mind, in misdirecting the spirit of our general philosophy. I allude in particular, to one very important intellectual process,—that by which we acquire our knowledge of the relation on which all physics may be said to be founded. He must have paid little attention to the history of philosophy, and even to the philosophy of his own time, who does not perceive, how much the vague and obscure notions entertained of that intermediate tie, which is supposed to connect phenomena with each other, have tended to favour the invention and ready admission of physical hypotheses, which otherwise could not have been entertained for a moment;—hypotheses, which attempt to explain what is known by the introduction of what is unknown; as if successions of phenomena were rendered easier to be understood merely by being rendered more complicated. This very unphilosophic passion for complexity, (which, unphilosophic as it is, is yet the passion of many philosophers,) seems, to me, to arise, in a great measure, from a mysterious and false view of causation; as involving always, in every series of changes, the intervention of something unobserved, between the observed antecedent and the observed effect;—a view which may very naturally be supposed to lead the mind, when it has observed no actual intervention, to imagine any thing which is not absolutely absurd, that it may flatter itself with the pleasure of having discovered a cause. It is unnecessary, however, to enlarge at present on this subject, as it must again come before us; when you will perhaps see more clearly, how much the general diffusion of juster views, as to the nature and origin of our notion of the connection of

events, would tend to the simplification, not of our theories of mind only, but, in a still higher degree, of our theories of matter.

The observations already made, I trust, have shown how important, to the perfection of every science, is an accurate acquaintance with that intellectual medium, through which alone the objects of every science become known to us, and with those intellectual instruments, by which, alike in every science, truth is to be detected and evolved. On this influence, which the philosophy of mind must always exercise on general philosophy, I have dwelt the longer, because, important as the relation is, it is one which we are peculiarly apt to forget; and the more apt to forget it, on account of that very excellence of the physical sciences, to which it has itself essentially contributed. The discoveries, which reward our inquiry into the properties of matter, as now carried on, on principles better suited to the nature and limits of our powers of investigation, are too splendid to allow us to look back to the circumstances which prepared them at a distance; and we avail ourselves of rules, that are the result of logical analysis, without reflecting, and almost without knowing, that they are the result of any analysis whatever. We are, in this respect, like navigators on the great ocean, who perform their voyage successfully by the results of observations, of which they are altogether ignorant; who look, with perfect confidence, to their compass and chart, and think of the stars as useful only in those early ages, when the pilot, if he ventured from shore, had no other directors of his course. It is only some more skilful mariner who is still aware of their guidance; and who knows, how much he is indebted to the satellites of Jupiter for the accuracy of that very chart, by which the crowds around him are mechanically directing their course.

The chief reason, however, for my dwelling so long on this central and governing relation, which the philosophy of intellect bears to all other philosophy, is, that I am anxious to impress their relation strongly on your minds; not so much with a view to the importance which it may seem to give to the particular science that is to engage us together, as with a view to those other sciences in which you may already have been engaged, or which may yet await you in the course of your studies. The consideration of mind, as universally present and presiding,—at once the medium of all the

knowledge which can be acquired, and the subject of all the truths of which that knowledge consists,—gives, by its own unity, a sort of unity and additional dignity to the sciences, of which their scattered experiments and observations would otherwise be unsusceptible. It is an unfortunate effect of physical inquiry, when exclusively devoted to the properties of external things, to render the mind, in our imagination, subordinate to the objects on which it is directed; the faculties are nothing, the objects every thing. The very nature of such inquiry leads us perpetually without to observe and arrange, and nothing brings us back to the observer and arranger within; or, if we do occasionally cast an inquisitive glance on the phenomena of our thought, we bring back with us what Bacon, in his strong language, calls "the smoke and tarnish of the furnace;" —the mind seems, to us, to be broken down to the littleness of the objects which it has been habitually contemplating; and we regard the faculties that measure earth and heaven, and that add infinity to infinity, with a curiosity of no greater interest, than that with which we inquire into the angles of a crystal, or the fructification of a moss. "Ludit istis animus," says one of the most eloquent of the ancients,—"Ludit istis animus, non proficit; et philosophiam a fastigio deducit in planum." To rest in researches of this minute kind, indeed, if we were absolutely to REST in them, without any higher and profounder views, would truly be, as he says, to drag down philosophy from that pure eminence on which she sits, to the very dust of the plain on which we tread. To the inquirer, however, whose mind has been previously embued with this first philosophy, and who has learned to trace, in the wonders of every science, the wonders of his own intellectual frame, there is no physical research, however minute its object, which does not at once elevate the mind, and derive elevation from it. Nothing is truly humble, which can exercise faculties that are themselves sublime.

——Search, undismayed the dark profound,
Where Nature works in secret; view the beds
Of mineral treasure, and the eternal vault
That bounds the hoary ocean; trace the forms
Of atoms, moving with incessant change,
Their elemental round; behold the seeds
Of being, and the energy of life,
Kindling the mass with ever active flame;

Then to the secrets of the working mind
Attentive turn; from dim oblivion call
Her fleet ideal band; and bid them go
Break through time's barrier, and o'ertake the hour
That saw the heavens created; then declare,
If ought were found in these external scenes
To move thy wonder now.*

In the physics of the material universe, there is, it must be owned, much that is truly worthy of our philosophic admiration, and of the sublimest exertions of philosophic genius. But even that material world will appear more admirable, to him who contemplates it, as it were, from the height of his own mind, and who measures its infinity with the range of his own limited but aspiring faculties. He is unquestionably the philosopher most worthy of the name, who unites to the most accurate knowledge of mind, the most accurate knowledge of all the physical objects amid which he is placed; who makes each science, to each, reciprocally a source of additional illumination; and who learns, from both, the noblest of all the lessons which they can give,—the knowledge and adoration of that divine Being, who has alike created, and adapted to each other, with an order so harmonious, the universe of matter, and the universe of thought.

* Akenside's Pleasures of Imagination, Book I. v. 512—526.

LECTURE III.

RELATION OF THE PHILOSOPHY OF MIND TO THE SCIENCES AND ARTS MORE STRICTLY INTELLECTUAL.

In my last Lecture, Gentlemen, I illustrated, at great length, the relation which the Philosophy of Mind bears to all the other sciences, as the common centre of each. These sciences I represented, as, in their relation to the powers of discovery, that are exercised in them, truly arts, in all the various intellectual processes of which, the artist is the same, and the instruments the same; and as to the perfection of any of the mechanical arts, it is essential, that we know the powers of the instruments employed in it, so, in the inventive processes of science of every kind, it seems essential to the perfection of the process, that we should know, as exactly as possible, the powers and the limits of these intellectual instruments, which are exercised alike in all,—that we may not waste our industry, in attempting to accomplish with them what is impossible to be accomplished, and at the same time may not despair of achieving with them any of the wonders to which they are truly adequate, if skilfully and perseveringly exerted; though we should have to overcome many of those difficulties which present themselves, as obstacles to every great effort, but which are insurmountable, only to those who despair of surmounting them.

It was to a consideration of this kind, as to the primary importance of knowing the questions to which our faculties are competent, that we are indebted for one of the most valuable works in our science, a work, which none can read even now, without being impressed with reverence for the great talents of its author; but of which it is impossible to feel the whole value, without an acquaintance with the verbal trifling, and barren controversies,

that still perplexed and obscured intellectual science at the period when it was written.

The work to which I allude is the *Essay on the Human Understanding*, to the composition of which Mr Locke, in his preface, states himself to have been led by an accidental conversation with some friends who had met at his chamber. In the course of a discussion, which had no immediate relation to the subject of the Essay, they found themselves unexpectedly embarrassed by difficulties that appeared to rise on every side, when after many vain attempts to extricate themselves from the doubts which perplexed them, it occurred to Mr Locke, that they had taken a wrong course,—that the inquiry in which they were engaged was probably one which was beyond the reach of human faculties, and, that their *first* inquiry should have been, into the nature of the understanding itself, to ascertain what subjects it was fit to explore and comprehend.

"When we know our own strength," he remarks, "we shall the better know what to undertake with hopes of success: and when we have well surveyed the powers of our own minds, and made some estimate what we may expect from them, we shall not be inclined either to sit still, and not set our thoughts on work at all, in despair of knowing any thing; or, on the other side, question every thing, and disclaim all knowledge, because some things are not to be understood. It is of great use to the sailor, to know the length of his line, though he cannot with it fathom all the depths of the ocean. It is well he knows, that it is long enough to reach the bottom, at such places as are necessary to direct his voyage, and caution him against running upon shoals that may ruin him.—This was that which gave the first rise to this essay concerning the understanding. For I thought, that the first step towards satisfying several inquiries, the mind of man was very apt to run into, was to take a survey of our own understandings, examine our own powers, and see to what things they were adapted. Till that was done, I suspected we began at the wrong end, and in vain sought for satisfaction in a quiet and sure possession of truths that most concerned us, while we let loose our thoughts into the vast ocean of being, as if all that boundless extent were the natural and undoubted possession of our understandings.—Thus men, extending their inquiries beyond their

capacities, and letting their thoughts wander into those depths, where they can find no sure footing, it is no wonder that they raise questions and multiply disputes, which, never coming to any clear resolution, are proper only to continue and increase their doubts, and to confirm them, at last, in perfect scepticism; whereas, were the capacities of our understanding well considered, the extent of our knowledge once discovered, and the horizon found, which sets the bounds between the enlightened and dark parts of things, between what is and what is not comprehensible by us, men would perhaps, with less scruple, acquiesce in the avowed ignorance of the one, and employ their thoughts and discourse, with more advantage and satisfaction in the other."*

These observations of Mr Locke illustrate, very happily, the importance of a right view of the limits of our understanding, for directing our inquiries to the objects that are truly within our reach. It is not the waste of intellect, as it lies torpid in the great multitude of our race, that is alone to be regretted in relation to science, which in better circumstances, it might improve and adorn. It is in many cases, the very industry of intellect, busily exerted, but exerted in labours that must be profitless, because the objects, to which the labour is directed, are beyond the reach of man. If half the zeal, and, I may add, even half the genius, which, during so many ages, were employed in attempting things impossible, had been given to investigations, on which the transcendental inquirers of those times would certainly have looked down with contempt, there are many names that are now mentioned only with ridicule or pity, for which we should certainly have felt the same deep veneration, which our hearts so readily offer to the names of Bacon and Newton; or perhaps even the great names of Bacon and Newton might, in comparison with them, have been only of secondary dignity. It was not by idleness that this high rank of instructors and benefactors of the world was lost, but by a blind activity more hurtful than idleness itself. To those who never could have thought of numbering the population of our own little globe, it seemed an easy matter to number, with precise arithmetical accuracy, the tribes of angels, and to assign to each order of spiritual beings its separate duties, and separate dignities, with the exactness of some heraldic pomp; and, amid

* Essay on the Human Understanding.—Introd. sect. 6, 7.

all those visible demonstrations of the Divinity which surround us wherever we turn our view, there were minds that could think in relation to him, of every thing but his wisdom and goodness; as if He who created us, and placed around us this magnificent system of things, were an object scarcely worthy of our reverence, till we had fixed his precise station in our logical categories, and had determined, not the majestic relations which he bears to the universe, as created and sustained by his bounty, but all the frivolous relations which he can be imagined to bear to impossibilities and nonentities.

> O, son of earth! attempt ye still to rise,
> By mountains pil'd on mountains, to the skies!
> Heaven still, with laughter, the vain toil surveys,
> And buries madmen in the heaps they raise.*

It is, indeed, then, to borrow Mr Locke's metaphor, of no slight importance to know the length of our line, though we cannot, with it, fathom all the depths of the ocean. With the knowledge, that, to a certain depth at least, we may safely confide in it, we shall not be corrupted, by our fear, to coast along the shore, with such cautious timidity as to lose all the treasures which might be obtained by a more adventurous voyage; nor tempted in the rashness of ignorance or despair, to trust ourselves wildly to every wind, though our course should be amidst rocks and quicksands.

The study of the natural limits of the faculties of the mind, has, indeed, sometimes been misrepresented, as favouring a tendency to vague and unlimited doubt on all subjects, even on those most important to individual and social happiness; as if the great names, to which we have long given our admiration, for the light which they have thrown on the powers and weaknesses of the human understanding, were not also the very names which we have been accustomed, not to admire merely, but to venerate, for excellence of a still nobler kind. Far from leading to general scepticism, it is, on the contrary, a sound study of the principles of our intellectual and moral nature, which alone can free from the danger of it. If the sceptical philosophy be false, as the assertors of this objection will allow that it most assuredly is, it can be overcome and destroyed only by a philosophy that is true;

* Pope's Essay on Man, Ep. iv. v. 73—76.

and the more deeply, and the more early, the mind is embued with the principles of truth, the more confidently may we rely on its rejection of the errors that are opposed to them. It is impossible for one, who is not absolutely born to labour, to pass through life without forming, in his own mind, occasionally, some imperfect reflections on the faculties by which he perceives and reasons; or without catching, from those with whom he may associate, some of those vague notions, of a vague philosophy, which pass unexamined from mind to mind, and become current in the very colloquial language of the day. The alternatives, therefore, (if we can, indeed, think of any other alternative when truth is one,) are not those of knowledge and absolute ignorance of the mental phenomena, but of knowledge more or less accurate; because absolute ignorance, even though it were a state to be wished, is beyond our power to preserve, in one who enjoys, in any respects, the benefit of education and liberal society. We might, with much greater prospect of success, attempt, by merely keeping from his view all professed treatises on Astronomy, to prevent him from acquiring that slight and common acquaintance with the system of the heavenly bodies, which is necessary for knowing that the sun does not go round the earth, than we could hope to prevent him from forming, or receiving, some notions, accurate or inaccurate, as to the nature of mind; and we surely cannot suppose, that the juster those opinions are, as to the nature and force of the principles of belief, the feebler must the principles of belief appear. It is not so, that nature has abandoned us, with principles which we must fear to examine, and with truths and illusions which we must never dare to separate. In teaching us what our powers are incapable of attaining, she has at the same time, taught us what truths they may attain; and within this boundary, we have the satisfaction of knowing, that she has placed all the truths that are important for our virtue and happiness. He, whose eyes are the clearest to distinguish the bounding circle, cannot surely, be the dullest to perceive the truths that are within. To know only to doubt, is but the first step in philosophy; and to rest at this first step, is either imbecility or idleness. It is not there that Wisdom sees, and compares, and pronounces; it is Ignorance, that, with dazzled eyes, just opening from the darkness of the night, perceives that she has been dreaming, without being able to distinguish, in the sunshine,

what objects really existing are around. He alone is the philosopher truly awake, who knows both how to doubt, and how to believe; believing what is evident on the very same principles, which lead him to doubt, with various degrees of uncertainty, where the evidence is less sure. To conceive, that inquiry must lead to scepticism, is itself a species of scepticism, as to the power and evidence of the principles to which we have given our assent, more degrading, because still more irrational, than that open and consistent scepticism which it dreads. It would, indeed, be an unworthy homage to truths, which we profess to venerate, to suppose, that adoration can be paid to them only while we are ignorant of their nature; and that to approach their altars would be to discover, that the majestic forms, which seem animated at a distance, are only lifeless idols, as insensible as the incense which we have offered to them.

The study of the powers and limits of the understanding, and of the sources of evidence in external nature and ourselves, instead of either forming or favouring a tendency to scepticism, is then, it appears, the surest, or rather the only mode, of removing the danger of such a tendency. That mind may soon doubt even of the most important truths, which has never learned to distinguish the doubtful from the true. But to know well the irresistible evidence on which truth is founded, is to believe in it, and to believe in it forever.

Nor is it from the danger of scepticism only, that a just view of the principles of his intellectual constitution tends to preserve the philosophic inquirer. It saves him, also, from that presumptuous and haughty dogmatism, which, though free from doubt, is not, therefore, necessarily free from error; and which is, indeed, much more likely to be fixed in error than in truth, where the inquiry, that precedes conviction, has been casual and incomplete. A just view of our nature as intelligent beings, at the same time that it teaches us enough of our strength to allow us to rest with confidence on the great principles, physical, moral, and religious, in which alone it is of importance for us to confide, teaches us also enough of our weakness, to render us indulgent to the weakness of others. We cease to be astonished that multitudes should differ from us; because we know well, that while nature has made a provision for the universal assent of mankind to those

fundamental physical truths, which are essential to their very existence, and those *fundamental truths* of another kind, which are equally essential to their existence as subjects of moral government, she has left them, together with principles of improvement that ensure their intellectual progress, a susceptibility of error, without which there could be no progression; and while we almost trace back the circumstances which have modified our own individual belief, we cannot but be aware, at the same time, how many sources there are of prejudice, and, consequently, of difference of opinion, in the various situations in which the multitudes, that differ from us, have been placed. To feel anger at human error, says an ancient philosopher, is the same thing as if we were to be angry with those who stumble in the dark,—with the deaf for not obeying our command,—with the sick,—with the aged,—with the weary. That very dulness of discernment, which excites at once our wonder and our wrath, is but a part of the general frailty of mortality; and the love of our errors is not less inherent in our constitution than error itself. It is this general constitution which is to be studied by us, that we may know with what mistakes and weaknesses we must have to deal, when we have to deal with our fellow-men; and the true art, therefore, of learning to forgive *individuals*, is to learn first how much we have to forgive *to the whole human race*. "Illud potius cogitabis, non esse irascendum erroribus. Quid enim, si quis irascatur in tenebris parum vestigia certa ponentibus? Quid si quis surdis, imperia non exaudientibus? Quid si pueris, quod neglecto dispectu officiorum, ad lusus et ineptos æqualium jocos spectent? Quid si illis irasci velis, qui ægrotant, senescunt, fatigantur? Inter cætera mortalitatis incommoda, et hæc est, caligo mentium: nec tantum necessitas errandi, sed errorum amor. Ne singulis irascaris, universis ignoscendum: generi humano venia tribuenda est."*

How much of the fury of the persecuting spirit of darker ages would have been softened and turned into moderation, by juster views of the nature of man, and of all the circumstances on which belief depends! It appears to us so very easy to believe what we consider as true,—or, rather, it appears to us so impossible to disbelieve it,—that, if we judge from our own momentary feelings

* Seneca, de Ira, lib. ii. cap. 9.

only, without any knowledge of the general nature of belief, and of all the principles in our mental constitution by which it is diversified, we very naturally look on the dissent of others as a sort of wilful and obstinate contrariety, and almost as an insulting denial of a right of approbation, which we consider ourselves, in these circumstances, as very justly entitled to claim. The transition from this supposed culpability to the associated ideas of pains and penalties, is a very natural one; and there is, therefore a sufficient fund of persecution in mere ignorance, though the spirit of it were not, as it usually is, aggravated by degrading notions of the divine Being, and false impressions of religious duty. Very different are the sentiments which the science of mind produces and cherishes. It makes us tolerant, not merely by showing the absurdity of endeavouring to overcome, by punishment, a belief which does not depend on suffering; but which may remain, and even gather additional strength, in imprisonment, in exile, under the axe, and at the stake. The absurdity of every attempt of this kind it shews indeed; but it makes us feel, still more intimately, that *injustice* of it, which is worse than absurdity,—by shewing our common nature, in all the principles of truth and error, with those whom we would oppress; all having faculties that may lead to truth, and tendencies of various kinds which may mislead to error, and the mere accidental and temporary difference of power being, if not the greatest, at least the most obvious circumstance, which, in all ages, has distinguished the *persecutor* from the *persecuted*.

Let not this weak, unknowing hand,
Presume thy bolts to throw;
Or deal damnation round the land,
On all I judge thy foe!

If I am right,—thy grace impart,
Still in the right to stay;
If I am wrong,—O, teach my heart,
To find the better way.*

Such is the language of devout philosophy. No proud assertion of individual infallibility,—no triumph over the consequences in others, of a fallible nature, which ourselves partake in common,—

* Pope's Universal Prayer, v. 25—32.

but the expression of feelings more suited to earthly weakness,—of a modest joy of belief, which is not less delightful for the humility that tempers it; and of a modest sorrow for the seeming errors of others, to which the consciousness of our own nature gives a sympathy of warmer interest. The more important the subject of difference, the *greater*, not the *less*, will be the indulgence of him who has learned to trace the sources of human error,—of error, that has its origin not in our weakness and imperfection merely, but often in the most virtuous affections of the heart,—in that respect for age, and admiration of virtue, and gratitude for kindness received, which make the opinions of those whom we love and honour seem to us, in our early years, as little questionable, as the virtues which we love to contemplate, or the very kindness which we feel at every moment beaming on our heart, in the tender protection that surrounds us. That the subjects on which we may differ from others, are *important to happiness*, of course implies, that it is no slight misfortune *to have erred;* and that the mere error, therefore, must be already too great an evil to require any addition from our individual contempt or indignation, far less from the vengeance of public authority,—that *may* be right, in the opinions which it conceives to be insulted by partial dissent; but which *must* be wrong, in the means which it takes to avenge them. To be sincerely thankful for truths received, is, by the very nature of the feeling, to be sensible how great a blessing those have lost who are deprived of the same enjoyment; and to look down, then, with insolent disdain, on the unfortunate victim of error, is, indeed to render contemptible, (as far as it is in our feeble power to render it contemptible,) not the error which we despise, but the truth which allows us to despise it.

The remarks which I have as yet made, on the effects of acquaintance with the Philosophy of Mind, relate to its influence on the general spirit of philosophical inquiry; the advantages which must be derived, in every science, from a knowledge of the extent of the power of the intellectual instruments which we use for the discovery of truth; the skill which we thence acquire in distinguishing the questions in which we may justly hope to discover truth, from those questions of idle and endless controversy, the decision of which is altogether beyond the reach of our faculties; and the consequent moderation in the temper, with which

we look both to our own possible attainments, and to the errors of others.

But beside these general advantages, which the Philosophy of Mind extends to all the inquiries of which human genius is capable, there are some advantages more peculiarly felt in certain departments of science or art. It is not merely *with* the mind that we operate; the subject of our operations is also often the *mind itself*. In education, in criticism, in poetry, in eloquence, the mind has to act upon mind, to produce in it either emotions that are *temporary*, or affections and opinions that are *permanent*. We have to instruct it,—to convince it,—to persuade it,—to delight it,—to soften it with pity,—to agitate it with terror or indignation;—and all these effects, when other circumstances of genius are the same, we shall surely be able to produce more readily, if we know the natural laws of thought and emotion; the feelings which are followed by other feelings; and the thoughts, which, expanding into other thoughts, almost of themselves produce the very passion, or conviction, which we wish to excite.

"One considerable advantage," says Mr Hume, "which results from the accurate and abstract philosophy, is its subserviency to the easy and humane; which, without the former, can never attain a sufficient degree of exactness in its sentiments, precepts, or reasonings. All polite letters are nothing but pictures of human life in various attitudes and situations; and inspire us with different sentiments of praise or blame, admiration or ridicule, according to the qualities of the object which they set before us. An artist must be better qualified to succeed in this undertaking; who, besides a delicate taste and quick apprehension, possesses an accurate knowledge of the internal fabric, the operations of the understanding, the workings of the passions, and the various species of sentiment which discriminate vice and virtue. However painful this inward search or inquiry may appear, it becomes, in some measure, requisite to those who would describe with success the obvious and outward appearances of life and manners. The anatomist presents to the eye the most hideous and disagreeable objects; but his science is highly useful to the painter in delineating even a Venus or an Helen. While the latter employs all the richest colours of his art, and gives his figures the most graceful and engaging airs, he must still carry his attention to the in-

ward structure of the human body, the position of the muscles, the fabric of the bones, and the use and figure of every part or organ. Accuracy is, in every case, advantageous to beauty, and just reasoning to delicacy of sentiment;—in vain would we exalt the one by depreciating the other."*

There is a most striking passage to the same purport, in that beautiful dialogue on ancient oratory, which has been ascribed, without any very satisfactory evidence, to various authors, particularly to Quinctilian, the younger Pliny, and Tacitus, and which is not unworthy of the most eminent of the names to which it has been ascribed. After dwelling on the universal science and erudition of the great master of Roman eloquence, the chief speaker in the dialogue proceeds to show the peculiar advantage which oratory must derive from *moral and intellectual science*, to the neglect of which fundamental study, as superseded by the frivolous disputations of the rhetorical schools, he ascribes the decay of eloquence in the age of which he speaks.

"Ita enim est, optimi viri, ita, ex multa eruditione, ex pluribus artibus, et omnium rerum scientia, exundat et exuberat illa admirabilis eloquentia. Neque oratoris vis et facultas, sicut ceterarum rerum, angustis et brevibus terminis eluditur; sed is est orator, qui de omni quæstione pulchre, et ornate, et ad persuadendum apte dicere, pro dignitate rerum ad utilitatem temporum, cum voluptate audientium, possit. Hæc sibi illi veteres persuadebant. Ad hæc efficienda intelligebant opus esse, non ut Rhetorum scholis declamarent,—sed ut his artibus pectus implerent, in quibus de bonis ac malis, de honesto ac turpi, de justo et injusto disputatur; —de quibus copiose, et varie, et ornate, nemo dicere potest, nisi qui cognovit naturam humanam.—Ex his fontibus etiam illa profluunt, ut facilius iram judicis vel instiget, vel leniat, qui scit quid ira, promptius ad miserationem impellat qui scit quid sit misericordia, et quibus animi motibus concitetur. In his artibus exercitationibusque versatus orator, sive apud infestos, sive apud cupidos, sive apud invidentes, sive apud tristes, sive apud timentes dicendum habuerit, tenebit habenas animorum, et prout cujusque natura postulabit, adhibebit manum et temperabit orationem, parato omni instrumento, et ad usum reposito."†

* Inquiry concerning the Human Understanding, sec. I.

† Tacitus, edit. Lipsii, p. 484, 5.

What is the whole art of criticism, in its most important applications, but the knowledge of the most natural successions of thought and feeling in the mind? We judge of the perspicuity and order of a discourse, by knowing the progress in which the mind, by the developement of truth after truth, may be made at last to see the full meaning of the most complex proposition. We judge of the beauty of impassioned poetry or eloquence, by knowing whether the figures, the images, the very feelings described, be such as, from our observation of the laws that regulate the internal series of changes in the mind, we know to be consistent with that state of emotion, in which a mind must exist that has been placed in the situation supposed. If all other circumstances be equal, he will undoubtedly be the best critic, who knows best the phenomena of human thought and feeling; and, without this knowledge, criticism can be nothing but a measurement of words, or a repetition of the ever repeated and endless common places of rhetoric. The knowledge of *nature*,—of the necessity of which critics speak so much, and so justly, and which is as essential to the critic himself, as to the writer on whom he sits in judgment,—is only another name for the knowledge of the successive transitions of feeling of the mind, in all the innumerable diversities in which it is capable of being modified, by the variety of circumstances in which it may be placed. It is for this reason, that, with so great an abundance of the mere *art*, or rather of the mere technical phrases of criticism, we have so very little of the *science* of it; because the science of criticism implies an acquaintance with the philosophy of thought and passion, which few can be expected to possess; and though nothing can be easier than to deliver opinions, such as pass current in the drawing-room, and even in the literary circle, which the frivolous may admire as profound, and the ignorant as erudite, and which many voices may be proud to repeat; though even the dull and pedantic are as able as the wise to say, in fluent language, that one passage of a work of genius is beautiful, and another the reverse,—because one of them is in accordance with some technical rules, or because Homer and Milton have passages similar to the one, and not to the other: it is far from being equally easy to show, how the one passage is beautiful, from its truth of character, and the other, though perhaps rich in harmony of rhythm and rhetorical ornament, is yet faulty, by its violation of the more im-

portant harmony of thought and emotion,—a harmony which nature observes as faithfully, in the progress of those vehement passions that appear most wild and irregular, as in the calmest successions of feeling of the most tranquil hours. It would indeed, be too much to say, as in the well known couplet of Pope,

> "Let such teach others who themselves excel,
> And censure freely, who have written well;"*

for the critic requires only *one* of the *two* great talents, which in the poet, ought to exist together, but which may yet exist separately. In the poet, there must be, in the first place, an inventive fancy to bring together thoughts and images which have never been combined before; and with this inventive fancy, a discriminating judgment, which is to measure, by the standard of nature, the products of invention; and to retain them, only if they appear such, as though perhaps never before combined, might yet, in conformity with the natural laws of thought, have occurred to a mind, in the circumstances represented, as truly, as the other thoughts or images, which the works of other poets have rendered more familiar. This latter talent,—the judgment which determines the intrinsic beauty and fidelity to general nature,—is all which is absolutely requisite to the *critic*, who is not, therefore, under the necessity of being himself "the great sublime" which he draws. Yet, though all the elements of excellence in the artist are not absolutely requisite for the judgment of the sage and discriminating admirer of the noble works which that excellence may have produced, some of these elements unquestionably are requisite,—elements, for which the critic may search in vain in all the rules of rhetoricians, and even in the perusal of all the masterpieces of ancient and modern times, unless, to an acquaintance with these, he add an accurate acquaintance with that *intellectual and moral nature of man*, the beautiful conformity to which was the essential charm of all the pathos, and all the eloquence, which he has admired.

There is another art, however, to which knowledge of the intellectual and moral nature of man is still more important—that noble art, which has the charge of training the ignorance and im-

* Essay on Criticism, v. 15, 16.

becility of infancy into all the virtue, and power, and wisdom of maturer manhood—of forming, of a creature, the frailest and feeblest perhaps which heaven has made, the intelligent and fearless sovereign of the whole animated creation, the interpreter, and adorer, and almost the representative of the Divinity. The art, which performs a transformation so wondrous, cannot but be admirable itself; and it is from observation of the laws of mind, that all which is most admirable in it is derived. These laws we must follow indeed, since they exist not by our contrivance, but by the contrivance of that nobler wisdom, from which the very existence of the mind has flowed; yet, if we know them well, we can *lead* them, in a great measure, even while we *follow* them. And, while the helpless subject of this great moral art is every moment requiring our aid,—with an understanding that may rise, from truth to truth, to the sublimest discoveries, or may remain sunk forever in ignorance, and with susceptibilities of vice that may be repressed, and of virtue that may be cherished,—can we know too well the means of checking what is evil, and of fostering what is good? It is too late to lie by, in indolent indulgence of affection, till vice be already formed in the little being whom we love, and to labour then to remove it, and to substitute the virtue that is opposite to it. Vice already formed, is almost beyond our power. It is only in the state of latent propensity, that we can with much reason expect to overcome it by the moral motives which we are capable of presenting; and to distinguish this propensity before it has expanded itself, and even before it is known to the very mind in which it exists,—to tame those passions which are never to rage, and to prepare, at a distance, the virtues of other years,—implies a knowledge of the mental constitution, which can be acquired only by a diligent study of the nature, and progress, and successive transformations of feeling. It is easy to know, that praise or censure, reward or punishment, may increase or lessen, the tendency to the repetition of any particular action; and this, together with the means of elementary instruction, is all which is commonly termed *education*. But the true science of education is something far more than this. It implies a skilful observation of the past, and that long foresight of the future, which experience and judgment united afford. It is the art of seeing, not the *immediate effect* only, but the *series of effects* which may follow any particular thought or

feeling, in the infinite variety of possible combinations—the art often of drawing virtue from apparent evil, and of averting evil that may rise from apparent good. It is, in short, the philosophy of the human mind applied practically to the human mind,—enriching it, indeed, with all that is useful or ornamental in knowledge, but at the same time giving its chief regard to objects of yet greater moment—averting evil, which all the sciences together could not compensate, or producing good, compared with which all the sciences together are as nothing.

LECTURE IV.

RELATION OF THE PHILOSOPHY OF MIND TO THE CULTIVATION OF MORAL FEELING.

We have already, Gentlemen, considered the relation which the *Philosophy of Mind* bears to the *Sciences in general*, and its particular application to those sciences and arts, in which the mind is not merely the instrument with which we carry on our intellectual operations, but the very subject on which we operate, as in the great arts of reasoning, and persuading, of delighting with all the charms of poetry and eloquence, of judging of the degrees of excellence that have been attained in these delightful arts; and, still more, its application to the noblest, though, in proportion to its value, the least studied of all the arts, the art of *education*. It remains still, to point out some moral effects which the study of the Science of Mind produces in the *inquirer himself*, effects which may not be obvious at first sight, but which result from it, as truly as the intellectual advantages already pointed out.

One very powerful and salutary influence of moral science arises directly from the mere contemplation of the objects with which it is conversant—the benevolent affections, the pleasure which attends these, the sacrifices that are made by generous virtue, and all the sublime admiration which they excite—the sordid and malevolent, and joyless passions of the selfish—the fear and shame that attend the guilty in society, and the horrors that, with a certainty of constant return more dreadful than their very presence, await them in their solitary hours. It is good to have these often before us, and to trace and contrast all the immediate, and all the remote effects of vice and virtue, even though we should form, at the time, no direct reference to our own past or future conduct. Without any such reference to ourselves, we must still be sensible of the pleasure and serene confidence which attend the one, and of

the insecurity and remorse which forever hang over the other; and the remaining impressions of love and disgust, will have an influence on our future conduct, of which we may probably be altogether unconscious at the time. It is, in truth, like the influence of the example of those with whom we habitually associate, which no one perceives at any particular moment, though all are every moment subject to it; and to meditate often on virtne and happiness, is thus almost to dwell in a sort of social communion with the virtuous and happy. The influence of moral conceptions has, in this respect, been compared to that of *light*, which it is impossible to approach, without deriving from it some faint colouring, even though we shonld not sit in the very sunshine,—or to that of *precious odours*, amid which we cannot long remain, without bearing away with us some portion of the fragrance. "Ea enim philosophiæ vis est, ut non solum studentes, sed etiam conversantes juvet. Qui in solem venit, licet non in hoc venerit, colorabitur: qui in unguentaria taberna resederunt, et paulo diutius commorati sunt, odorem secum loci ferunt: et qni apud philosophiam fuerunt, traxerint aliquid necesse est, quod prodesset etiam negligentibus."*

The nature of the process, by which this moral benefit arises from the mere contemplation of moral objects, frequently repeated, is far from obscure, though it depends on a cause to which you may perhaps as yet have paid little attention, but which, in an after part of the course, I shall have an opportunity of illustrating at length,—the influence of the associating principle in the mind, —of that principle, by which ideas and other feelings, that have often co-existed, acquire, forever after, an almost indissoluble union. It is not merely, therefore, by having traced, more accurately than others, the consequences of vice and virtue, as affecting the general character, that the lover of moral science strengthens his admiration of virtue, and his abhorrence of vice. But, by the frequent consideration of virtue, together with the happiness which it affords, and of vice, together with its consequent misery, the notions of these become so permanently, and so deeply associated, that future virtue appears almost like happiness about to be enjoyed, and future vice like approaching misery. The dread of misery, and the love of happiness, which are essential principles of our very physical existence, are thus transformed into principles of *mor-*

* Seneca, Ep. 108.

al conduct, that operate, before reflection, with the rapidity, and almost with the energy of instincts,—and that, after reflection, add to our virtuous resolutions a force and stability, which, as results of mere reasoning, they could not possess.

It is, besides, no small advantage of the abstract consideration of virtue, as opposed to the miseries of vice, that, in considering these philosophically, we regard them as stripped of every thing that can blind or seduce us; and we behold them, therefore, truly as they are. It is not in the madness of intemperate enjoyment, that we see drunkenness in the goblet, and disease in the feast. Under the actual seduction of a passion, we see dimly, if we see at all, any of the evils to which it leads; and if the feelings, of which we are then conscious, were those which were forever after to be associated with the remembrance of the passion, it would appear to us an object, not of disgust or abhorrence, but of delight and choice, and almost of a sort of moral approbation. It is of importance, then, that we should consider the passion, at other moments than these, that the images associated with it may be not of that brief and illusive pleasure, which stupifies its unfortunate victim, but of its true inherent character, of deformity, and of the contempt and hatred which it excites in others. Such is the advantage of the point of view, in which it is seen by the *moral inquirer*, to whom it presents itself, not under its momentary character of pleasure, but under its lasting character of pain and disgust. By habituating himself to consider the *remote*, as well as the immediate results of all the affections and passions, he learns to regard virtue, not merely as good in itself, at the moment in which it is called into exercise, but as an inexhaustible source of good which is continually encreasing; and vice not merely as a temporary evil in itself, but as a source of permanent and yet deeper misery and degradation. Every generous principle, which nature has given him, is thus continually deriving new strength, from the very contemplation of the good which it affords; and if, in the frailty of mortality, he should still be subject to the occasional influence of those very passions, which, in cooler moments, he detests, he yet does not fall, thoroughly and hopelessly. There are lingering associations of moral beauty and happiness in his mind, which may save him still,—associations that must render it, in some degree at least, more difficult for him than for others, to yield to seduc-

tions, of which he has long known the vanity, and which perhaps even may, in some happier hour, lead him back to that virtue, of which he has never wholly forgotten the charms.

The charms of virtue, indeed, it is scarcely possible, for him who has felt them, wholly to forget. There may be eyes that can look unmoved on the external beauty which once delighted them. But who is there that has ever been alive to its better influence, who can think of moral loveliness without a feeling of more than admiration,—without a conscious enjoyment, in the possession of what is so truly admirable, or a sigh at having lost the privilege of dwelling on it with delight, and at being obliged to shrink from the very thought of what it once appeared?

"For what can strive
With virtue? which of nature's regions vast
Can in so many forms produce to sight
Such powerful beauty?—Beauty, which the eye
Of hatred cannot look upon secure;
Which Envy's self contemplates, and is turn'd
Ere long to tenderness, to infant smiles,
Or tears of humblest love. Is ought so fair,
In all the dewy landscapes of the Spring,
The Summer's noontide groves, the purple eve
At harvest-home, or in the frosty moon
Glittering on some smooth sea, is aught so fair
As virtuous friendship? As the honour'd roof,
Whither, from highest heaven, immortal love,
His torch etherial, and his golden bow,
Propitious brings, and there a temple holds,
To whose unspotted service gladly vow'd,
The social bond of parent, brother, child,
With smiles, and sweet discourse, and gentle deeds,
Adore his power? What gift of richest clime
E'er drew such eager eyes, or prompted such
Deep wishes, as the zeal, that snatcheth back
From Slander's poisonous tooth a *foe's* renown,
Or crosseth Danger in his lion-walk,
A rival's life to rescue?"

The study of moral science, then, we have seen, has a direct tendency to strengthen our attachment to the virtues which we habitually contemplate. *Another* most important advantage derived from it, relates to us in our higher character of beings *capable*

of religion, increasing our devotion and gratitude to the Divinity, by the clearest manifestation which it gives us of his provident goodness in the constitution and government of the moral world.

The *external universe*, indeed, though our study were confined to the laws which regulate its phenomena, would afford, in itself, abundant proof of the power and wisdom by which it was created. But power and wisdom *alone* excite admiration only, not love; which, though it may be feigned in the homage that is universally paid to power, is yet, as an offering of the heart, paid to it only when it is combined with benevolence. It is the splendid benevolence, therefore, of the Supreme Being, which is the object of our grateful adoration; and, to discover this benevolence, we must look to creatures that have not existence *merely*, like inanimate things, but a capacity of enjoyment, and means of enjoyment. It is in man,—or in beings capable of knowledge and happiness, like man,—that we find the solution of the wonders of the creation; which would otherwise, with all its regularity and beauty, be but a solitary waste, like the barren magnificence of rocks and deserts. God, says Epictetus, has introduced man into the world, to be the spectator of his works, and of their divine Author; and not to be the spectator only, but to be the announcer and interpreter of the wonders which he sees and adores. Ὁ Θεὸς —τὸν ἄνθρωπον θεατὴν εἰσήγαγεν αὐτοῦ τε καὶ τῶν ἔργων τῶν αὐτοῦ· καὶ οὗ μόνον θεατὴν ἀλλὰ καὶ ἐξηγητὴν αὐτῶν.* "Hæc qui contemplatur," says another ancient Stoic, with a little of the bold extravagance of his school,—"Hæc qui contemplatur, quid Deo præstat? Ne tanta ejus opera sine teste sint."—"Curiosum nobis natura ingenium dedit; et artis sibi ac pulchritudinis suae conscia, spectatores nos tantis rerum spectaculis genuit, perditura fructum sui, si tam magna, tam clara, tam subtiliter ducta, tam nitida, et non uno genere formosa solitudini ostenderet."†

In the study of what might be considered as the very defects of our moral nature, how pleasing is it, to the philosophic inquirer, to discover that provident arrangement of a higher Power, which has rendered many of the most striking of the apparent evils of life subservient to the production of a general utility, that

* Dissertat. ab Arrian, collect. lib. i. c. 6.—p. 35. Edit. Upton.

† Seneca de otio Sapent. c. 32.

had never entered into the contemplation of its remote authors. He who has never studied the consequences of human actions, perceives, in the great concourse of mankind, only a multitude of beings consulting each his own peculiar interest, or the interest of the very small circle immediately around him, with little, if any, apparent attention to the interests of others. But he who has truly studied human actions and their consequences, sees, in the prosecution of all these separate interests, that universal interest which is their great result; and the very principle of self-regard thus contributing to social happiness,—unconsciously indeed, but almost as surely as the principle of benevolence itself.

> Each individual seeks a several goal,
> But Heaven's great view is *one*, and that the whole.
> That counterworks each folly and caprice;
> That disappoints the effect of every vice;—
> All Virtue's ends from Vanity's can raise;
> Which seeks no interest, no reward but praise;
> And build on wants, and on defects of mind,
> The joy, the peace, the glory of mankind.*

I have already,†—when treating of the influence of just views of the extent and limits of our faculties, in fixing the proper tone of inquiry, and lessening equally the tendency to the opposite extremes of dogmatism and scepticism,—stated some important moral advantages that arise from this very moderation of the tone of inquiry, particularly with respect to the temper with which it prepares us to receive dissent from our opinions without anger, or insolent disdain, or even astonishment. So much of the intercourse of human society consists in the reciprocal communication of opinions which must often be opposed to each other, that this preparation of the temper, whether for amicable and equal discussion, or for mutual silent forbearance, is not to be lightly appreciated as an element in the sum of human happiness. On this point, however, and on its relation to the still greater advantages, or still greater evils, of national or legislative tolerance or intolerance, I before offered some remarks, and therefore merely allude to it at present.

The tolerance with which we receive the opinions of others is

* Pope's Essay on Man, Ep. ii. v. 237—240, and 245—248.

† Lect. III.

a part, and an indispensable part, of that general refinement of manners to which we give the name of *politeness*. But politeness itself, in all its most important respects,—indeed in every respect, in which it is to be separated from the mere fluctuating and arbitrary forms and ceremonies of the month or year,—is nothing more than *knowledge of the human mind directing general benevolence*. It is the art of producing the greatest happiness, which, in the mere external courtesies of life, can be produced, by raising such ideas or other feelings in the minds of those with whom we are conversant, as will afford the most pleasure, and averting, as much as possible, every idea which may lead to pain. It implies, therefore, when perfect, a fine knowledge of the natural series of thoughts, so as to distinguish, not merely the thought which will be the immediate or near effect of what is said or done, but those which may arise still more remotely; and he is the most successful in this art of giving happiness, who sees the future at the greatest distance. It is this foresight acquired by attentive observation of the various characters of mankind in a long intercourse with society, which is the true knowledge of the world; for the knowledge of the mere *forms* and *ceremonies* of the world, which is of far easier acquisition, is scarcely worthy of being called a part of it. The essential, and the only valuable part of politeness then, is as truly the result of study of the human mind, as if its minutest rules had formed a regular part of our systems of intellectual and moral philosophy. It is the philosophy indeed of those, who scarcely know that they are philosophizing; because *philosophy*, to them, implies something which has no other ornaments than *diagrams* and frightful *algebraic characters*, laid down in systems, or taught in schools and universities, with the methodical tediousness of rules of grammar; and they are conscious, that all, or the greatest part of what they know, has been the result of their own observation, and acquired in the very midst of the amusements of life. But he, who knows the world, must have studied the mind of man, or at least—for it is only a partial view of the mind which is thus formed—must have studied it in some of its most striking aspects. He is a *practical* philosopher, and, therefore, a *speculative* one also, since he must have founded his rules of action on certain principles, the results of his own observation and reflection. These results are, indeed,

usually lost to all but to the individual: and the loss is not to be considered as slight, merely because the knowledge, which thus perishes, has been usually applied by its possessor to frivolous purposes, and sometimes perhaps to purposes still more unworthy. When we read the maxims of La Rochefoucauld, which, false as they would be, if they had been intended to give us a faithful universal picture of the moral nature of man, were unfortunately too faithful a delineation of the passions and principles that immediately surrounded their author, and met his daily view, in the splendid scenes of vanity and ambitious intrigue to which his observation was confined,—it is impossible not to feel, that, acute and subtle as they are, many of these maxims must have been only the expression of principles, which were floating, without being fixed in words, in the minds of many of his fellow courtiers; and the instruction, which might be received from those who have been long conversant with mankind, in situations favourable to observation, if, by any possibility, it could be collected and arranged, would probably furnish one of the most important additions which could be made to moral science.

How much politeness consists in knowledge of the natural succession of thoughts and feelings, and a consequent ready foresight of the series of thoughts, which it is in our power indirectly to excite or avert, must have presented itself in a very striking manner to every one, whose professional duties, or other circumstances, have led him to pay attention to the lower orders of society. The most benevolent of the poor, in situations too in which their benevolence is most strongly excited, as in the sickness of their relations or friends, and in which they exert themselves to relieve obvious pain, with an assiduity of watching and fatigue, after all the ordinary fatigues of the day, that is truly honourable to their tenderness, have yet little foresight of the mere pains of thought; and while in the same situation, the rich and better educated, with equal, or perhaps even with less benevolence of intention, carefully avoid the introduction of any subject, which might suggest, indirectly to the sufferer the melancholy images of parting life, the conversation of the poor, around the bed of their sick friend, is such as can scarcely fail to present to him every moment, not the probability merely, but almost the certainty of approaching death. It is impossible to be present in these two situ-

ations, without remarking the benefit of a little knowledge of the human mind, without which, far from fulfilling its real wishes, benevolence itself may be the most cruel of torturers.

The same species of foresight which is essential to the refinements of social intercourse, is equally essential in the active occupations of life, to that knowledge of times and circumstances, which is so important to success; and though this knowledge may be too often abused, to unworthy purposes, by the sordid and the servile, it is not the less necessary to those who pursue only honourable plans, and who avail themselves only of honourable means. Such is the nature of society, that the most generous and patriotic designs still require some *conduct* to procure for them authority; and, at least in the public situations of life, without a knowledge of the nature both of those who are to govern, and of those who are to be governed, though it may be very easy to *wish well* to society, the hardest of all tasks will be the task of *doing it good.*

May I not add, as another salutary moral effect of the Science of Mind, the tendency which the study of the general properties of our common nature has to lessen that undue veneration, which, in civilized society, must always attend the adventitious circumstances of fortune, and to bring this down, at least some degrees, nearer to that due respect which is indispensable for the tranquillity and good order of a state, and which no wise and patriotic moralist, therefore, would wish to see diminished. It is only in the tumultuous phrenzy of a revolution, however, or in periods of great and general discontent, that the respect of the multitude for those who are elevated above them, in rank and fortune, is likely to fall beneath this salutary point. So many of the strongest principles of our nature, favour the *excess* of it, that, in the ordinary circumstances of society, it must always pass far beyond the point of calm respect; so far beyond it, indeed, that the lesson which the people require most frequently to be taught, is, not to venerate the very guilt and folly of the rich and powerful, because they are the guilt and folly of the rich and powerful. It is to the objects of the idolatry themselves, however, that the study of a science, which considers them as stripped of every adventitious distinction, and possessing only the common virtues and talents of mankind, must be especially salutary. In the ordinary circumstances of a luxurious age, it is scarcely possible for the great

to consider themselves as what they truly are; and though, if questioned as to their belief of their common origin with the rest of mankind, they would no doubt think the question an absurd one, and readily own their descent from the same original parentage; there can be as little doubt, that in the silence of their own mind, and in those hours of vanity and ambition, which, to many of them, are almost the whole hours of life, this tie of common nature is rarely, if ever felt. It is impossible indeed, that it should be often felt, because, in the circumstances in which they are placed, there is every thing to remind them of a *superiority*, of which their passions themselves are sufficiently ready to remind them, and very little to remind them of an *equality*, from the contemplation of which all their passions are as ready to turn away. There are, however, some circumstances which are too strong for all these passions to overcome, and which force in spite of them, upon the mind that self-knowledge, which in other situations, it is easy to avoid. In pain and sickness, notwithstanding all the vain magnificence which the pride of grandeur spreads around the couch, and the profusion of untasted delicacies, with which officious tenderness strives to solicit an appetite that loathes them, he who lies upon the couch within, begins to learn his own nature, and sees through the splendour that seems to surround him, as it were, without touching him, how truly foreign it is to that existence, of which before it seemed to form a part. The feeling that he is but a *man*, in the true sense of that word, as a frail and dependant being like those around him, is one of the first feelings, and perhaps not one of the least painful, which arise in such a situation. The impression, however, of this common nature, is, while it lasts, a most salutary one; and it is to be regretted only, that health cannot return without bringing back with it all those flattering circumstances which offer the same seductions as before to his haughty superiority.

The sight of death, or of the great home of the dead, in like manner, seldom fails to bring before us our common and equal nature. In spite of all the little distinctions which a churchyard exhibits, in mimic imitation, and almost in mockery, of the great distinctions of life, the turf, the stone with its petty sculptures, and all the columns and images of the marble monument; as we read the inscription, or walk over the sod, we think only of *what lies*

beneath in undistinguishable equality. There is scarcely any one on whom these two great equalizing objects, sickness and the sight of death, have not produced, for a short time, at least, some salutary moral impression. But these are objects which cannot often occur, and which are accompanied with too many distressing circumstances, to render it desirable that they should be of very frequent occurrence. The study of the *mind*, of our common moral and intellectual nature, and of those common hopes which await us, as immortal beings, seems in some degree to afford the advantage, without the mixture of evil: for, though in such speculative inquiries, the impression may be less striking than when accompanied with painful circumstances, it is more permanent, because, from the absence of those powerful circumstances, it is more frequently and willingly renewed. In the philosophy of mind, all those heraldic differences which have converted mere human vanity into a science, are as nothing. It is *man* that is the object of investigation, and man with no distinctions that are adventitious. The feelings, the faculties, which we consider, are endowments of the rich and powerful indeed; but they are endowments also of the meanest of those on whom they look with disdain. It is something, then, for those whose thoughts are continually directed by external circumstances, to that perilous elevation on which they are placed, to be led occasionally, as in such inquiries they must be, to measure themselves and others without regard to the accidental differences of the heights on which they stand, and to see what it is in which they truly *differ*, and what it is in which they truly *agree*.

In the remarks already made, on the study of the Science of Mind, we have considered its effects on the progress of the other sciences, and on the moral dispositions. But, though the study had no effects of this kind, moral or intellectual, is not the mind itself a part of nature, and *as a mere physical object*, deserving of our profoundest and most intent investigation? or shall it be said, that while we strive, not merely to measure the whole earth, and to follow in our thought the revolutions of these great orbs, whose majesty may almost be said to force from us this homage of admiration, but to arrange, in distinct tribes, those animalcular atoms, whose very existence we learn only from the glass through which we view them; the observing and calculating mind itself is less

an object of universal science, than the antennae of an insect, or the filaments of a weed? Would it be no reproach to man, even though he knew all things besides, that he yet knew far less accurately than he might know, his own internal nature,—like voyagers who delight in visiting every coast of the most distant country, without the slightest acquaintance, perhaps, with the interior of their own?

> Qui terræ pelagique vias, mundique per omnes
> Articulos spatiatur ovans, metasque suornm
> Herculeas audet supra posuisse laborum,
> Neglectus jacet usque sibi, dumque omnia quærit,
> Ipse sui quæsitor abest; incognita tellus
> Solus nauta latet, propiorque ignotior orbis.

Would the lines which follow these, if indeed there were any one to whom they were applicable in their full extent, convey praise less high than that which might be given to the observer of some small nerve or membrane, that had never been observed before, or the discoverer of a new species of earth, in some pebble before unanalyzed?

> Tu melior Tiphys, spreto jam Phasidis auro,
> In te vela paras, animatos detegis orbes,
> Humanasque aperis ausis ingentibus oras.
> Jamque novos laxari sinus, animæque latentis
> Arcanas reserare vias, cœlosque recessus
> Fas aperire tibi, totamque secludere mentem.

To the *mind*, considered as a mere object of physical inquiry, there is one circumstance of interest, that is peculiar. It is the part of our mixed nature which we have especially in view as often as we think of *self*,—that by which we began to exist, and continue to exist, by which in every moment of our being, we have rejoiced, and hoped, and feared, and loved; or rather, it is that which has been itself, in all our emotions, the rejoicer, the hoper, the fearer. To inquire into the history of the mind, therefore, is in truth to look back, as far as it is permitted to us to look back, on the whole history of our life. It is to think of those many pleasing emotions which delighted us when present, or of those sadder feelings, which when considered as past, become delightful, almost like the feelings that were in themselves originally pleasing, and in many cases, are reviewed with still greater inter-

est. We cannot attempt to think of the origin of our knowledge, without bringing before us scenes and persons most tenderly familiar; and though the effect of such remembrances is perhaps less powerful, when the mind is prepared for philosophical investigation, than in moments in which it is more passive, still the influence is not wholly lost. He must be a very cold philosopher indeed, who, even in intellectual analysis, can retrace the early impressions of his youth, with as little interest as that with which he looks back on the common occurrences of the past day.

But it is not any slight interest which it may receive from such peculiar remembrances, that can be said to give value to the philosophy of mind. It furnishes, in itself, the sublimest of all speculations, because it is the philosophy of the sublimest of all created things. "There is but one object," says St. Augustine, "greater than the soul, and that one is its Creator." "Nihil est potentius illa creatura quæ mens dicitur rationalis, nihil est sublimius. *Quicquid supra illam est jam Creator est.*" When we consider the powers of his mind, even without reference to the wonders which he has produced on earth, what room does man afford for astonishment and admiration! His senses, his memory, his reason, the past, the present, the future, the whole universe, and, if the universe have any limits, even more than the whole universe, comprised in a single thought; and, amid all these changes of feelings that succeed each other, in rapid and endless variety, a permanent and unchangeable duration, compared with which, the duration of external things is but the existence of a moment.

> "O what a patrimony this! a being
> Of such inherent strength and majesty,
> Not worlds possest can raise it; worlds destroy'd
> Not injure;* which holds on its glorious course,
> When thine, O Nature, ends!"†

Such, in dignity and grandeur, is the mind considered, even abstractedly. But when, instead of considering the mind itself, we look to the wonders which it has performed—the cities, the cultivated plains, and all the varieties of that splendid scene to which the art of man has transformed the desarts, and forests, and rocks of original nature; when we behold him, not limiting the

* Can't injure. *Orig.*

† Young's Night Thoughts, VI. v. 535—539.

operations of his art to that earth to which he seemed confined, but bursting through the very elements, that appeared to encircle him as an insurmountable barrier—traversing the waves—struggling with the winds, and making their very opposition subservient to his course; when we look to the still greater transformations which he has wrought in the *moral scene*, and compare with the miseries of barbarous life, the tranquillity and security of a well ordered state; when we see, under the influence of legislative wisdom, insurmountable multitudes obeying, in opposition to their strongest passions, the restraints of a power which they scarcely perceive, and the crimes of a single individual marked and punished, at the distance of half the earth; is it possible for us to observe all these wonders, and yet not to feel some curiosity to examine the faculties by which they have been wrought, some interest in a being so noble, that leads us to speculate on the future wonders which he may yet perform, and on the final destiny which awaits him? This interest we should feel, though no common tie connected us with the object of our admiration; and we cannot surely admit that the object of our admiration is less interesting to us, or less sublime in nature, because the faculties which we admire are those which ourselves possess, and the wonders such as we are capable of achieving and surpassing.

LECTURE V.

ON THE NATURE OF PHYSICAL INQUIRY IN GENERAL.

THE preceding Lectures, Gentlemen, have, I trust, sufficiently convinced you of the *importance* of the science on which we are to enter,—if, indeed, many of the advantages which we have considered were not of themselves so obvious, as readily to have occurred to your own reflection, or at least to require less illustration, than,—in my desire to interest not your attention merely, but your zealous ardour, in a science which appears to me so truly to deserve it,—I have thought necessary to give them. We have seen, how interesting the mind is, as an object of study, *from its own intrinsic excellence*, even though it were to be considered in no other light, than as a mere part of the universal system of things, necessary, therefore, to be comprehended with every other existing substance, *in a system of general physics*. We have seen, likewise, in how many important respects, the study of the science of Mind is favourable to the growth of virtuous sentiment, and to the refinement and happiness of society; and, above all, how essential an acquaintance with it is, to the proper conduct of our inquiries,—not merely in those sciences, the objects of which are kindred or analogous, but in every other science, the various objects of which, however independent, and even remote from it they may seem, must always be considered, not as they exist in *themselves*, but as they exist in *relation to it;* since they can be known to us only through the medium of the mental affections, or feelings, excited by them, which have laws peculiar to themselves, and analyzed and arranged only by our mental faculties, which have their own peculiar limits of extent and power.

The first great division of our course of inquiry is purely physiological. It has for its object the mind, considered as susceptible

of various states or affections, and constituting, as it is thus variously affected, the whole phenomena of thought and feeling, which, though expressed by a variety of terms, of functions, or faculties, are still but the *one* mind itself existing in different states. On retracing these states, which form the whole progress of our sentient, intellectual, and moral life, we have to inquire into the properties of the substance, mind, according to the same laws of investigation, by which we inquire into the properties of external substances,—not by assuming principles, from which the phenomena may be supposed to flow, but by observing and generalizing, till we arrive at those few simple principles or laws, which, however pompous the term *laws* may seem, as if it denoted something different from the phenomena themselves, and paramount to them, are in truth, nothing more than the expression of the most general circumstances, in which the phenomena themselves have been felt by us to agree. As we say of gold, that it is that which is of a certain specific weight, yellow, ductile, fusible at a certain temperature, and capable of certain combinations,—because all these properties have been observed by ourselves or others,—so we say of the *mind*, that it is that which perceives, remembers, compares, and is susceptible of various emotions or other feelings; because of all these we have been conscious, or have observed them indirectly in others. We are not entitled to state with confidence any quality, as a property of gold, which we do not remember to have observed ourselves, or to have received on the faith of the observation of others, whose authority we have reason to consider as indubitable; and as little are we entitled to assert any quality, or general susceptibility, as belonging to the human *mind*, of which we have not been conscious ourselves in the feelings resulting from it, or for which we have not the authority of the indubitable consciousness of others. The exact coincidence, in this respect, of the physics of mind and of matter, it is important that you should have constantly before you, that you may not be led to regard the comparative indistinctness and vagueness of the mental phenomena as a warrant for greater boldness of assertion, and looseness of reasoning with respect to them. There is, on the contrary, in such a case, still greater reason to adhere rigidly to the strict rules of philosophizing; because the less definite the phenomena are, the greater danger is there of being misled in discriminating and class-

ing them. The laws of inquiry, those general principles of the logic of physics, which regulate our search of truth in all things, external and internal, do not vary with the name of a science, or its objects or instruments. They are not laws of *one* science, but of *every* science, whether the objects of it be mental or material, clear or obscure, definite or indefinite; and they are thus universal, because, in truth, though applicable to *many sciences*, they are only laws of *the one inquiring mind*, founded on the weakness of its powers of discernment, in relation to the complicated phenomena on which those powers are exercised. The sort of reasoning which would be false in chemistry, would be false in astronomy, would be false in the physiology of our corporeal or intellectual and moral nature, and in all, for the same reason; because the mind is the inquirer in all alike, and is limited, by the very constitution of its faculties, to a certain order of inquiry, which it must, in this case of supposed erroneous reasoning, have transgressed.

On these general laws of inquiry, as relating alike to the investigation of the properties of *matter* and of *mind*, it is my intention to dwell, for some time, with full discussion; for, though the subject may be less pleasing, and may require more severe and unremitting attention on your part, than the greater number of the inquiries which await us, it is still more important than any of these, because it is, in truth, *essential* to them all. The season of your life is not that which gathers the harvest; it is that which prepares the soil, by diligent cultivation, for the fruits which are to adorn and enrich it;—or, to speak without a metaphor, you do not come here, that you may make yourselves acquainted, in a few months, with all the phenomena of the universe,—as if it were only to look on the motions of the planets in an orrery, or to learn a few names of substances and qualities,—but that you may acquire those *philosophical principles*, which in the course of a long and honourable life, are to enable you to render yourselves more familiar every day with the works of nature, and with the sublime plans of its beneficent Author:—and if without the knowledge of a single word of fact, in matter or in mind, it were possible for you to carry away from these walls a clear notion of the objects of inquiry, and of the plan on which alone ivestigation can be pursued with advantage, I should conceive, that you had profited far more, than if, with confused notions of the objects and plan of investiga-

tion, you carried with you the power of talking fluently, of observations, and experiments, and hypotheses, and systems, and of using, in their proper places, all the hardest words of science.

I must remark, however, that I should not have thought it necessary, thus to direct so much of your attention to the principles of scientific inquiry in general, if I could have taken for granted, that you had already enjoyed the benefit of the instruction of my illustrious colleague in another Chair, whose Lectures on Natural Philosophy, exemplifying that soundness of inquiry, which I can only recommend, would, in that case, have enlightened you more, as to the principles of physical investigation, than any mere rules, of which it is possible to point out to you the utility and the excellence.

All physical science, whatever may be the variety of objects, mental or material, to which it is directed, is nothing more than the comparison of phenomena, and the discovery of their agreement or disagreement, or order of succession. It is on *observation*, therefore, or on consciousness, which is only another name for *internal* observation, that the whole of science is founded; because there can be no comparison, without observation of the phenomena compared, and no discovery of agreement or disagreement, without comparison. So far, then, as man has observed the phenomena of matter or of mind, so far, and no farther, may he infer, with confidence, the properties of matter and of mind; or, in the words of the great primary aphorism of Lord Bacon, which has been so often quoted, and so often quoted in vain, "Homo, naturæ minister et interpres, tantum facit et intelligit, quantum de naturæ ordine re vel mente observaverit; nec amplius scit aut potest."*

What is it that we truly mean, however, when we say, that we are about to inquire into the nature and properties of any substance? The question is a most important one, and is far from being so simple as it may at first appear. From the mere misunderstanding of the import of this question, the brightest talents of a long succession of ages,—talents, which, with clearer views of *this single point*, might have anticipated all the discoveries of our own time, and introduced us, perhaps, to discoveries still more brilliant and astonishing, were wasted in inquiries as barren as the frivolous glory which attended them,—that produced indeed much conten-

* Nov. Org. Aph. 1.

tion, and more pride, but produced nothing more; and, without giving any additional knowledge, took away from ignorance only its humility, and its power of being instructed.

What is it that we truly have in view, or should have in view, when we inquire into the nature of a substance?

The material universe, and all the separate substances which compose it, may be considered in *two* lights,—either simply, as composed of parts that co-exist, and are to our feelings continuous, so as to form, of many separate and independent elements, one apparent whole; or of parts that change their relative positions, constituting, by this change of place, all the physical events of the material system of the world; and inquiry may have reference to a substance in both, or either of those points of view. What is this body? may be inquired of us, when any particular body is pointed out; and the answer which we give will be very different according to the *particular* light in which we may have viewed it, though it must always relate to it in *one* or *other* of these two aspects. Let us suppose, for example, the body, concerning which the question is put, to be a piece of glass; I select intentionally a substance which is familiar to you all, and of which many of you probably have sufficient chemical knowledge to be acquainted with the composition. It may be asked of us, then, What is the substance termed *glass?* and our answer will vary, as I have said, with the view which we take of it. If we consider it merely as a *continuous whole*, our answer will be, that it is a *compound of alkaline and siliceous matter*—meaning that particles of alkali and flint coexist, and are apparently continuous, in that mass of which we speak.

Such is *one* of the answers which may be given to the question; and this sort of answer is one which is very commonly given to such questions. It is, you will perceive, nothing more than the enumeration of the constituent parts of the substance, and considers the substance, simply as it exists alone, without regard to any other bodies that may exist around it, or near it, and without any allusion to change of *any kind*.

This sort of view, however, may be altogether reversed; and, instead of thinking of the parts that exist together in the substance, without reference to any changes, of which it is either the agent or the subject, we may think only of such changes, without reference to its constituent parts.

In this latter point of view, we may say, in answer to the question, as to the nature of the substance termed glass, that it is a transparent substance, which, according to the general laws of refraction, bends the light that passes through it variously, according to the different density of the medium through which the rays have immediately passed before arriving at it, or of the medium, through which they are to pass after penetrating it; that it is a substance fusible at a certain temperature, not dissolved by the common powerful acids, but soluble in a particular acid termed the *fluoric* acid; that, when strongly rubbed, by certain other substances, it communicates, for a time, to various bodies, the power of attracting or repelling other bodies; and we may add to our description, in like manner, as many other qualities as there are various substances which produce in it any change, or are in any way changed by it. In all answers of this kind, you will perceive that regard is uniformly had, not to the *mere substance*, concerning which the question is put, but also to some other substance with which, in consequence of some motion of one or other of the bodies, at the time of the phenomenon of which we speak, it has changed its relative position; for, if all the objects in nature remained constantly at rest, it is very evident that we could have no notion of any property of matter whatever. In the enumeration of the qualities of glass, for example, when we speak of its properties, we suppose it to have changed, in every case, some relative position with the *light* that passes through it, the *heat* that melts it, the *fluoric acid* that dissolves it, and the various bodies that excite in it, or conduct from it, electricity; and all these bodies, therefore, we must have in view, in our enumeration, as much as the glass itself.

As there are only these two different aspects in which matter can be viewed, all physical inquiry, with respect to matter, *must*, as I have said, have reference to one of them; and if we think that we are inquiring further concerning it, our inquiry is truly without an object, and we know not what we seek. We may consider it, simply as it exists in space, or as it exists in time. Any substance, considered as it exists in space, is the mere name which ourselves give to the co-existence of a multitude of bodies, similar in nature, or dissimilar, in apparent continuity; considered as it exists in time, it is that which is affected by the prior changes of other bodies, or which itself produces a change of some sort in

other bodies. As it exists in space, therefore, we inquire into its composition, or, in other words, endeavour to discover what are the elementary bodies that co-exist in the space which it occupies, and that are all which we truly consider, when we think that we are considering the compound as one distinct body. As it exists in time, we inquire into its susceptibilities or its powers, or, in other words, endeavour to trace all the series of prior and subsequent changes, of which its presence forms an intermediate link.

This, then, is our meaning, when we speak of inquiring into the nature of a substance. We have one, or both of *two* objects in view, the discovery of the separate bodies that co-exist in the substance, or rather that constitute the substance, which is nothing more than the separate bodies themselves, or the discovery of that series of changes, of which the presence of this particular substance, in some new relative position with respect to other bodies, forms a part; the changes which other bodies, in consequence of this altered relative position, occasion in *it*, with the changes which *it* occasions in other bodies.

On these two different objects of physical investigation, the co-existing elements of bodies, and their successions of changes, it may be of advantage to dwell a little more fully in elucidation of the method which we have to pursue in our own department of physical research; for, though it may perhaps at first appear to you, that to treat of the principles of inquiry, in the physics of *matter*, is to wander from the intellectual and moral speculations which peculiarly concern us; it is in truth only as they are illustrative of inquiries which we are to pursue in the *physiology of the mind*, that I am led to make these general remarks. The principles of philosophic investigation are, as I have already said, common to all the sciences. By acquiring more precise notions of the objects of any one of them, we can scarcely fail to acquire, in some degree, more precision in our notions of every other, and each science may thus be said to profit indirectly by every additional light that is thrown upon each. It is by this diffusive tendency of its spirit, almost as much as by its own sublime truths, and the important applications of these to general physics, that the study of geometry has been of such inestimable advantage to science. Those *precise definitions* which insure to every word the same exact signification, in the mind of every one who hears it pronounced, and

that lucid progress in the developement of truth after truth, which gives, even to ordinary powers, almost the same facility of comprehension with the highest genius, are unquestionably of the utmost benefit to the mathematical student, while he is prosecuting his particular study, without any contemplation of other advantages to be reaped from them. But there can be no doubt that they are, at the same time, preparing his mind for excellence in other inquiries, of which he has then no conception ; that he will ever after be less ready to employ, and be more quicksighted than he would otherwise have been in detecting vague and indefinite phraseology, and loose and incoherent reasoning ; and that a general spirit of exactness and perspicuity may thus at length be diffused in society, which will extend its influence, not to the sciences merely, but, in some faint degree, also to works of elegant literature, and even to the still lighter graces of conversation itself. "The spirit of geometrical inquiry," says Fontenelle, "is not so exclusively attached to geometry, as to be incapable of being applied to other branches of knowledge. A work of morals, of politics, of criticism, or even of eloquence, will, if all other circumstances have been the same, be the more beautiful, for having come from the hand of a geometrician. The order, the clearness, the precision, which, for a considerable time, have distinguished works of excellence on every subject, have most probably had their origin in that mathematical turn of thought, which is now more prevalent than ever, and which gradually communicates itself even to those who are ignorant of mathematics. It often happens that a single great man gives the tone to the whole age in which he lives; and we must not forget, that the individual who has the most legitimate claim to the glory of having introduced and established a new art of reasoning, was an excellent geometer." * The philosopher to whom this improvement of the art of reasoning is ascribed, is evidently Descartes, whose claim is certainly much less legitimate than that of our own illustrious countryman ; but the works of Bacon were not very extensively studied on the continent, at the time at which Fontenelle wrote ; while especially in France, the splendid reputation of the great geometer, who shook, as much with his own wild hypothesis, as with the weight of his reasoning, the almost idolatrous worship of the God

* Preface aux Eloges—Œuvres, tom. v. p. 8.

of the Schools, seemed to sweep before it the glory of every other reformer. The instance of Descartes, however, is a still more happy one than his ingenious countryman, who was himself a Cartesian, could have imagined it to be. It is, indeed, impossible to conceive a more striking example of that diffusive influence of the *general spirit of scientific inquiry*, which I wish to illustrate; since, in this instance, it survived the very system by which it was diffused; all that was sceptical in that mixed system of scepticism and dogmatism which constituted the philosophy of Descartes, having long continued, and even now continuing, to operate beneficially, when scarcely a doctrine of his particular philosophy retains its hold.

You will not then, I trust, take for granted, that precise notions as to the objects of inquiry, in any science, even in the department of external physics, can be so absolutely without benefit to our plans of inquiry into mind, which must be pursued on the same principles, if it be pursued with any prospect of success; and I may, therefore, safely solicit your attention to a little farther elucidation of the two objects which we have in view, in general physical inquiry, whether it be relative to *matter* or to *mind*.

To inquire into the composition of a substance, is to consider as *one*, many substances, which have not the less an independent existence, because they are in immediate proximity to each other. What we term a *body*, however minute, is a multitude of bodies, or to speak more exactly, an infinite number of bodies, which appear limited to us, indeed, but may perhaps appear, in their true character of infinity, to beings of a higher order, who may be able to distinguish as *infinite*, what our limited senses allow us to perceive only as *finite*. They are *one*, not in nature, but in our thought; as one thousand individuals, that in nature must always be one thousand, receive a sort of unity that is relative merely to our conception, when ranked by us as a single regiment, or as many regiments become *one* by forming together an army. In the energies of external matter, the innumerable separate bodies are thus regarded by us as *one*, when the space which divides them is not measurable by our imperfect vision, and as distinct or separate, when the space can be measured by us. The *unity* of the aggregate is here no absolute quality of the mass, but is truly relative to the observer's power of distinguishing the com-

ponent parts; the mass being one or many, as his senses are less or better able to distinguish these. This whole globe of earth, with its oceans, and rivers, and mountains, and woods, and with all the separate multitudes of its animated inhabitants, may seem to some being of another species, only one continuous and uniform mass; as the masses, that seem to us uniform and continuous, may seem a whole world of separate and varied parts, to the insect population that swarms upon its surface. "A single leaf of a tree," to borrow an obvious illustration from a French writer, "is a little world inhabited by invisible animals, to whose senses it appears of immense extent, who see in it mountains and abysses that are almost immeasurable, and who, from one side of the leaf to the other, hold as little communication with the opposite animalcula, who have their dwellings there, as we do with our Antipodes."*

Nothing can appear to our eyes more uniform than a piece of glass; yet we know, from its composition, as a product of art, that it is a congeries of bodies, which have no similarity to each other, and which truly exist separately from each other, in the compound, as they existed separately before the composition, though the lines of space which divide them have now ceased to be visible to our weak organs; and though, instead of being composed of alkaline and siliceous matter, which we know to be different in their qualities, the beautiful transparent substance, considered by us, were, as far as we know, *simple*, in the chemical sense of the term, it would still be as truly an aggregate of many bodies, not dissimilar, indeed, as in the former case, but each similar in qualities to the aggregate itself. The aggregate, in short, is, in every case, but a name invented by ourselves; and what we term the constituent elements, are all that truly exists. To inquire into the composition of a body, is, therefore, only to inquire what these separate bodies are which we have chosen to consider as *one*, or rather which are ranked by us as one, from their apparent continuity.

I have dwelt the longer on this point of the *unity* of an aggregate mass, as derived from the mind of the observer only, and not from its constituent bodies, which are truly separate and independent of each other, and must always be seperate and independent,

* Fontenelle, Pluralité des Mondes, Conversat. 3.

whatever changes they may seem to undergo, in the various processes of composition and decomposition, because this is one of the most simple, and, at the same time, one of the most convincing examples of a tendency of the mind, which we shall often have occasion to remark in the course of our intellectual analysis,—the tendency to ascribe to substances without, as if existing in them like permanent physical qualities, the relations which ourselves have formed, by the mere comparison of objects with objects, and which, in themselves, as relations, are nothing more than modifications of our own mind. It is very difficult for us to believe, that, when we speak of a rock, or a mountain, or, perhaps, still more, when we speak of a single leaf or blade of grass as *one*, we speak of a plurality of independent substances, which may exist apart, as they now exist together, and which have no other unity than in our conception. It is the same with every other species of relation. The tallness of a tree, the lowness of a shrub or weed, as these relative terms are used by us in opposition, do not express any real quality of the tree, or shrub, or weed, but only the fact that our mind has considered them together; all which they express, is the mere comparison that is in *us*, not any quality in the external objects; and yet we can scarcely bring ourselves to think, but that independently of this comparison, there is some quality, in the tree, which corresponds with our notion of tallness, and some opposite quality in the shrub or weed, which corresponds with our notion of shortness or lowness; so that the tree would deserve the name of tall, though it were the only object in existence, and the shrub or weed, in like manner, the epithet of lowly, though it alone existed, without a single object with which it could be compared. These instances, as I have said, are simple, but they will not be the less useful, in preparing your minds for considering the more important natures of relation in general, that imply, indeed, always some actual qualities in the objects themselves, the perception of which leads us afterwards to consider them as related, but no actual quality in either of the objects that primarily and directly corresponds with the notion of the relation itself, as there are qualities of objects that correspond directly with our sensations of warmth or colour, or any other of the sensations excited immediately by external things. The relation is, in every sense of the word *mental*, not merely as being a

feeling of the mind, for our knowledge of the qualities of external things is, in this sense, equally mental; but, as having its cause and origin directly in the very nature of the *mind itself*, which cannot regard a number of objects, without forming some comparison, and investing them consequently with a number of relations. I have already spoken of the intellectual medium, through which external objects become known to us; and the metaphor is a just one. The medium, in this case, as truly as in the transmission of light, communicates something of its own to that which it conveys; and it is as impossible for us to perceive objects long or often together, without that comparison which instantly invests them with certain relations, as it would be for us to perceive objects, for a single moment, free from the tint of the coloured glass through which we view them. "Omnes perceptiones," says Lord Bacon, using a similar figure, "omnes perceptiones, tam sensus quam mentis, sunt ex analogia hominis, non ex analogia universi; estque intellectus humanus instar speculi inæqualis ad radios rerum, qui suam naturam naturæ rerum immiscet, eamque distorquet et inficit."

But, whatever may be thought of relations in general, there can be no question, at least, as to the nature of that unity which we ascribe to bodies. We have seen, that the substance, which, in thought we regard as *one*, is, in truth, not *one*, but *many* substances, to which our thought alone gives unity; and that all inquiry, therefore, with respect to the nature of a substance, as it exists in space, is an inquiry into the nature of those separate bodies, that occupy the space which we assign to the imaginary aggregate.

To dissipate this imaginary aggregate of our own creation, and to show us those separate bodies which occupy its space, and are all that nature created, is the great office of the analytic art of *Chemistry*, which does for us only what the microscope does, that enables us to see the small objects which are before us at all times, without our being able to distinguish them. When a chemist tells us, that glass, which appears to us one uniform substance, is composed of different substances, he tells us, what, with livelier perceptive organs, we might have known, without a single experiment; since the siliceous matter and the alkali were present to us in every piece of glass, as much before he told us of their presence, as after it. The art of analysis, therefore, has its origin in

the mere imperfection of our senses, and is truly the art of the blind, whose wants it is always striving to remedy, and always discovering sufficient proof of its inability to remedy them.

We boast, indeed, of the chemical discoveries which we have made of late, with a rapidity of progress as brilliant, as it is unexampled in the history of any other science; and we boast justly, because we have found, what the generations of inquirers that have preceded us on our globe,—far from detecting,—had not even ventured to guess. Without alluding to the agency of the *Galvanic power*,—by which all nature seems to be assuming before us a different aspect—we have seen fixed in the products of our common fires, and in the drossy rust of metals, the purest part of that ethereal fluid which we breathe, and the air itself, which was so long considered as simple, ceasing to be an element. Yet whatever unsuspected similarities and diversities of composition we may have been able to trace in bodies, all our discoveries have not created a single new particle of matter. They have only shown these to exist, where they always existed, as much before our analysis as after it,—unmarked indeed, but unmarked, only because our senses alone were not capable of making the nice discrimination. If man had been able to perceive, with his mere organs of sense, the different particles that form together the atmospheric air—if he had at all times seen the portion of these which unites with the fuel that warms him, enter into this union, as distinctly as he sees the mass of fuel itself, which he flings into his furnace, he could not have thought it a very great intellectual achievement, to state in words so common and familiar a fact,—the mere well-known change of place of a few well-known particles; and yet this is what, in the imperfect state of his perceptive organs, he so proudly terms his *Theory of Combustion*, the developement of which was hailed by a wondering world, and in these circumstances justly hailed by it, as a *scientific era*. To beings, capable of perceiving and distinguishing the different particles, that form by their aggregation, those small masses, which, after the minutest mechanical division of which we are capable, appear atoms to us, the pride which we feel, in our chemical analyses, must seem as ludicrous, as to us would seem the pride of the blind, if one, who had never enjoyed the opportunity of beholding the sun, were to boast of having discovered, by a nice comparison of

the changing temperature of bodies, that, during certain hours of the day, there passed over our earth some great source of heat. The addition of one new sense to us, who have already the inestimable advantages which vision affords, might probably, in a few hours, communicate more instruction, with respect to matter, than all which is ever to repay and consummate the physical labours of mankind,—giving, perhaps, to a single glance, those slow revelations of nature, which, one by one, at intervals of many centuries, are to immortalize the future sages of our race.

"All philosophy," says an acute foreign writer, "is founded on these two things,—that we have a great deal of curiosity, and very bad eyes. In astronomy, for example, if our eyes were better, we should then see distinctly, whether the stars really are, or are not, so many suns, illuminating worlds of their own; and if, on the other hand, we had less curiosity, we should then care a very little about this knowledge, which would come pretty nearly to the same thing. But we wish to know more than we see, and there lies the difficulty. Even if we saw *well* the little which we do see, this would at least be some small knowledge gained. But we observe it different from what it is; and thus it happens, that a true philosopher passes his life, in not believing what he sees, and in labouring to guess what is altogether beyond his sight. I cannot help figuring to myself," continues the same lively writer, "that nature is a great public spectacle, which resembles that of the opera. From the place at which we sit in the theatre, we do not see the stage quite as it is. The scenes and machinery are arranged, so as to produce a pleasing effect at a distance; and the weights and pullies, on which the different movements depend, are hid from us. We therefore do not trouble our heads with guessing, how this mechanical part of the performance is carried on. It is perhaps only some mechanician, concealed amid the crowd of the pit, who racks his brain about a flight through the air, which appears to him extraordinary, and who is seriously bent on discovering by what means it has been executed. This mechanic, gazing, and wondering, and tormenting himself, in the pit of the opera, is in a situation very like that of the philosopher in the theatre of the world. But what augments the difficulty to the philosopher, is, that, in the machinery which nature presents, the cords are completely concealed from him,—so completely indeed,

that the constant puzzle has been to guess, what that secret contrivance is, which produces the visible motions in the frame of the universe. Let us imagine all the sages collected at an opera,—the Pythagorases, Platos, Aristotles, and all those great names, which now-a-days make so much noise in our ears. Let us suppose, that they see the flight of Phaeton, as he is represented carried off by the winds; that they cannot perceive the cords to which he is attached; and that they are quite ignorant of every thing behind the scenes. It is a *secret virtue*, says one of them, that carries off Phaeton. Phaeton, says another, is composed of certain *numbers*, which cause him to ascend. A third says, Phaeton has a certain *affection* for the top of the stage. He does not feel at his ease, when he is not there. Phaeton, says a fourth, is not formed to fly; but he likes better to *fly*, than to leave the top of the stage empty,—and a hundred other absurdities of the kind, that might have ruined the reputation of antiquity, if the reputation of antiquity, for wisdom could have been ruined. At last, come Descartes, and some other moderns, who say, Phaeton ascends, because he is drawn by cords, and because a weight, more heavy than he, is descending as a counterpoise. Accordingly, we now no longer believe, that a body will stir, unless it be drawn or impelled by some other body, or that it will ascend, or descend, unless by the operation of some spring or counterpoise; and thus to see nature, such as it really is, is to see the back of the stage at the opera."*

In this exposition of the phenomena of the universe, and of those strange "follies of the wise," which have been gravely propounded in the systems of philosophers concerning them, there is much truth, as well as happy pleasantry. As far, at least, as relates to matter, considered merely as existing in space,—the first of the two lights in which it may be physically viewed,—there can be no question, that philosophy is nothing more than an endeavour to repair, by art, the badness of our eyes, that we may be able to see what is actually before us at every moment. To be fairly behind the scenes of the great spectacle of nature, however, is something more than this. It is not merely to know, at any one moment, that there are many objects existing on the

* Fontenelle, Pluralité des Mondes, Conversat. 1.

stage, which are invisible where the spectators sit, but to know them as pieces of machinery, and to observe them operating in all the wonders of the drama. It is, in short, to have that *second* view of nature, as existing in time as well as space, to the consideration of which I am to proceed in my next Lecture.

LECTURE VI.

THE SAME SUBJECT CONTINUED.

In my last Lecture, Gentlemen, I considered, at some length, the nature of *Physical Inquiry in general*, and stated to you, in particular, the *two lights*, in which objects may be physically viewed, as existing simply in *space*, or as existing in *time*,—the inquiries, with respect to the one, having regard to the composition of bodies; the inquiries, with respect to the other, having regard to the changes, of which they are either the subjects or occasions, and consequently to their susceptibilities or their powers—their susceptibilities of being affected by other substances, their powers of affecting other substances. I use the word *susceptibility*, you will perceive, as, in this case, synonymous with what Mr Locke, and some other writers, have denominated *passive power*, to avoid the apparent verbal contradiction, or at least the ambiguity, which may arise from annexing the term *passive* to a word, which is generally employed to signify, not the *subject* of change, but the *cause* or occasion of change.

Of these two points of view, then, in which an object may be regarded, when the question is put, What is it? we have seen, I hope, sufficiently distinctly, the nature of one. If, in answering the question, we regard the object merely as it exists in space, and say, that it is a *compound* of certain substances, we mean nothing more, than that, in the portion of space, which we conceive to be occupied by this one imaginary aggregate, there is truly a plurality of bodies, which, though seemingly contiguous, have an existence, as separate and independent of each other, as if they were at the most remote distance; the one aggregate being nothing more than a name for these separate bodies, to which ourselves give all the unity which they have, merely by considering them as *one*.

The necessity of inquiring into the nature of these separate elementary bodies,—which constitutes one of the two great departments of physical investigation,—we found to arise from the imperfection of our senses, that are not sufficiently acute to discover, of themselves, the component parts of the masses, which nature everywhere presents to us. We are thus obliged to form to ourselves an *art of analysis*, merely that we may perceive what is constantly before our eyes, in the same manner, as we are obliged to have recourse to the contrivances of the optician, to perceive stars and planets, that are incessantly shedding on us their light.

There is, indeed, something truly worthy of our astonishment, in the sort of knowledge of the qualities of matter, which, with our very imperfect senses, we are still able to attain. What we conceive ourselves to know is an aggregate of many bodies, of each of which, individually, we may be said, in the strictest sense of the term, to be absolutely ignorant; and yet the aggregate, which we know, has no real existence, but as that very multitude of bodies, of which we are ignorant. When water was regarded as a *simple substance*, every one who looked upon a lake or river, conceived that he knew as well what the liquid was which flowed in it, as the chemist, who now considers it as compound; and the chemist, who has learned to regard it as compound, is perhaps as ignorant of the true nature of the separate bodies that exist in it, as those who formerly regarded it as simple; since one additional discovery may prove the very elements, which he now regards as the ultimate constituents of water, to be truly compounded of other elements, still more minute, and now altogether unknown to him.

That our only knowledge of matter should be of a multitude of bodies, of the nature of each of which, individually, we are in absolute ignorance, may seem, at first sight, to justify many of the most extravagant doubts of the sceptic: and yet there is really no ground for such scepticism, since, though the *coexisting* bodies be *separately* unknown, the effect, which they produce when coexisting in the circumstances observed by us, is not the less certain and definite; and it is this joint effect of the whole, thus certain and definite, which is the true object of our knowledge; not the uncertain effect, which the minuter elements might produce, if they

existed alone. The same aggregates, whatever their elementary nature may be, operate on our senses, as often as they recur, in the same manner; the unknown elements which constitute an oak, or a tower, or the ivy that clings around it, exciting in the mind those particular sensations, to the external causes of which we continue to give the name of *oak* or *tower* or *ivy;* and exciting these, as precisely and uniformly, as if we were acquainted with each minute element of the objects without. Our knowledge of nature must in this way, indeed, be confined to the *mixed effects* of the masses which it exhibits; but it is not on that account less valuable, nor less sure; for to the certainty of this limited knowledge all which is necessary is uniformity of the mixed effects, whatever their unknown coexisting causes may be. It is with *masses* only, not with *elements* that we are concerned, in all the important purposes of life; and the provident wisdom of the Author of Nature, therefore, has in this as in every other case, adapted our powers to our necessities,—giving to all mankind the knowledge, that is requisite for the purposes which all mankind must equally have in view, and leaving to a few philosophic inquirers, the curiosity of discovering what the substances around us truly are in their elementary state, and the means of making continual progress, in this never-ending analysis.

Such then is the nature of *one* of the views, in which physical inquiry may be directed, to the discovery of elements, that are existing together, at the same moment. But is not this species of inquiry, it may be asked, peculiar to *matter*, or may it also be extended to *mind?* It is easy to conceive that, if matter always have extension, and therefore necessarily be composed of parts, an inquiry into its composition may form an important part of physical investigation; but this sort of inquiry will seem to you altogether inadmissible in the *philosophy of mind*, since the mind is not composed of parts that coexist, but is simple and indivisible. If, indeed, the term composition, in this application of it, be understood strictly in the same sense as when applied to matter, it is very evident, that there can be no inquiry into the composition of thoughts and feelings, since every thought and feeling is as simple and indivisible as the mind itself; being, in truth, nothing more than the mind itself existing at a certain moment in a certain state; and yet, in consequence of some very wonderful laws, which

regulate the successions of our mental phenomena, the science of mind is, in all its most important respects, a science of analysis, or at least a science which exhibits to our contemplation the same results as if it were strictly analytical; and we inquire into the separate ideas or other feelings, involved in one complex thought or emotion, very nearly as we inquire into the corpuscular elements, that coexist in one seemingly continuous mass. The nature of this very wonderful application of analysis, or at least of a process which is virtually the same as analysis, to a substance, that is necessarily at all times simple and indivisible, will, however, be better understood by you, after we have turned our attention to the other general division of physical inquiry, which is still to be considered by us. I need not I hope, repeat, after the remarks which I made in my last Lecture, that, in leading your thoughts, for so long a time, to the subject of general science, I have had constantly in view its application to the phenomena of our own department of it, and that we are truly learning to study *mind* with accuracy, when we are learning what it is, which is to be studied in the great system of things. There can be no question at least, that he who has erroneous notions of the objects of physical investigation in the material universe, will be very likely also to err, or rather cannot fail to err, in his notions of the objects of physical investigation, as it relates to mind.

I proceed, then, to consider, what it is which we truly have in view, when we direct our inquiry, not to the mere composition of objects existing continuously in *space*, but to the succession of changes which they exhibit in *time*,—to their susceptibility of being affected by other substances, or their power of affecting other substances. The inquiry, as you must perceive, involves the consideration of some words about which a peculiar mystery has been very generally supposed to hang—*causation*, *power*, *connexion* of events. But we shall perhaps find that what is supposed so peculiarly mysterious in them, is not in the very simple notions themselves, but in the misconceptions of those who have treated of them.

It is not in this case, as in the former department of physical investigation, the mere imperfection of our senses, that produces the necessity of inquiry. Matter, as existing in space, is wholly before us, and all which is necessary for perfect knowledge of it,

in this respect, is greater delicacy of our perceptive organs, that we may distinguish every element of the seemingly continuous mass. To know the mere *composition* of a substance, is to know only what is actually present at the very moment, which we may imagine senses of the highest perfection to be capable of instantly perceiving: but to know all the *susceptibilities* and *powers* of a substance, the various modes in which it may affect or be affected by every other, is to know it, not merely as it exists before us in the particular circumstances of any one moment, but as it *might* have existed, or *may* exist, in all possible circumstances of combination.—which our senses, that are necessarily confined to the circumstances of the present moment, never could teach us, even though they were able to distinguish every atom of the minutest mass.

If, indeed, there were any thing, in the mere appearance of a body, which could enable us to predict the changes that would take place in it, when brought into every possible variety of situation, with respect to other bodies, or the changes which it would then produce in those other bodies, the two views, into which I have divided physical inquiry, would coincide exactly: so that to know the *continuous elements* of any substance, would be to know, at the same time, its *susceptibilities* and *powers*. But there is nothing, in the mere sensible qualities of bodies, considered separately, that can give us even the slightest intimation of the changes, which, *in new circumstances of union*, they might reciprocally suffer or produce. Who could infer, from the *similar* appearance of a lump of sugar and a lump of calcareous spar, that the one would be soluble in water, and the other remain unmelted; or, from the *different* aspect of gunpowder and snow, that a spark would be extinguished, if it fell upon the one, and, if it fell upon the other, would excite an explosion that would be almost irresistable? But for experience, we should be altogether incapable of predicting any such effects, from either of the objects compared; or, if we did know, that the peculiar susceptibility belonged to one of the two, and not the other, we might as readily suppose, that calcareous spar would melt in water as sugar, and as readily, that *snow* as that *gunpowder* would detonate, by the contact of a spark. It is *experience* alone, which teaches us that these effects ever take place, and that they take

place, not in all substances, but only in some particular substances.

It has, indeed, been supposed by many ingenious philosophers, that, if we were acquainted with what they term the *intimate structure* of bodies, we should then see, not merely *what* corpuscular changes take place in them, but *why* these changes take place in them; and should thus be able to predict, before experience, the effects which they would reciprocally produce. "I doubt not," says Locke, "but if we could discover the figure, size, texture, and motion of the minute constituent parts of any two bodies, we should know without trial several of their operations one upon another, as we do now the properties of a square or a triangle. Did we know the mechanical affections of the particles of rhubarb, hemlock, opium, and a man; as a watch-maker does those of a watch, whereby it performs its operations, and of a file, which by rubbing on them will alter the figure of any of the wheels; we should be able to tell before-hand, that rhubarb will purge, hemlock kill, and opium make a man sleep; as well as a watch-maker can, that a little piece of paper laid on the balance will keep the watch from going, till it be removed; or that, some small part of it being rubbed by a file, the machine would quite lose its motion, and the watch go no more. The dissolving of silver in aquafortis, and gold in aqua regia, and not *vice versa*, would be then perhaps no more difficult to know, than it is to a smith to understand why the turning of one key will open a lock, and not the turning of another. But while we are destitute of senses acute enough to discover the minute particles of bodies, and to give us ideas of the mechanical affections, we must be content to be ignorant of their properties and ways of operation; nor can we be assured about them any farther, than some few trials we make are able to reach. But whether they will succeed again another time, we cannot be certain. This hinders our certain knowledge of universal truths concerning natural bodies: and our reason carries us herein very little beyond particular matter of fact.

"And therefore I am apt to doubt, that how far soever human industry may advance useful and experimental philosophy in physical things, scientifical will still be out of our reach; because we want perfect and adequate ideas of those very bodies which are nearest to us, and most under our command. Those which we

have ranked into classes under names, and we think ourselves best acquainted with, we have but very imperfect and incomplete ideas of. Distinct ideas of the several sorts of bodies that fall under the examination of our senses perhaps we may have; but adequate ideas, I suspect, we have not of any one among them. And though the former of these will serve us for common use and discourse, yet while we want the latter, we are not capable of scientifical knowledge; nor shall ever be able to discover general, instructive, unquestionable truths concerning them. Certainty and demonstration are things we must not, in these matters, pretend to. By the colour, figure, taste, and smell, and other sensible qualities, we have as clear and distinct ideas of sage and hemlock, as we have of a circle and a triangle; but having no ideas of the particular primary qualities of the minute parts of either of these plants, nor of other bodies which we would apply them to, we cannot tell what effects they will produce; nor when we see those effects, can we so much as guess, much less know, their manner of production. Thus having no ideas of the particular mechanical affections of the minute parts of bodies that are within our view and reach, we are ignorant of their constitutions, powers, and operations: and of bodies more remote we are yet more ignorant, not knowing so much as their very outward shapes, or the sensible and grosser parts of their constitutions."*

The fallacy of the reasoning of this very eminent philosopher consists partly, in the present case, in a sort of *petitio principii*, or, at least, a false assumption that is involved in the very phrase *mechanical affections*, and in all the mechanical illustrations adduced. If rhubarb purge, and hemlock kill, by qualities that can be said to be mechanical, and if these qualites be PERMANENT, there can be no question, that to know accurately the *mechanical qualities* of these substances, in relation to the human body, would be to know, that rhubarb *must* purge, and hemlock kill, as much as to know the mechanism of a watch would be to know, that the watch *must* stop, if a small part of it were rubbed by a file. But the inquiry is still left, whether it be thus, by the mere principles of mechanical action, that rhubarb and hemlock produce their peculiar effects on the animal system, and that silver is dissolved in aqua fortis, and gold in aqua regia; and, if there be no reason whatever to

* Essay concerning Human Understanding, book iv. c. 3. sec. 25, 26.

suppose this, we must then surely admit that the prophecy would still be beyond our power, though we were acquainted with "the figure, size, texture, and motion, of the minute constituent parts" of the different bodies. In the same manner, as, in the mechanical division of a substance, we must still come to other substances capable of further division, so, though we could reduce all the changes that appear to be wrought in the great masses around us, to the changes wrought in their minute parts, we must still come to certain ultimate changes as inexplicable as those which we see at present. It is as difficult to predict, without experience, the motion of one atom to or from another atom, as the motion of one mass of atoms to or from another mass of atoms. That the globe of the earth should tend towards the sun, which is at so great a distance from it, and should thus be every moment arrested within that orbit, from which, if there were no such deflecting force, it would every moment have a tendency to escape by flying off in a straight line, is, indeed, most wonderful. But precisely the same laws which operate on the whole globe of the earth, operate on every particle of which the earth is composed,—since the earth itself is only these separate particles under another name; and if it be wonderful that all of these should have a tendency to approach the sun, it must be equally wonderful, that each minute constituent particle should tend individually, though, to use Mr Locke's words, we were accurately acquainted with the "figure, size, texture, and motion of each." The same original mystery of gravitation, then, would remain, though our senses enabled us to discover every gravitating particle in the intimate structure of the gravitating mass. By knowing the intimate structure of bodies, we should indeed, know *what* were their elements mutually affected, but not *why* these elements were mutually affected, or were affected in *one* way rather than in *another*.

The chief error of Mr Locke, in this respect, evidently consisted, as I have said, in his assumption of the very thing to be proved, by taking for granted, that all the changes of bodies are the effects of their immediate contact and impulse, and of a kind. therefore, which may be termed strictly mechanical,—an assumption, indeed, which harmonized with the mathemetical chemistry and medicine of the age in which he lived, but of the justness of which there is not the slightest evidence in the general phenom-

ena, chemical and nervous, of which he speaks. If, instead of confining his attention to the action of bodies in apparent contact, he had turned his thought to the great distant agencies of nature in the motions of the planetary world, it is scarcely possible to conceive that he should not have discovered his mistake. In another of his works, his *Elements of Natural Philosophy*, he has stated very justly, as a consequence of the law of gravitation, that if the earth were the sole body in the universe, and at rest, and the moon were suddenly created at the same distance from the earth as at present, the earth and the moon would instantly begin to move towards one another in a straight line. What knowledge of the "figure, size, and texture," of the particles of the earth could have enabled its human inhabitants to predict this instant change? and if the particles of gold and aqua regia, and of hemlock, rhubarb, and opium, which, together with all the other particles of our globe, would in the case supposed, instantly begin to move towards the moon,—can thus attract and be attracted, in gravitation, with tendencies that are independent of every mechanical affection, what authority can there be for supposing, that the chemical and vital agencies of the same particles must be mechanical, or that the one set of changes could have been predicted *a priori*, if the other was confessedly beyond the power of philosophic divination?

But even with regard to the mechanical affections of matter themselves, though all the changes which take place in nature were truly reducible to them, we should still have ultimately the same difficulty in attempting to predict, without experience, the changes that would ensue from them. The mechanical properties are indeed the most familiar to our thought, because they are those which we are constantly witnessing in the great displays of human power that are most striking to our senses. The house, the bridge, the carriage, the vessel, every implement which we use, and the whole wide surface of the cultivated earth, present to us, as it were, one universal trophy of the victories of the great mechanist, man. We cannot look back to the time when we were ignorant of the mechanical properties of matter; but still there was a time when they first became known to us, and became known by experience of the motions that resulted from them. What can be simpler than the phenomena of impulse? That a ball in motion, when it

meets another at rest, should force this to quit its place, appears now to he something which it required no skill or experience to predict; and yet, though our faculties were, in every respect, as vigorous as now,—if we could imagine this most common of all phenomena to he wholly unknown to us,—what reason should we he ahle to discover in the circumstances that immediately precede the shock, for inferring the effect that truly results, rather than any other effect whatever? Were the laws of motion previously unknown, it would be in itself as presumable, that the moving hall should simply stop when it reached the other, or that it should merely rehound from it, as that the quiescent ball should be forced hy it to quit its state of rest, and move forward in the same direction. We know, indeed, that the effect is different, but it is because we have witnessed it that we know it; not hecause the laws of motion, or any of the mechanical affections of matter whatever are qualities that might he inferred independently of ohservation.

Experience, then, is necessary in every case, for discovering the mutual tendencies of the *elements* of bodies, as much as for determining the reciprocal affections of the *masses*. But experience teaches us the past only, not the future, and the ohject of physical inquiry is, not the mere solitary fact of a change which has taken place, but the similar changes which will continually take place as often as the ohjects are again in the same circumstances,—not the *phenomena* only, hut the *powers* by which the phenomena are produced.

Why is it, then, we believe that continual similarity of the future to the past, which constitutes, or at least is implied, in our notion of power? A stone tends to the earth,—a stone will always tend to the earth,—are not the same proposition; nor can the *first* be said to involve the *second*. It is not to experience, then, alone that we must have recourse for the origin of the helief, hut to some other principle, which converts the simple facts of experience into a general expectation, or confidence, that is afterwards to he physically the guide of all our plans and actions.

This principle, since it cannot he derived from experience itself, which relates only to the past, must he an original principle of our nature. There is a tendency in the very constitution of the mind from which the expectation arises,—a tendency that, in every thing which it adds to the mere facts of experience, may truly

be termed *instinctive;* for though that term is commonly supposed to imply something peculiarly mysterious, there is no more real mystery in it than in any of the simplest successions of thought, which are all, in like manner, the results of natural tendency of the mind to exist in certain states, after existing in certain other states. The belief is, a state or feeling of the mind as easily conceivable as any other state of it,—a new feeling, arising in certain circumstances as uniformly as in certain other circumstances. There arise other states or feelings of the mind, which we never consider as mysterious; those, for example, which we term the sensations of sweetness or of sound. To have our nerves of taste or hearing affected in a certain manner, is not, indeed, to taste or to hear, but it is immediately afterwards to have those particular sensations; and this merely because the mind was originally so constituted, as to exist directly in the one state after existing in the other. To observe, in like manner, a series of antecedents and consequents, is not, in the very feeling of the moment, to believe in the future similarity, but, in consequence of a similar original tendency, it is immediately afterwards to believe, that the *same antecedents* will invariably be followed by the *same consequents.* That this belief of the future is a state of mind very different from the mere perception or memory of the past, from which it flows, is indeed true; but what resemblance has sweetness, as a sensation of the mind, to the solution of a few particles of sugar on the tongue,—or the harmonies of music, to the vibration of particles of air? All which we know, in both cases, is, that these successions regularly take place; and in the regular successions of nature, which could not, in one instance more than in another, have been predicted without experience, nothing is mysterious, or every thing is mysterious. It is wonderful, indeed,—for what is not wonderful?—that any belief should arise as to a *future* which as yet has no existence; and which, therefore, cannot, in the strict sense of the word, be an object of our knowledge. But, when we consider Who it was who formed us, it would, in truth, have been more wonderful, if the mind had been so differently constituted that the belief had not arisen; because, in that case, the phenomena of nature, however regularly arranged, would have been arranged in vain, and that Almighty Being, who, by enabling us to foresee the physical events that are to arise,

has enabled us to provide for them, would have left the creatures, for whom he has been so bounteously provident, to perish, ignorant and irresolute, amid elements that seemed waiting to obey them,—and victims of confusion, in the very midst of all the harmonies of the universe.

Mr Hume, indeed, has attempted to show, that the belief of the similarity of future sequences of events is reducible to the influence of custom, without the necessity of any intuitive expectation; but he has completely failed in the reasoning with which he has endeavoured to support this opinion. Custom may account for the mere suggestion of one object by another, as a part of a train of images, but not for that belief of future realities, which is a very different state of mind, and which, perhaps, does not follow every such suggestion, however frequent and habitual. The phenomenon A, a stone has a thousand times fallen to the earth; the phenomenon B, a stone will always, in the same circumstances, fall to the earth; are propositions that differ as much as the propositions, A, a stone has *once* fallen to the earth; B, a stone will always fall to the earth. At whatever link of the chain we begin, we must still meet with the same difficulty—the conversion of the past into the future. If it be absurd to make this conversion at one stage of inquiry, it is just as absurd to make it at any other stage; and, as far as our memory extends, there never was a time at which we did not make the instant conversion,—no period, however early, at which we were capable of knowing that a stone had fallen, and yet believed that, in exactly the same circumstances, there was no reason to suppose that it would fall again. But on this particular error of Mr Hume, the very narrow outline, within which the present sketch is necessarily bounded, will not permit me to enlarge. I have examined it, at considerable length, in the third edition of the Inquiry which I have published on the Relation of Cause and Effect.

It is more immediately our present purpose to consider, What it truly is which is the object of inquiry, when we examine the physical successions of events, in whatever manner the belief of their similarity of sequence may have arisen? Is it the mere series of regular antecedents and consequents themselves? or, Is it any thing more mysterious, which must be supposed to intervene and connect them by some invisible bondage?

We see, in nature, one event followed by another. The fall of a spark on gunpowder, for example, followed by the deflagration of the gunpowder; and, by a peculiar tendency of our constitution, which we must take for granted, whatever be our theory of power, we believe, that as long as all the circumstances continue the same, the sequence of events will continue the same; that the deflagration of gunpowder, for example, will be the invariable consequence of the fall of a spark on it;—in other words, we believe the gunpowder to be susceptible of deflagration on the application of a spark,—and a spark to have the power of deflagrating gunpowder.

There is nothing more, then, understood in the trains of events, however regular, than the regular order of antecedents and consequents which compose the train; and between which, if any thing else existed, it would itself be a part of the train. All that we mean, when we ascribe to one substance a susceptibility of being affected by another substance, is, that a certain change will uniformly take place in it when that other is present;—all that we mean, in like manner when we ascribe to one substance a power of affecting another substance, is, that, when it is present a certain change will uniformly take place in that other substance. Power, in short, is significant not of any thing different from the invariable antecedent itself, but of the mere invariableness of the order of its appearance in reference to some invariable consequent,—the invariable antecedent being denominated a *cause*, the invariable consequent an *effect*. To say, that water has the power of dissolving salt, and to say, that salt will always melt when water is poured upon it, are to say precisely the same thing;—there is nothing in the one proposition, which is not exactly, and to the same extent, enunciated in the other.

It would, indeed, be a very different theory of causation, if, without taking into account the important circumstance of ivariableness, or the uniform certainty of being at all times followed by a particular event, we were to say, that power is mere antecedence; for there can be no question, that phenomena precede other phenomena, which we never consider as having any permanent relation to them. They are regarded as antecedents, but not invariable antecedents, and the reason of this is obvious. Innumerable events are constantly taking place together in the im-

mense system of the universe. There must, therefore, always be innumerable co-existing series, the parts of each of which, though permanently related to each other, may have no permanent relation to the parts of the other series; and one event of one series, may thus precede, not its own effect merely, which is to he its constant and uniform attendant, in all similar circumstances, hut the events also of other co-existing series, which may never occur with it again at the same moment. There is no superstition in believing that an eclipse *may* be followed hy a pestilence, or an unpleasant dream hy some unforeseen calamity of the day, though there would he much superstition in believing, that these antecedents and consequents had any *permanent* relation to each other. In ordinary and familiar cases, at least, every one knows sufficiently the distinction of what is thus *casual* only, and what is *invariable* in the order of nature. Yet it is only by losing all sight of a distinction so very ohvious, and confounding invariable with casual consequences, that Dr Reid, and other eminent philosophers, have been led into much lahorious argumentation, in the confidence of confuting one of the simplest and justest of metaphysical opinions. To prove that power is more than invariable antecedence, they prove that it is more than casual antecedence, and that events do not follow each other, loosely and confusedly, as if antecedents could he invariahle, which had not consequents as invariable, or, as if an uniform series were not merely another name for a numher of uniform antecedents and consequents. A *cause* is, perhaps, not that which has merely *once* preceded an event; hut we give the name to that which *has* always been followed hy a certain event, *is* followed by a certain event, and according to our belief, *will continue* to he in future followed by that event, as its immediate consequent; and causation, power, or any other synonymous words which we may use, express nothing more than this permanent relation of that which has preceded to that which has followed. If this invariahleness of succession, past, present, and future, he not that which constitutes one event the *effect* of another, Dr Reid, at least, has not pointed out any additional circumstance which we must comhine with it, in our definition of an effect, though he has shown, indeed, with most ahundant evidence, if any evidence at all were necessary, that the antecedents and consequents are not the same; that we use active

and passive verbs, in different senses, applying, as might well be supposed, the one to the antecedent, the other to the consequent; that we speak of effects and causes as if truly different, since it is unquestionably not the same thing to *follow* uniformly a certain change, and to *precede* uniformly a certain change, and that we never think of giving those names where we do not conceive that there is some permanent relation. But, though these distinctions might be allowed to have irresistible weight, in opposition to the scepticism, if such extravagant scepticism there ever were, which affirmed the sequences of events to be altogether casual and irregular, they are surely of no weight against that simple definition of power, which affirms it to consist in the probability of the invariable *sequence* of some event as its immediate *consequent;* since this very regularity of the sequences, which is supposed by the definition, must, of itself, have given occasion to all those distinctions of thought and language which Dr Reid has adduced.

That one event should invariably be followed by another event, is indeed, it will be allowed, as every thing in nature is, most wonderful, and can be ascribed only to the infinite source of every thing wonderful and sublime; the will of that divine Being, who gave the universe its laws, and who formed these with a most beneficent arrangement for the happiness of his creatures, who, without a belief in the uniformity of these laws, to direct their conduct, could not have known how to preserve even their animal existence. But the uniformity of succession is surely not rendered less wonderful, by a mere change of name. It is the same unaltered wonder still, when we ascribe the term *power* to the prior of two events, as when we ascribe to it the exactly synonymous phrase *invariableness of antecedence;* each of these terms implying nothing more than that the one event cannot take place without being immediately followed by the other. The permanence and uniformity of the relation are the essential circumstances. To be that which cannot exist, without being instantly followed by a certain event, is to be the *cause* of the *event*, as a correlative *effect*. It is impossible for us to believe, that the invariable antecedent is any thing but the cause, or the cause any thing but the invariable antecedent; as it is impossible for us to believe that *homo* is the Latin synonime of *man*, and yet that *man* is not the English synonime of *homo*.

To know the *powers* of nature, is, then, nothing more than to know what antecedents are and will be *invariable*, followed by what consequents; for this invariableness, and not any distinct existence, is all which the shorter term power, in any case, expresses; and this, and this alone, is the true object of physical inquiry, in that second point of view, in which we have considered it, as directed to the successions of events.

Whenever, therefore, the question is put, as to any object, What is it? there are two answers, and only two answers, that can be given with meaning. We may regard it as it exists *in space*, and state the elements that co-exist in it, or rather that constitute it; or we may regard it, as it exists *in time*, and state, in all the series of changes, of which it forms an invariable part, the objects to which it is related as antecedent or consequent.

To combine these two views of nature, as it exists in space and time, and to know, with perfect accuracy, every element of every aggregate, and every series of changes, of which each forms, or can form, a part, would be to know every thing which can be physically known of the universe. To extend our mere physical inquiry still farther into the phenomena of nature, after this perfect knowledge, would be to suppose erroneously, that, in the compounds before us, of which we know every element, there is some element, not yet discovered, or, in the well-known successions of events, some antecedent or consequent as yet unobserved; or it would be to inquire without any real object of inquiry,—a sort of investigation, which, for two thousand years, was almost the sole employment of the subtile and the studious, and which is far from having perished, with those venerable follies of the schools, at which we know so well how to smile, even while we are imitating them, perhaps, with similar errors of our own. I cannot but think, for example, that, on this very subject of the connexion of events, the prevalent notions and doctrines, even of very eminent philosophers, are not far advanced beyond the verbal complexity of the four causes of which Aristotle treats, the *material*, the *formal*, the *efficient*, and the *final*; or Plato's five causes, which Seneca, in one of his Epistles, briefly defines the *id ex quo*, the *id a quo*, the *id quo*, the *id ad quod*, and the *id propter quod*,* and though there were no other evidence than this one subject affords, it would still,

* Epist. 65.

I fear, prove sufficiently, that, with all our manifest improvements in our plans of philosophical investigation, and all the splendid discoveries to which these improvements have led, we have not wholly lost that great art, which, for so long a time, supplied the place of the whole art of philosophizing—the art of inquiring assiduously, without knowing what we are inquiring about.

It is an art, indeed, which, there is too much reason to suppose, will accompany philosophy, though always, it is to be hoped, in less and less proportion, during the whole course of its progress. There will forever be points, on which those will reason ill, who may yet reason, with perfect accuracy, on other matters. With all those sublime discoveries of modern times, which do us so much honour, and with that improved art of discovery, which is still more valuable to us than the discoveries produced by it, we must not flatter ourselves with exemption from the errors of darker ages—of ages truly worthy of the name of dark, but to which we perhaps give the name, with more readiness, because it seems to imply, that our own is an age of light. Our real comfort, in comparing ourselves with the irrefragable and subtile doctors of other times, is not that we do not sometimes reason as indefatigably ill as they, and without knowing what we are truly reasoning about, but that we do this much *less* frequently, and are continually lessening the number of cases, in which we reason as ill, and increasing, in proportion, the number of cases, in which we reason better, and do truly know, what objects we are seeking.

Of all the cases, however, in which it is of importance, that the mind should have precise notions of its objects of inquiry, the most important are those which relate to the subject at present considered by us; because the nature of power, in the relation which it is impossible for us not to feel of events, as reciprocally effects and causes, must enter, in a great measure, into every inquiry which we are capable of making, as to the successive phenomena, either of matter or of mind. It is of so much importance, therefore, to our future inquiries, that you should know what this universal and paramount relation is, that I have dwelt on it at a length, which I fear must have already exhausted your patience; since it is a discussion, I must confess, which requires considerable effort of attention; and which has nothing, I must also confess, to recommend it, but its dry utility. I trust, however, that

you are too well acquainted with the nature of science, not to know, that it is its utility which is its primary recommendation; and that you are too desirous of advancing in it, not to disregard the occasional ruggedness of a road, which is far from being always rugged. It may be allowed to him, who walks only for the pleasure of the moment, to turn away from every path, in which he has not flowers and verdure beneath his feet, and beauty wherever he looks around. But what should we have thought of the competitor of the Olympic course, whose object was the glory of a prize, contested by the proudest of his contemporary heroes, if, with that illustrious reward before him,—with strength and agility that might ensure him the possession of it,—and with all the assembled multitudes of Greece to witness his triumph, he had turned away, from the contest, and the victory, because he was not to tread on softness, and to be refreshed with fragrance, as he moved along! In that knowledge which awaits your studies, in the various sciences to which your attention may be turned, you have a much nobler prize before you; and, therefore, I shall not hesitate to call forth occasionally all the vigour of your attention, at the risk of a little temporary fatigue, as often as it shall appear to me, that, by exciting you to more than ordinary intellectual activity, I can facilitate your acquisition of a reward, which the listless exertions of the indolent never can obtain, and which is as truly the prize of strenuous effort, as the Palms of the Circus or the Course.

LECTURE VII.

ON POWER, CAUSE, AND EFFECT.

My last Lecture, Gentlemen, was chiefly employed in examining *what it is*, which is the real object of inquiry, when we consider the phenomena of nature as successive; and we found, that, by an original principle of our constitution, we are led, from the mere observation of change, to believe, that, when similar circumstances recur, the changes, which we observed, will also recur in the same order,—that there is hence conceived by us to be a permanent relation of one event, as invariably antecedent, to another event, as invariably consequent,—and that this *permanent relation* is all which constitutes *power*. It is a word, indeed, of much seeming mystery; but all which is supposed to be mysterious and perplexing in it vanishes, when it is regarded in its true light as only a short general term, expressive of invariable antecedence, or, in other words, of that, which cannot exist in certain circumstances, without being immediately followed by a certain definite event, which we denominate an effect, in reference to the antecedent, which we denominate a cause. To express, shortly, what appears to me to be the only intelligible meaning of the three most important words in physics, immediate invariable *antecedence*, is *power*,—the immediate invariable *antecedent*, in any sequence, is a *cause*,—the immediate invariable *consequent* is the correlative *effect*.

The object of philosophic inquiry, then, in that second department of it, which we considered with respect to the phenomena of nature as successive, we have found not to be any thing different from the phenomena themselves, but to be those very phenomena, as preceding or following, in certain regular series. Power is not any thing that can exist separately from a substance, but is merely the substance itself, considered in relation to another substance,—in the

same manner, as what we denominate *form*, is not any thing separate from the elementary atoms of a mass, but is merely the relation of a number of atoms, as co-existing in apparent contact. The sculptor at every stroke of his chisel, alters the form of the block of marble on which he works, not by communicating to it any new qualities, but merely by separating from it a number of the corpuscles, which were formerly included by us, in our conception of the continuous whole; and when he has given the last delicate touches that finish the Jupiter, or the Venus, or Apollo, the divine form which we admire, as if it had assumed a new existence beneath the artist's hand, is still in itself *unaltered*,—the same quiescent mass, that slumbered for ages in the quarry of which it was a part.

Quale fuscæ marmor in Africæ
Solo recisum, sumere idoneum
  Quoscunque vultus, seu Diana
  Seu Cytheræa magis placebit;
Informis, ater, sub pedibus jacet,
Donec politus Phidiaca manu
  Formosa tandem destinatæ
  Induitur lapis ora divæ.
Jam, jamque poni duritiem placens,
Et nunc ocelli, et gratia mollium
  Spirat genarum, nunc labella et
  Per nivium coma sparsa collum.

The *form* of bodies is the relation of their elements to each other *in space*,—the *power* of bodies is their relation to each other *in time*; and both form and power, if considered separately from the number of elementary corpuscles, and from the changes that arise successively, are equally abstractions of the mind, and nothing more. In a former Lecture, I alluded to the influence of errors with respect to the nature of abstraction, as one of the principal causes that retard the progress of philosophy. We give a name to some common quality of many substances; and we then suppose, that there is in it something real, because we have given it a name, and strive to discover, what that is in itself, which, in itself, has no existence. The example, which I used at that time, was the very striking one, of the *genera*, and *species*, and the whole classes of ascending and descending universals of the schools. I

might have found an example, as striking, in those abstractions of form and power, which we are now considering,—abstractions, that have exercised an influence on philosophy, as injurious as the whole series of universals in Porphyry's memorable tree, and one of which, at least, still continues to exercise the same injurious influence, when the tree of Porphyry has been long disregarded, and almost forgotten.

In the philosophy of Aristotle, *form*, which all now readily allow to be a mere abstraction of the mind, when considered separately from the figured substance, was regarded as something equally real with matter itself; and indeed, *matter*, which was supposed to derive from *form* all its qualities, was rather the less important of the two. Of substantial forms, however, long so omnipotent, we now hear, only in those works which record the errors of other ages, as a part of the history of the fallible being, man, or in those higher works of playful ridicule, which convert our very follies into a source of amusement, and find abundant materials, therefore, in what was once the wisdom of the past. Crambé, the young companion of Martinus Scribblerus, we are told, "regretted extremely, that substantial forms, a race of harmless beings, which had lasted for many years, and afforded a comfortable subsistence to many poor philosophers, should be now hunted down like so many wolves, without the possibility of a retreat. He considered that it had gone much harder with them, than with *essences*, which had retired from the schools, into the apothecaries' shops, where some of them had been advanced into the degree of quintessences. He thought there should be a retreat for poor substantial forms among the Gentlemen Ushers at Court, and that there were indeed substantial forms, such as *forms of Prayer* and *forms of Government*, without which the things themselves could never long subsist."*

The subject of this pleasantry is, indeed, it must be owned, so absurd in itself, as scarcely to require the aid of wit, to render it ridiculous; and yet this more than poetic personification of the mere figure of a body, as itself a separate unity, which appears to us too absurd almost to be feigned as an object of philosophic belief, even to such a mind as that of Crambé, was what, for age after age,

* Mart. Scrib. c. 7.—Pope's Works, *Ed.* 1757, v. vii. p. 58, 59.

seemed to the most intelligent philosophers a complete explanation of all the wonders of the universe; and *substantial forms*, far from needing a retreat among Gentlemen Ushers at Court, had their place of highest honours amid Doctors and Disputants, in every School and College, where, though they certainly could not give science, they at least served the temporary purpose of rendering the want of it unfelt, and of giving all the dignity which science itself could have bestowed.

The vague and obscure notions, at present attached to the words power, cause, effect, appear to me very analagous to the notions of the Peripatetics, and, indeed, of the greater number of the ancient philosophers, with respect to form; and, I trust that as we have now universally learned to consider *form*, as nothing in itself, but only as the relation of bodies co-existing immediately in space, so *power* will at length be as universally considered as only the relation which substances bear to each other *in time*, according as their phenomena are immediately successive; the invariable antecedent being the cause, the invariable consequent the effect; and the antecedent and consequent being all that are present in any phenomenon. There are, in nature, only substances; and all the substances in nature, are every thing that truly exists in nature. There is, therefore, no additional *power*, separate, or different from the antecedent itself, more than there is *form*, separate or different from the figured mass, or any other quality, without a substance. In the beautiful experiment of the prismatic decomposition of light, for example, the refracting power of the prism is not any thing separate or separable from it, more than its weight or transparency of colour. There are not a prism and transparency, but there is a prism giving passage to light. In like manner, there are not a prism, and refracting power, and coloured rays, but there are a prism and rays of various colours, which we have perceived to be deflected variously from their original line of direction, when they approach and quit the lens, and which we believe, will, in the same circumstances, continually exhibit the same tendency.

It is the mere regularity of the successions of events, not any additional and more mysterious circumstance, which power may be supposed to denote, that gives the whole value to our physical knowledge. It is of importance for us to know, *what* antecedents

truly precede *what* consequents; since we can thus provide for that future, which we are hence enabled to foresee, and can, in a great measure, modify, and almost create, the future to ourselves, by arranging the objects over which we have command, in such a manner, as to form with them the antecedents, which we know to be invariably followed by the consequents desired by us. It is thus we are able to exercise that command over nature, which *He*, who is its only real Sovereign, has designed, in the magnificence of His bounty, to confer on us, together with the still greater privilege of knowing that Omnipotence to which all our delegated empire is so humbly subordinate. It is a command which can be exercised by us, only as beings, who, according to one of the definitions that have been given of man, look both *before* and *behind;* or, in the words of Cicero, who join and connect the future with the present, seeing things, not in their progress merely, but in the circumstances that precede them, and the circumstances that follow them, and being thus enabled to provide and arrange whatever is necessary for that life, of which the whole course lies open before us. "Homo autem (quod rationis est particeps, per quam consequentia cernit, causas rerum videt, earumque progressus et quasi antecessiones non ignorat, similitudines comparat, et rebus præsentibus adjungit atque annectit futuras) facile totius vitæ cursum videt, ad eamque degendam præparat res necessarias."*

That power is nothing more than the relation of one object or event as antecedent to another object or event, though its immediate and invariable consequent, may, perhaps, from the influence of former habits of thought, or rather, of former abuse of language, at first appear to you an unwarrantable simplification; for, though you may never have clearly conceived, in power, any thing more than the immediate sequence of a certain change or event, as its uniform attendant, the mere habit of attaching to it many phrases of mystery, may, very naturally, lead you to conceive, that, in itself, independently of these phrases, there must be something peculiarly mysterious. But the longer you attend to the notion, the more clearly will you perceive, that all which you have ever understood in it, is the immediate sequence of some

* Cicero de Officiis, lib. i. c. 4.

change with the certainty of the future recurrence of this effect, as often as the antecedent itself may recur in similar circumstances. To take an example, which I have already repeatedly employed, when a spark falls upon gunpowder, and kindles it into explosion, every one ascribes to the spark the *power* of kindling the inflammable mass. But let any one ask himself, what it is which he means by the term, and, without contenting himself with a few phrases that signify nothing, *reflect*, before he give his answer, and he will find, that he means nothing more than that, in all similar circumstances, the explosion of gunpowder will be the immediate and uniform consequence of the application of a spark. To take an example more immediately connected with our own science, we all know, that as soon as any one, in the usual circumstances of health and freedom, wills to move his arm, the motion of his arm follows; and we all believe, that, in the same circumstance of health, and in the same freedom from external restraint, the same *will* to move the arm, will be constantly followed by the same motion. If we knew and believed nothing more, than that this motion of the arm would uniformly follow the will to move it, would our knowledge of this particular phenomenon be less perfect, than at present, and should we learn any thing new, by being told, that the will would not merely be invariably followed by the motion of the arm, but that the will would also have the power of moving the arm; or would not the power of moving the arm be precisely the same thing, as the invariable sequence of the motion of the arm, when the will was immediately antecedent?

This test of identity, as I have said in my Essay on the subject, appears to me to be a most accurate one. When a proposition is true, and yet communicates no additional information, it must be of exactly the same import, as some other proposition, formerly understood and admitted. Let us suppose ourselves, then, to know all the antecedents and consequents in nature, and to believe, not merely that they have once or repeatedly existed in succession, but that they have uniformly done so, and will continue forever to recur in similar series, so that, but for the intervention of the Divine will, which would be itself, in that case, a new antecedent, it will be absolutely impossible for any one of the antecedents to exist again, in similar circumstances, without being instantly fol-

lowed by its original consequent. If an effect be something more than what invariably follows a particular antecedent, we might, on the present supposition, know every invariable consequent of every antecedent, so as to be able to predict, in their minutest circumstance, what events would forever follow every other event, and yet have no conception of power or causation. We might know, that the flame of a candle, if we hold our hand over it, would be instantly followed by pain and burning of the hand,—that, if we ate or drank a certain quantity, our hunger and thirst would cease: —we might even build houses for shelter, sow and plant for sustenance, form legislative enactments for the prevention or punishment of vice, and bestow rewards for the encouragement of virtue;—in short, we might do, as individuals and citizens, whatever we do at this moment, and with exactly the same views, and yet, (on the supposition that power is something different from that invariable antecedence which alone we are supposed to know,) we might with all this unerring knowledge of the future, and undoubting confidence in the results which it was to present, have no knowledge of a single power in nature, or of a single cause or effect. To him who had previously kindled a fire, and placed on it a vessel full of water, with the certainty that the water, in that situation, would speedily become hot, what additional information would be given, by telling him that the fire had the *power* of boiling water, that it was the *cause* of the boiling, and the boiling its *effect?* And, if no additional information would in this case be given, then, according to the test of this identity of propositions, before stated, to know events as invariably antecedent and consequent, is to know them as causes and effects; and to know all the powers of every substance therefore, would be only to know what changes or events would, in all possible circumstances, ensue, when preceded by certain other changes or events. It is only by confounding *casual* with uniform and invariable antecedence, that power can be conceived, to be something different from antecedence. It certainly is something very different from the priority of a single moment; but it is impossible to form any conception of it whatever, except merely as that which is constantly followed by a certain effect.

Such is the *simple*, and, as it appears to me, the *only* intelligible view of *power*, as discoverable in the successive phenomena of

nature. And yet, how different from this simple view is the common, or, I may almost say, the universal notion of the agencies, which are supposed to be concerned in the phenomena that are the objects of philosophic inquiry. It is the detection of the powers of nature, to which such inquiry is supposed to lead,—but not of powers, in the sense in which alone that phrase is intelligible, as signifying the objects themselves which uniformly precede certain changes. The powers which our investigation is to detect, or which, at least, in all the phenomena that come under our observation, we are to consider as the sole efficient, though invisible producers of them, are conceived by us to be something far more mysterious,—something that is no part of the antecedent, and yet is a part of it,—or that intervenes between each antecedent and consequent, without being itself any thing intermediate,—as if it were possible that any thing could intervene in a series, without instantly becoming itself a part of the series,—a new link in the lengthened chain,—the consequent of the former antecedent, and the antecedent of the former consequent.

To me, indeed, it appears so very obvious a truth, that the substances which exist in nature—the world, its living inhabitants, and the adorable Being who created them,—are all the real existences in nature, and that, in the various changes which occur, therefore, there can as little be any powers or susceptibilities different from the antecedents and consequents themselves, as there can be forms different from the co-existing particles which constitute them,—that to labour thus to impress this truth upon your minds, seems to me almost like an attempt to demonstrate a self-evident proposition. An illusion, however, so universal, as that which supposes the powers of nature, to be something more, than the mere series of antecedents themselves, is not rashly, or without very full inquiry, to be considered as an illusion; and, at any rate, in the case of a mistake, so prevalent and so important in its consequences, it cannot be uninteresting, to inquire into the circumstances, that appear most probably to have led to it. Indeed the more false, and the more obviously false the illusion is, the more must it deserve our inquiry, *what* those circumstances have been which have so long obtained for it the assent, not of common understanding merely, but of the quick-sighted and the subtile. For a full view of my opinions on this subject, I must refer you to the work which I have

published on the Relation of Cause and Effect; and the short abstract of them which I now offer, as it would be superfluous for those who have read and understood that work, is chiefly for the sake of those who may not have had an opportunity of perusing the volume itself.

One source of the general fallacy unquestionably is that influence of *abstraction*, to which I before alluded, as aided, and in a great measure perpetuated, by the use of language, and the common unavoidable modes of grammatical construction. We speak of the powers of a substance, of substances that have certain power —of the figure of a body, or of bodies that have a certain figure, in the same manner as we speak of the students of a university, or of a house that has a great number of lodgers; and we thus learn to consider the power, which a substance possesses, as something different from the substance itself, inherent in it indeed, but inherent, as something that may yet subsist separately. In the ancient philosophy, this error extended to the notions both of form and power. In the case of *form*, however, we have seen, that the illusion, though it lasted for many ages, did at length cease, and that no one now regards the *figure* of a body, as any thing but the body itself. It is probable that the illusion, with respect to power, as something different from the substance that is said to possess it, would, in like manner, have ceased, and given place to juster views, if it had not been for the cause, which I am next to consider.

This cause is the *imperfection of our senses*, the same cause which, in the other department of physics before examined by us, —the department, that relates to matter considered merely as existing in space,—we find to give occasion to all our inquiries into the compositions of bodies. In this department of physics, however, which relates to the successions of phenomena in time, the imperfection of our senses operates in a different way. It is not that which gives occasion to the necessity of inquiry; for we have seen, that senses, of the utmost accuracy and delicacy, could not, of themselves, and without experience, have enabled us to predict any one event, in the innumerable series of phenomena that are constantly taking place around us. But, though senses of the nicest discrimination could not have rendered inquiry into the successions of events superfluous, they would have saved us from much idle

inquiry, and have given far greater precision, if not to our *rules*, at least to our uniform *practice*, of philosophizing.

As our senses are at present constituted, they are too imperfect, to enable us to distinguish all the elements, that co-exist in bodies, and of elements, which are themselves unknown to us, the minute changes which take place in them, must of course be unknown. We are hence, from our incapacity of discovering these elements by our imperfect senses, and imperfect analysis, incapable of distinguishing the whole series of external changes that occur in them,—the whole progressive series of antecedents and consequents in a phenomenon that appears to our senses simple; and, since it is only between immediate antecedents and consequents, that we suppose any permanent and invariable relation, we are therefore constantly on the watch, to detect, in the more obvious changes that appear to us in nature, some of those minuter elementary changes, which we suspect to intervene. These minute invisible changes, when actually intervening, are truly what connect the obvious antecedents with the obvious consequents; and the innumerable discoveries, which we are constantly making of these, lead us habitually to suppose, that, amid all the visible changes perceived by us, there is something latent which links them together. He who for the first time listens to the delightful sounds of a violin, if he be ignorant of the theory of sound, will very naturally suppose that the touch of the strings by the bow is the cause of the melody which he hears. He learns, however, that this primary impulse would be of little effect, were it not for the *vibrations* excited by it in the violin itself; and another discovery, still more important, shews him that the vibration of the instrument would be of no effect, if it were not for the elastic medium, interposed, between his ear and it. It is no longer to the violin, therefore, that he looks, as the direct cause of the sensation of sound, but to the vibrating air; nor will even this be long considered by him as the *cause*, if he turns his attention to the structure of the organ of hearing. He will then trace effect after effect, through a long series of complex and very wonderful parts, till he arrive at the auditory nerve, and the whole mass of the brain,—in some unknown state of which he is at length forced to rest, as the cause or immediate antecedent, of that affection of the mind, which constitutes the particular sensation. To inquire into the latent caus-

es of events is thus to endeavour to observe changes which we suppose to be actually taking place before us unobserved, very nearly in the same manner, as to inquire into the composition of a substance is to strive to discover the bodies that are constantly before us, without our being able to distinguish them.

It is quite impossible, that this constant search, and frequent detection of causes, before unknown, thus found to intervene between all the phenomena observed by us, should not, by the influence of the common principles of our mental constitution, at length associate, almost indissolubly, with the very notion of changes as perceived by us, the notion of something intermediate, that as yet lies hid from our search, and connects the parts of the series which we at present perceive. This latent something, supposed to intervene between the observed antecedent and the observed consequent, being the more immediate antecedent of the change which we observe, is of course regarded by us as the *true cause* of the change, while the antecedent actually observed by us, and known, ceases, for the same reason, to be regarded as the cause, and a cause is hence supposed by us, to be something very mysterious; since we give the name, in our imagination, to something of the nature of which we must be absolutely ignorant, as we are, by supposition, ignorant of its very existence. The parts of a series of changes, which we truly observe, are regarded by us as little more than signs of other intervening changes as yet undetected; and our thought is thus constantly turned from the known to the unknown, as often as we think of discovering a cause.

The expectation of discovering something intermediate and unknown between all known events, it thus appears, is very readily convertible into the common notion of power, as a secret and invisible tie. Why does it do this? or, How does it produce this effect? is the question which we are constantly disposed to put, when we are told of any change which one substance occasions in another; and the common answer, in all such cases, is nothing more than the statement of some intervening object, or event, supposed to be unknown to the asker, but as truly a mere antecedent in the sequence, as the more obvious antecedent which he is supposed to know. How is it that we see objects at a distance—a tower, for example, on the summit of a hill, on the opposite side of a river? Because rays of light are reflected from the tower to

the eye. The new antecedent appears to us a very intelligible reason. And why do rays of light, that fall in confusion from every body, within our sphere of vision, on every point of the surface of the eye,—from the wood, the rock, the bridge, the river, as well as the tower,—give distinct impressions of all these different objects? Because the eye is formed of such refracting power, that the rays of light, which fall confusedly on its surface, converge within it, and form distinct images of the objects from which they come, on that part of the eye which is an expansion of the nerve of sight. Again we are told only of intervening events before unknown to us; and again we consider the mere knowledge of these new antecedents as a very intelligible explanation of the event which we knew before. This constant statement of *something intermediate*, that is supposed to be unknown to us, as the cause of the phenomena which we perceive, whenever we ask, how or why they take place? continually strengthens the illusion, which leads us to regard the powers of objects as something different from the perceived objects themselves;—and yet it is evident, that to state *intervening* changes, is only to state *other* antecedents,—not any thing different from mere antecedence,—and that whatever number of these intervening changes we may discover between the antecedent and the consequent, which we at present know, we must at length come to some ultimate change, which is truly and immediately antecedent to the known effect. We may say, that an orator, when he declaims, excites the sensation of sound, because the motion of his vocal organs excites vibrations in the intervening air,—that these vibrations of air are the cause of the sound, by communicating vibration to parts of the ear, and that the vibrations of these parts of the ear are the cause of the sound, by affecting in a particular manner the nerve of hearing, and the brain in general;—but, when we come to the *ultimate* affection of the sensorial organ, which immediately precedes the sensation of the mind, it is evident, that we cannot say of it, that it is the cause of the sound, by exciting any thing intermediate, since it then could not itself be that by which the sound was immediately preceded. It is the cause, however; exactly in the same manner as all the other parts of the sequence were causes, merely by being the immediate and invariable antecedent of the particular effect. If, in our inability of assigning any thing in-

termediate, we were to say, that this last affection of the sensorial organ occasioned the sound, because it had the power of occasioning sound, we should say nothing more than if we said at once, that it occasioned the sound, or, in other words, was that which could not exist in the same circumstances without the sound as its instant attendant.

"What is there," says Malebranche, "which Aristotle cannot at once propose and resolve, by his fine words of genus, species, act, power, nature, form, faculties, qualities, causa per se, causa per accidens? His followers find it very difficult to comprehend that these words signify nothing; and that we are not more learned than we were before, when we have heard them tell us, in their best manner, that fire melts metals, because it has a solvent faculty; and that some unfortunate epicure, or glutton digests ill, because he has a weak digestion, or because the *vis concoctrix* does not perform well its functions."*

We see only parts of the great sequences that are taking place in nature; and it is on this account we seek for the causes of what we *know* in the parts of the sequences that are *unknown*. If our senses had originally enabled us to discriminate every element of bodies, and consequently, all the minute changes which take place in these, as clearly as the more obvious changes at present perceived by us; in short, if, between two known events, we had never *discovered* any thing intermediate and unknown, forming a new antecedent of the consequent observed before, our notion of a cause would have been very different from that mysterious unintelligible something which we now conceive it to be; and we should then, perhaps, have found as little difficulty in admitting it to be what it simply and truly is,—only another name for the immediate invariable antecedent of any event,—as we now find in admitting the *form* of a body, to be only another name for the *relative position* of the parts that constitute it.

But,—I have said in my Essay,—though the powers of created things be nothing more than their relation to certain events that invariably attend them, is this definition consistent with the notion which we form of the power of the Creator? or, Is not *his* efficiency altogether different in nature, as well as in degree? The

* Recherche de la verité, liv. iv. c. ii.—Vol. II. p. 322.

omnipotence of God, it must, indeed, be allowed, bears to every created power the same relation of awful superiority, which his infinite wisdom and goodness bear to the humble knowledge and virtue of his creatures. But as we know his wisdom and goodness, only by knowing what that human wisdom and goodness are, which, with all their imperfection, he has yet permitted to know and adore him,—so, it is only by knowing created power, weak and limited as it is, that we can rise to the contemplation of his omnipotence. In contemplating it, we consider only his *will*, as the direct *antecedent* of those glorious effects which the universe displays. The power of God is not any thing different from God; but is the Almighty himself, willing whatever seems to him good, and creating or altering all things by his very will to create or alter. It is enough for our devotion to trace every where the characters of the Divinity,—of provident arrangement *prior* to this system of things,—and to know, therefore, that, without that divine will as *antecedent*, nothing could have been. Wherever we turn our eyes,—to the earth—to the heavens—to the myriads of beings that live and move around us—or to those more than myriads of worlds, which seem themselves almost like animated inhabitants of the infinity through which they range,—above us, beneath us, on every side, we discover, with a certainty that admits not of doubt, intelligence and design, that must have preceded the existence of every thing which exists. Yet, when we analyse those great, but obscure, ideas which rise in our mind, while we attempt to think of the creation of things, we feel, that it is still only a sequence of events which we are considering,—though of events, the magnitude of which allows us no comparison, because it has nothing in common with those earthly changes which fall beneath our view. We do not see any third circumstance existing intermediately, and binding, as it were, the will of the Omnipotent Creator to the things which are to be; we conceive only the *divine will itself*, as if made visible to our imagination, and all nature at the very moment rising around. It is evident, that in the case of the divine agency, as well as in every other instance of causation, the introduction of any circumstance, as a bond of closer connexion, would only furnish a new phenomenon to be itself connected; but even though it were possible to conceive the closer connexion of such a third circumstance, as is supposed to con-

stitute the inexplicable efficiency between the *will* of the Creator and *the rise of the universe*, it would *diminish*, indeed, but it certainly cannot be supposed to elevate, the majesty of the person, and of the scene. Our feeling of his omnipotence is not rendered stronger by the elevation of the complicated process ; it is, on the contrary, the immediate succession of the object to the desire, which impresses the force of the omnipotence on our mind; and it is to the divine agency, therefore, that the representation of *instant* sequence seems peculiarly suited, as if it were more emphatically powerful. Such is the great charm of the celebrated passage of Genesis, descriptive of the creation of light. It is from stating nothing more than the antecedent and consequent, that the majestic simplicity of the description is derived. God *speaks*, and *it is done*. We imagine nothing intermediate. In our highest contemplation of His power, we believe only, that, when He *willed* creation, a world arose; and that, in all future time, His will to create cannot exist, without being followed by the instant rise into being of whatever He may have willed; that His will to destroy any thing, will be, in like manner, followed by its non-existence; and His will to vary the course of things, by miraculous appearances. The will is the only necessary previous change; and that Being has almighty power, whose every will is immediately and invariably *followed* by the existence of its object.

LECTURE VIII.

ON HYPOTHESIS AND THEORY.

THE observations which I have already made on *power*, Gentlemen, have, I hope, shown you, both what it truly is, and the sources of that illusion, which leads us to regard it as something more mysterious.

The principal source of this illusion, we found to be our incapacity of distinguishing the minute elements of bodies,—that leads us, in a manner, which it is unnecessary now to recapitulate, to suspect constantly some intermediate and unobserved objects and events, between the parts of sequences, which we truly observe, and, by the influence of this habit, to transfer, at least, the notion of power, from the antecedent which we observe, to the supposed more direct antecedent, which we only imagine, and to consider the causes of events as some unknown circumstances, that exist between all the antecedents which we know, and the consequents which we know, and connect these together in mysterious union.

The same imperfection of our senses, which, from our incapacity of discovering all the minute elements, and consequently all the minute elementary changes, in bodies, leads us to form erroneous notions of power and causation, has tended, in like manner, to produce a fondness for *hypotheses*, which, without rendering the observed phenomena, in any respect, more intelligible, only render them more complicated, and increase the very difficulty, which they are supposed to diminish.

Of this tendency of the mind, which is a very injurious one to the progress of sound philosophy, I must request your attention to a little fuller elucidation. To know well, what *hypotheses* truly are in themselves, and what it is which they contribute to the explanation of phenomena, is, I am convinced, the surest of all preservatives against that too ready assent, which you might other-

wise be disposed to give to them; and to guard you from the ready adoption of such loose conclusions, in the reasonings of others, and from the tendency to similar rashness of arrangement and inference, in your own speculative inquiries, is to perform for you the most important office that can be performed, for the regulation, both of your present studies, and of those maturer investigations, to which, I trust, your present studies are to lead.

I have also endeavoured to point out to you, in what manner we are led to believe, that we explain the sequence of two events, by stating some intermediate event. If asked, *How* it is that we hear a voice at a distance, or see a distant object? we immediately answer, Because the primary vibration of the organs of speech is propagated in successive vibrations through the intervening air, and because light is reflected or emitted from the distant object to the eye; and he who hears this answer, which is obviously nothing more than the statement of another effect, or series of effects, that takes place before that particular effect, concerning which the question is put, is perfectly satisfied, for the time, with the acquisition which he has made, and thinks, that he now knows, how it is, that we hear and see. To know *why* a succession of events takes place, is thus at length conceived by us, to be the same thing, as to know some other changes, or series of changes, which take place between them; and, with this opinion, as to the necessary presence of some intervening and connecting link, it is very natural, that, when we can no longer state or imagine any thing which intervenes, we should feel as if the sequence itself were less intelligible, though unquestionably, when we can state some intervening circumstance, we have merely found a new antecedent in the train of physical events, so as to have now *two* antecedents and consequents, instead of *one* simple antecedent and consequent, and have thus only doubled our supposed mystery, instead of removing it.

Since it does *appear* to us, however, to remove the very mystery which it doubles, it is the same thing, with respect to our general practice of philosophizing, as if it *did* remove it. If we suppose the intervention of some unknown cause, in every phenomenon which we perceive, we must be equally desirous of discovering that unknown cause, which we suppose to be intermediate,—and, when this is not easily discoverable, we must feel a

strong tendency to divine what it is, and to acquiesce, more readily than we should otherwise have done, in the certainty of what we have only imagined,—always, of course, imagining the cause, which seems to have most analogy to the observed effect.

Such is the nature of that illusion, from which the love of hypotheses flows,—as seeming, by the intervention of a new antecedent, to render more intelligible the sequences of events that are obviously before us,—though all which is truly done, is to double the number of antecedents; and, therefore, to double, instead of removing the difficulty, that is supposed to be involved in the consideration of a simple sequence of events. A stone tends to the ground—that it should have this *tendency*, in consequence of the mere presence of the earth, appears to us most wonderful; and we think, that it would be much less wonderful, if we could discover the presence, though it were the *mere presence*, of something else. We therefore, in our mind, run over every circumstance analogous, to discover something which we may consider as present, that may represent to our imagination the cause which we seek. The effect of *impulse*, in producing motion, we know by constant experience; and, as the motion, which it produces, in a particular direction, seems analogous to the motion of the stone in its particular direction, we conceive, that the motion of a stone, in its fall to the earth, is rendered more intelligible, by the imagined intervention of some impelling body. The circumstances, which we observe, however, are manifestly inconsistent with the supposition of the impulse of any very gross matter. The analogies of gross matter are accordingly excluded from our thoughts, and we suppose the impulse to proceed from some very subtle fluid, to which we give the name of *ether*, or any other name, which we may choose to invent for it. The hypothesis is founded, you will observe, on the mere analogy of another species of motion, and which would account for gravitation by the impulse of some fine fluid. It is evident, that there may be, in this way, as many hypotheses to explain a single fact, as there have been circumstances analogous observed in all the various phenomena of nature. Accordingly, another set of philosophers, instead of explaining gravitation by the analogy of *impulse*, have had recourse to another analogy, still more intimately familiar to us—that of the phenomena of life. We are able to move our

limbs by our mere volition. The mind, therefore, it is evident, can produce motion in matter; and it is hence some interposed spiritual agent, which produces all the phenomena of gravitation. Every orb, in its revolution on its axis, or in its great journey through the heavens, has, according to this system of philosophical mythology, some peculiar *genius*, or directing spirit, that regulates its course, in the same manner as, of old, the universe itself was considered as one enormous animal, performing its various movements by its own vital energies. It is the influence of this analogy of our own muscular motions, as obedient to our volition,—together with the mistaken belief of adding greater honour to the divine Omnipotent,—which has led a very large class of philosophers to ascribe every change in the universe, material or intellectual, not to the original *foresight* and arrangement merely,—the irresistible evidence of which even the impiety, that professes to question it, *must* secretly admit,—but to the direct operation of the Creator and Sovereign of the world,—

> " The mighty Hand,
> That, ever busy, wheels the silent spheres,
> Works in the secret deep; shoots streaming thence
> The fair profusion that o'erspreads the spring;
> Flings from the sun direct the flaming day;
> Feeds every creature; hurls the tempest forth;
> And, as on earth this grateful change revolves,
> With transport touches all the springs of life."

So prone is the mind to complicate every phenomenon, by the insertion of imagined causes, in the simple sequences of physical events, that one hypothesis may often be said to involve in it many other hypotheses, invented for the explanation of that very phenomenon, which is adduced in explanation of another phenomenon, as simple as itself. The production of muscular motion by the will, which is the source of the hypothesis of direct spiritual agency, in every production of motion, or change, in the universe, has itself given occasion to innumerable speculations of this kind. Indeed, on no subject has the imagination been more fruitful of fancies, that have been strangely given to the world under the name of philosophy. Though you cannot be supposed to be acquainted with the minute nomenclature of anatomy, you yet all know, that there are parts termed *muscles*, and other parts term-

ed *nerves*, and that it is by the contraction of our muscles that our limbs are moved. The nerves, distributing to the different muscles, are evidently instrumental to their contraction; since the destruction of the nerve puts an end to the voluntary contraction of the muscle, and consequently to the apparent motion of the limb. But what is the influence that is propagated along the nerve, and in what manner is it propagated? For explaining this most familiar of all phenomena, there is scarcely any class of phenomena in nature, to the *analogy* of which recourse has not been had,—the vibration of musical chords,—the coiling or uncoiling of springs,—the motion of elastic fluids, electricity, magnetism, galvanism;—and the result of so many hypotheses,—after all the labour of striving to adapt them to the phenomena, and the still greater labour of striving to prove them exactly adapted, when they were far from being so—has been the return to the *simple fact*, that muscular motion follows a certain state of the nerve;—in the same manner, as the result of all the similar labour, that has been employed to account, as it has been termed, for gravitation, has been a return to the simple fact, that, at all visible distances observed, the bodies in nature tend toward each other.

The mere sequence of one event after another event, is, however, too easily conceived, and has too little in it of that complication, which at once busies and delights us, to allow the mind to rest in it long. It must forever have something to disentangle, and, therefore, something which is perplexed; for, such is the strange nature of man, that the simplicity of truth, which might seem to be its essential charm,—and which renders it doubly valuable, in relation to the weakness of his faculties,—is the very circumstance that renders it least attractive to him; and though, in his analysis of every thing that is compound in matter, or involved in thought, he constantly flatters himself, that it is this very simplicity, which he loves and seeks, he yet, when he arrives at *absolute simplicity*, feels an equal tendency to turn away from it, and gladly prefers to it any thing that is *more* mysterious, merely because it is mysterious. "I am persuaded," said one, who knew our nature well, "that, if the majority of mankind could be made to see the order of the universe, such as it is, as they would not remark in it any virtues attached to certain numbers, nor any properties inherent in certain planets, nor fatalities, in certain

times and revolutions of these, they would not be able to restrain themselves, on the sight of this admirable regularity and beauty, from crying out with astonishment, What, is this all?"

For the fidelity of this picture, in which Fontenelle has so justly represented one of the common weaknesses of our intellectual nature, we unfortunately need not refer to the majority of mankind alone, to whom, it may be said, almost with equal truth, that every thing is wonderful, and that nothing is wonderful. The feeling which it describes exists even in the most philosophic mind, and had certainly no increased influence even on that mind which described it so truly, when it employed all its great powers, in still striving to support the cumbrous system of the *Vortices*, against the simple theory of *attraction*. Even Newton himself, whose transcendent intellect was so well fitted to perceive the sublimity, which simplification adds to every thing that is truly great in itself, yet, showed, by his query with respect to the agency of ether, that he was not absolutely exempt from that human infirmity of which I speak; and though philosophers may now be considered as almost unanimous with respect to gravitation,—in considering it as the mere tendency of bodies towards each other, we yet, in admiring this tendency which we perceive, feel some reluctance to admit a mere fact, that presents itself so simply to our conception, and would be better pleased, if any other mode could be pointed out, by which, with some decent appearance of reason on its side, the same effect could seem to be brought about, by a natural apparatus, better suited to gratify our passion for the *complicated* and the wonderful. Though the theory of *Vortices* can scarcely be said now to have any lingering defender left, there is a constant tendency, and a tendency which requires all our philosophy to repress it,—to relapse into the supposition of a great etherial fluid, by the immense ocean, or immense streams, of which the phenomenon now asserted to gravitate, may be explained, and we have no objection, to fill the whole boundless void of the universe, with an infinite profusion of this invisible matter, merely that we may think, with more comfort, that we know how a *feather* falls to the ground;—though the fall of the feather, after this magnificent cast of contrivance, would still be as truly inexplicable as at present; and though many other difficulties must, in that case, be admitted in addition

It is only in *geometry*, that we readily allow a straight line, to be the shortest that can be drawn between any two points. In the physics of mind, or of matter, we are far from allowing this. We prefer to it almost any *curve* that is presented to us by others,—and, without all doubt, any curve which we have described ourselves; and we boldly maintain, and, which is yet more fairly believe, that we have found out a *shorter road*, merely because, in our philosophical peregrination, we have chosen to journey many miles about, and in our delight of gazing on new objects, have never thought of measuring the ground which we have trod.

I am aware, indeed, that, in the consideration of the simple antecedents, and consequents which nature exhibits, it is not the mere complication of these, by the introduction of new intervening substances or events, which obtains from the mind so ready an adoption of hypotheses. On the contrary, there is a sort of false simplification in the introduction of hypotheses, which itself aids the illusion of the mystery. I term the simplification *false*, because it is not in the phenomena themselves, but in our mode of conceiving them. It is certainly far more simple, *in nature*, that bodies should have a tendency toward each other, than that there should be oceans of a subtle fluid, circulating around them, in vortices,—or streams of such a fluid, projected continually on them from some unknown source, merely to produce the same exact motions, which would be the result of the reciprocal tendency in the bodies themselves. But the interposition of all this immensity of matter, to account for the fall of a feather or rain-drop, cumbrous as the contrivance must be allowed to be, is yet in one respect, more simple to our conception, because, instead of two classes of phenomena, those of *gravitation* and of *impulse*, we have, in referring all to *impulse*, only one general class. Man loves what is simple *much*, but he loves what is mysterious *more*; and a mighty ocean of ether, operating invisibly in all the visible phenomena of the universe, has thus a sort of double charm, by uniting the false simplification, of which I have spoken, with abundance of real mystery. This mixture of the simple and the mysterious, is, in some measure, like the mixture of uniformity with diversity, that is so delightful in works of art. However pleasing objects may separately be, we are soon wearied with wandering over them, when, from their extreme irregularity, we cannot group them in any dis-

tinct assemblage, or discover some slight relation of parts to the whole; and we are still sooner, and more painfully fatigued, when every object which we see is in exact symmetry with some other object. In like manner, the mind would be perplexed and oppressed, if it were to conceive a great multitude of objects or circumstances, concurring in the production of one observed event. But it feels a sort of dissatisfaction also, when the sequences of events which it observes, are reduced to the mere antecedents and consequents of which they consist, and must have a little more *complication* to flatter it with the belief, that it has learned something which it is important to have learned. To know that a withered leaf falls to the ground, is to know, what the very vulgar know, as well as ourselves; but an ocean of *ether*, whirling it downward, is something of which the vulgar have no conception, and gives a kind of mysterious magnificence to a very simple event, which makes us think, that our knowledge is greater, because we have given, in our imagination, a sort of cumbrous magnitude to the phenomenon itself.

That hypotheses, in that wide sense of the word which implies every thing conjectural, are without use in philosophy, it would be absurd to affirm, since every inquiry may, in that wide sense, be said to pre-suppose them, and must always pre-suppose them if the inquiry have any object. They are of use, however, not as superseding investigation, but as directing investigation to certain objects,—not as telling us, what we are to believe, but as pointing out to us what we are to endeavour to ascertain. An hypothesis, in this view of it, is nothing more than a reason for making one experiment or observation rather than another; and it is evident, that, without some reason of this kind, as experiment and observations are almost infinite, inquiry would be altogether profitless. To make experiments, at random, is not to *philosophize;* it becomes philosophy, only when the experiments are made with a certain view; and to make them, with any particular view, is to suppose the presence of something, the operation of which they will tend either to prove or disprove. When Torricelli, for example,—proceeding on the observation previously made, by Galileo, with respect to the limited height to which water could be made to rise in a pump,—that memorable observation, which demonstrated, at last, after so many ages of errors, what ought

not for a single moment to have required to be demonstrated; the absurdity of the horror of a void ascribed to nature—when, proceeding in this memorable observation, Torricelli made his equally memorable experiment with respect to the height of the column of mercury supported in an inverted tube, and found, on comparison of their specific gravities, the columns of mercury and water to be exactly equiponderant, it is evident that he was led to the experiment with the mercury by the supposition, that the rise of fluids *in vacuo* was occasioned by some counterpressure, exactly equal to the weight supported, and that the column of mercury, therefore should be less in height than the column of water, in the exact inverse ratio of their specific gravities, by which the counterpressure was to be sustained. To conceive the air, which was then universally regarded as essentially light, to be not light but heavy, so as to press on the fluid beneath, was, at that time, to make as bold a supposition as could be made. It was indeed, a temporary hypothesis, even when it led to that experimental demonstration of the fact, which proved it forever after not to be hypothetical.

An hypothesis, then, in the first stage of inquiry, far from being inconsistent with sound philosophy, may be said to be essential to it. But it is essential only in this first stage, as suggesting what is afterwards to be verified or disproved; and, when the experiments or observations to which it directs us do not verify it, it is no longer to be entertained, even as an hypothesis. If we observe a phenomenon, which we never have observed before, it is absolutely impossible for us, not to think of the analogous cases which we may have seen; since they are suggested by a principal of association, which is as truly a part of our constitution, as the senses with which we perceived the phenomenon itself; and, if any of these analogies strike us as remarkably coincident, it is equally impossible for us not to imagine, that the cause, which we knew in that former instance, may also be present in this analogical instance, and that they *may*, therefore, both be reduced to the same class. To stop here, and, from this mere analogy, to infer positive identity of the causes, and to follow out the possible consequences in innumerable applications, would be to do, as many great artists in systematizing have done. What a philosopher, of sounder views, however, would do in such a case, is very differ-

ent. He would assume, indeed, as *possible* or perhaps as *probable*, the existence of the supposed cause. But he would assume it, only to direct his examination of its reality, by investigating, as far as he was able, from past experience, what the circumstances would have been, in every respect, if the cause supposed had been actually present; and, even if these were all found to be exactly coincident, though he would think the presence of the cause more probable, he would be very far from considering it as certain, and would still endeavour to lessen the chances of fallacy, by watching the circumstances, should they again recur, and varying them, by experiment, in every possible way.

This patience and caution, however, essential as they are to just philosophizing, require, it must be confessed, no slight efforts of self-denial, but of a self-denial which is as necessary to intellectual excellence as the various moral species of self-denial are to excellence and virtue.

"Mr Locke, I think," says Dr Reid, "mentions an eminent musician, who belived that God created the world in six days, and rested the seventh, because there are but seven notes in music. I myself," he continues, "knew one of that profession, who thought that there could be only three parts in harmony, to wit, bass, tenor, and treble; because there are but three persons in the Trinity."*

The minds that could be satisfied with analogies so very slight, must, indeed, have been little acquainted with the principles of philosophic inquiry; and yet how many systems have been advanced in different ages, admired by multitudes, who knew them only by name, and still more revered by the philosophers, who gloried in adopting them, that have been founded on analogies almost as slight.

"The philosophers who form hypothetical systems of the universe, and of all its most secret laws," says Voltaire, in one of his lively similes, "are like our travellers that go to Constantinople, and think that they must tell us a great deal about the seraglio. They pretend to know every thing which passes within it—the whole secret history of the Sultan and his favourites, and they have seen nothing but its outside walls."

* On the Powers of the Human Mind, Essay vi. Chap. viii. Vol. II. p. 334. 8vo. *edit.*

In one respect, however, philosophers, in their hypothetical systems, far outdo the travellers to Constantinople. They not merely tell us secrets of nature, which they have no opportunity of learning, but they believe the very tales of their own fancy. To see any usual phenomenon, is, indeed, to wonder at it, at first; but to explain it, is almost the very next step, reason serving rather to defend the explanation, when it is made, than to assist greatly in making it; and, in many cases, each philosopher has his separate explanation, on which he is disposed to put as much reliance, as on the certainty of the fact itself, not abandoning the hypothesis, even though the fact should prove to have been different, but making it bend, with a happy pliability, to all the diversities discovered, so as at last, perhaps, to account for circumstances the very reverse of those which it was originally invented to explain. "I have heard," says Condillac, "of a philosopher, who had the happiness of thinking that he had discovered a principle, which was to explain all the wonderful phenomena of chemistry; and who, in the ardour of his self-congratulation, hastened to communicate his discovery to a skilful chemist. The chemist had the kindness to listen to him, and then calmly told him, that there was but one unfortunate circumstance for his discovery, which was, that the chemical *facts* were exactly the reverse of what he had supposed. Well then, said the philosopher, have the goodness to tell me *what* they are, that I may explain them by my system."* To those who know that fondness for conjecture, which may almost be said to be a sort of intellectual appetite, there is nothing in all the wonders which Swift tells us of his fabled Houynhnhms, that marks them more strongly as a different race from mankind, than the total absence of hypothesis from their systems of knowledge.

"I remember," says Gulliver, "it was with extreme difficulty that I could bring my master to understand the meaning of the word *opinion*, or how a point could be disputable; because reason taught us to affirm or deny only when we are certain; and beyond our knowledge we cannot do either. So that controversies, wranglings, disputes, and positiveness, in false or dubious propositions, are evils unknown among the Houynhnhms. In the like manner, when I used to explain to him our several systems of Natural Philosophy, he would laugh, that a creature pretending to reason,

* Traite des Systemes, chap. xii. Vol. II. p. 372.

should value itself upon the knowledge of other people's conjectures, and in things, where that knowledge, if it were certain, could be of no use. Wherein he agreed entirely with the sentiments of Socrates, as Plato delivers them, which I mention as the highest honour I can do that Prince of philosophers. I have often since reflected what destruction such a doctrine would make in the libraries of Europe, and how many paths to fame would be then shut up in the learned world."*

While I wish to caution you against a fondness for hypotheses, by shewing you, not merely that they are liable to error,—for inquiry, of every kind, must be so in some degree,—but that, in truth, they leave the real difficulty of the succession of the observed consequents to the observed antecedents as great as before, and only add, to the supposed difficulty of explaining one sequence, the necessity of explaining a sequence additional,—I must remark, at the same time, that what is commonly termed *theory*, in opposition to *hypothesis*, is far from being so different from it as is commonly represented,—at least, in the very wide application which is usually made of it. We are told, by those who lay down rules of philosophizing, that the object of philosophy is, to observe particulars, and, from these, to frame general laws, which may, again, be applied to the explanation of particulars; and the view which is thus given of the real province of philosophy is undoubtedly a just one;—but there is an ambiguity in the language which may deceive you, and with respect to which, therefore, it is necessary for you to be on your guard. If, by the term *general law*, be meant the agreement in some common circumstances of a number of events observed, there can be no question that we proceed safely in framing it, and that what we have already found in a number of events, must be applicable to that number of events; in the same manner, as, after combining in the term *animal* the circumstances in which a dog, a horse, a sheep agree, we cannot err in applying the term animal to a dog, a horse, a sheep. But the only particular to which, in this case, we can, with perfect confidence, apply a general law, are the very particulars that have been before observed by us. If it be understood as more general than the circumstances observed, and, therefore, capable of being applied with perfect certainty to the explanation of new phenomena, we

* Travels, Part iv, chap. 8. Swift's Works, *edit.* Nichols, Vol. ix. p. 300.

evidently, to the extent in which the general law is applied beyond the circumstances observed, proceed on mere supposition, as truly, as in any hypothesis which we could have framed; and though the supposition may be more and more certain, in proportion to the number of cases thus generalized, and the absence of any circumstance which can be supposed, in the new case, to be inconsistent with it, it never can amount to actual certainty. Let us take, for example, one of the most striking cases of this sort. That bodies tend to each other, *in all circumstances*, with a force increasing directly as their quantities, and inversely as the squares of their distances, may seem in the highest degree probable indeed, from the innumerable facts observed on our globe, and in the magnificent extent of the planetary movements; but it cannot be said to be certain at all distances, in which we have never had an opportunity of making observations,—as it seems to be verified in the heights of our atmosphere, and in the distances of the planets, in their orbits, from the sun, and from each other. It is not necessary, however, to refer, for possible exceptions, to spaces that are beyond our observation; since, on the surface of our own earth, there is abundant evidence, that the law does *not* hold *universally*. Every quiescent mass that is capable of greater compression, and of which the particles, therefore, before that compression, are not in absolute contact, shews sufficiently, that the principle of attraction, which, of itself, would have brought them into actual contact, must have ceased to operate, while there was still a space between the particles that would have allowed its free operation; and, in the phenomena of *elasticity*, and impulse in general, it has not merely ceased, but is actually reversed,—the bodies which, at all visible distances, exhibited a reciprocal *attraction*, now exhibiting a reciprocal *repulsion*, in consequence of which they mutually fly off, as readily as they before approached,—that is to say, the tendency of bodies *to* each other being converted into a tendency *from* each other, by a mere change of distance, so slight as to be almost inappreciable. When a ball rebounds from the earth, toward which it moved rapidly before, and the gravitating tendency is thus evidently reversed, without the intervention of any foreign force, what eye, though it be aided by all the nicest apparatus of optical art, can discover the lines which separate those infinitesimal differences of proximity, at which the particles

of the ball still continue to gravitate toward the earth, and are afterwards driven from it in an opposite direction;—yet the phenomenon itself is a sufficient proof, that in these spaces, which seem, to our organs of sense, so completely the same, that it is absolutely impossible for us to distinguish them, the reciprocal tendencies of the particles of the ball and of the earth are as truly opposite, as if the laws of gravitation had, at the moment at which the rebound begins, been reversed through the whole system of the universe.

It is, indeed, scarcely possible to imagine a more striking proof of the danger of extending, with too great certainty, a general law, than this instant conversion of *attraction* into *repulsion*, without the addition of any new bodies, without any change in the nature of the bodies themselves, and a change of their circumstances so very slight, as to be absolutely indistinguishable, but for the opposite motions that result from it, with a change of their circumstances. After observing the gravity of bodies, at all heights of our atmosphere, and extending our survey through the wide spaces of our solar system,—computing the tendency of the planets to the sun, and their disturbing forces, as they operate on each other,—and finding the resulting motions exactly to correspond with those which we had predicted by theory;—in these circumstances, after an examination so extensive, if we had affirmed, as an universal law of matter, that, at all distances, bodies tend toward each other, we should have considered the wideness of the induction, as justifying the affirmation; and yet, even in this case, we find, on the surface of our earth, in the mutual shocks of bodies, and in their very rest, sufficient evidence, that, in making the universal affirmation, we should have reasoned falsely. There is no theory, then, which, if applied to the explanation of *new* phenomena, is not, to a certain degree, conjectural; because it must proceed on the supposition, that what was true in certain circumstances, is true also in circumstances that have not been observed. It admits of certainty, only when it is applied to the very substances observed,—in the very circumstances observed,—in which case, it may be strictly said to be nothing more than the application of a general term to the particulars, which we have before agreed to comprehend in it. Whatever is more than this is truly hypothetical,—the difference being, that we commonly give the name of *hypothe-*

sis to cases, in which we suppose the intervention of some substance, of the existence of which, as present in the phenomenon, we have no direct proof, or of some additional quality of a substance before unobserved,—and the name of *theory* to cases, which do not suppose the existence of any substance, that is not actually observed, or of any quality that has not been actually observed, but merely the continuance, in certain *new* circumstances, of tendencies observed in other circumstances. Thus, if a planet were discovered revolving in the space which separates the orbits of any two planets at present known, were we to suppose of matter, in this new situation, that it would be subject to the same exact law of gravitation, to which the other planets were known to be subject, and to predict its place in the heavens, at any time, according to this law, we should be said to form a theory of its motions; as we should not take for granted, any new quality of a substance, or the existence of any substance, which was not evidently present, but only of *tendencies* observed before in other circumstances,—analogous indeed, but not absolutely the same. We should be said to form an hypothesis on the subject, if, making the same prediction, as to its motions, and place in the heavens, at any given time, we were to ascribe the centripetal tendency, which confines it within its orbit, to the impulse of ether, or to any other mechanical cause. The terms, however, I must confess, though the distinction which I have now stated would be, in all cases, a very convenient one, are used very loosely, not in conversation merely, but in the writings of philosophers,—an hypothesis often meaning nothing more than a theory, to which we have not given our assent,—and a theory, an hypothesis which we have adopted, or still more, one which we have formed ourselves.

A *theory*, then, even in that best sense, to which I wish it accurately confined, as often as it ventures a single hair-breadth beyond the line of former observation, may be wrong, as an hypothesis may be wrong. But, in a theory, in this sense of it, there are both less risk of error, and less extensive evil from error, than in an hypothesis. There is less risk of error, because we speak only of the properties of bodies, that must be allowed actually to exist; and the evil of error is, for the same reason, less extensive, since it must be confined to this single point; whereas, if we were to imagine falsely the presence of some third substance, our sup-

position might involve as many errors, as that substance has qualities; since we should be led to suppose, and expect, some or all of the other consequences, which usually attend it, when really present.

The practical conclusion to be drawn from all this very long discussion, is, that we should use hypotheses to suggest and direct inquiry, not to terminate or supersede it; and that, in theorizing,—as the chance of error, in the application of a general law, diminishes, in proportion to the number of analogous cases, in which it is observed to hold,—we should not form any general proposition, till after as wide an induction, as it is possible for us to make; and, in the subsequent application of it to particulars, should never content ourselves, in any new circumstances, with the mere probability, however high, which this application of it affords; while it is possible for us to verify, or disprove it, by actual experiment.

LECTURE IX.

RECAPITULATION OF THE FOUR PRECEDING LECTURES; AND APPLICATION OF THE LAWS OF PHYSICAL INQUIRY TO THE STUDY OF MIND, COMMENCED.

For several Lectures, Gentlemen, we have been employed in considering the objects that are to be had in view, in Physical Inquiry in general, a clear conception of which seems to me as essential to the Philosophy of Mind, as to the Philosophy of Matter. I should now proceed to apply these general remarks more particularly to our own science; but, before doing this, it may be of advantage to retrace slightly our steps in the progress already made.

All inquiry, with respect to the various substances in nature, we have seen, must regard them as they exist in *space*, or as they exist in *time*,—the inquiry, in the one case, being into their composition; the inquiry, in the other case, into the changes which they exhibit. The first of these views we found to be very simple, having, for its object, only the discovery of what is actually before us at the moment,—which, therefore, if we had been endowed with senses of greater delicacy and acuteness, we might have known, without any inquiry whatever. It is the investigation of the elements, or separate bodies, that exist together, in the substances which we considered, or rather that constitute the substances which we considered, by occupying the space which we assign to the one imaginary aggregate, and are regarded by us as one substance,—not from any absolute unity which they have in nature, since the elementary atoms, however continuous or near, have an existence as truly separate and independent, as if they had been created at the distance of worlds,—but from a unity, that is relative only to our incapacity of distinguishing them as

separate. It is to the imperfection of our senses, then, that this first division of Physical Inquiry owes its origin; and its most complete results could enable us to discover only, what has been before our eyes from the moment of our birth.

The second division of inquiry,—that which relates to the successions of phenomena in time,—we found, however, to have a different origin; since the utmost perfection of our mere senses could show us only what *is*, at the moment of perception, not what *has been*, nor what *will be;* and there is nothing in any qualities of bodies perceived by us, which, without experience, could enable us to predict the changes that are to occur in them. The foundation of all inquiry, with respect to phenomena as successive, we found to be that most important law, or original tendency, of our nature, in consequence of which we not merely perceive the changes exhibited to us at one particular moment, but from this perception, are led irresistibly to believe, that similar changes *have* constantly taken place, in all similar circumstances, and *will* constantly take place, as often as the future circumstances shall be exactly similar to the present. We hence consider events, not as casually antecedent and consequent, but as invariably antecedent and consequent,—or, in other words, as causes and effects; and we give the name of *power* to this permanent relation of the invariable antecedent to its invariable consequent. The powers of substances, then, concerning which so many vague, and confused, and mysterious notions prevail, are only another name for the substances themselves, in relation to other substances,—not any thing separate from them and intermediate,—as the *form* of a body, concerning which too, for many ages, notions as vague and mysterious prevailed, is not any thing different from the body, but is only the body itself, considered according to the relative position of its elements. Form is the relation of immediate proximity, which bodies bear to each other in *space;*—power is the relation of immediate and uniform proximity, which events bear to each other in *time;* and the relation, far from being different, as is commonly supposed, when applied to matter and to spirit, is precisely the same in kind, whether the events, of which we think, be material or immaterial. It is of invariable antecedence that we speak alike in both cases, and of invariable antecedence only. When we say, that a magnet has the power of attracting iron, we

mean only, that a magnet cannot be brought near iron, without the instant motion of the iron towards it. When we say, in treating of *mental* influence, that man, in the ordinary circumstances of health, and when free from any foreign restraint, has the power of moving his hand, we mean only, that, in these circumstances, he cannot will to move his hand, without its consequent motion. When we speak of the omnipotence of the Supreme of Beings,—who is the fountain of all power, as he is the fountain of all existence,—we mean only, that the universe arose at his command, as its instant consequence, and that whatever he *wills* to exist or perish, exists, or is no more.

This simple view of power, as the mere antecedent substance itself, in its relation to its immediate and invariable consequences, without the intervention of any mysterious tie,—since there surely can be nothing in nature, but all the substances which exist in nature,—it was necessary to illustrate, at great length, in consequence of the very false notions, that are generally, or, I may say, universally prevalent on the subject. The illustration, I am aware, must, to many of you, have appeared very tedious, and a sufficient exemplification of that license of exhausting occasionally your attention, and perhaps, too, your patience, of which I claimed the right of exercise, whenever it should appear to me necessary, to make any important, but abstract truth familiar to your mind. I shall not regret, however, any temporary feeling of weariness which I may have occasioned, by dwelling on this great fundamental subject, if I have succeeded in making familiar to your minds, the truths which I wished to impress on them, and have freed you from those false notions of occult and unintelligible agency in causes,—as something different from the mere causes or antecedents themselves,—which appear to me to have retarded, in a very singular degree, the progress of philosophy,—not merely, by habituating the mind to acquiesce in the use of language, to which it truly affixes no meaning, though even this evil is one of very serious injury in its general effects,—but by misdirecting its inquiries, and leading it, from the simplicity of nature,—in which every glance is truth, and every step is progress,—to bewilder itself, with the verbal mysteries of the schools, where there is no refreshment of truth to the eye, that is wearied with wandering only from shadow to shadow,—and where

there is all the fatigue of continual progress, without the advance of a single step.

Even those philosophers, who have had the wisdom to perceive, that man can never discover any thing in the phenomena of nature, but a succession of events, that follow each other in regular series,—and who, accordingly, recommend the observation and arrangement of these regular antecedents and consequents, as the only attainable objects of philosophy, yet found this very advice, on the distinction of what they have termed efficient causes, as different from the physical causes, or simple antecedents, to which they advise us to devote our whole attention. There are certain *secret causes*, they say, continually operating in the production of every change which we observe, and causes which alone deserve the name of efficient; but they are, at the same time, careful to tell us, that, although these causes are constantly operating before us, and are all which are truly acting before us, we must not hope, that we shall ever be able to detect one of them; and indeed, the prohibition of every attempt to discover the efficient causes of phenomena,—repeated in endless varieties of precept or reproof,—is the foundation of all their rules of philosophizing; as if the very information,—that what we are to consider exclusively, in the phenomena of nature, is far less important, than what we are studiously to omit,—were not, of itself, more powerful, in stimulating our curiosity to attempt the forbidden search, than any prohibition could be in repressing it. "Felix qui potuit rerum cognoscere causas." This will forever be the feeling of the inquirer, while he thinks that there are any causes, more than those, which he has already investigated. Even Newton himself, that sagest of observers and reasoners, who could say, with the simplicity of pure philosophy, *Hypotheses non fingo.*" yet showed, as we have seen, by one of the most hypothetical of his Queries, that he was not exempt from the error which he wished to discourage—that inordinate love of the unknown, which must always lead those, who believe that there is something intermediate and undiscovered truly existing between events, to feel the anxious dissatisfaction of incomplete inquiry, in considering the mere antecedents and consequents which nature exhibits, and to turn, therefore, as if for comfort, to any third circumstance, which can be introduced, without obvious absurdity, as a

sort of connecting link, between the pairs of events. To suppose that the mind should *not* have this disposition, would, indeed, be to suppose it void of that principle of curiosity, without which there can be no inquiry of any kind. He who could believe, that, between all the visible phenomena, there are certain invisible agencies continually operating, which have as real an existence as all that he perceives, and could yet content himself with numbering the visible phenomena, and giving them names, without any endeavour to discover the intervening powers, by which he is constantly surrounded, or at least to form some slight *guess*, as to that universal machinery, by which he conceived all the wonders of nature to be wrought, must be a being as different from the common intellectual beings of this earth, as the perfect sage of the Stoics from the frail creatures, of mingled vice and virtue, that live and err around us. That, in considering the phenomena of nature, we should confine our attention to the mere antecedents and consequents, which succeed each other in regular series, is unquestionably the soundest advice that can be given. But it is sound advice, for this reason more than any other, that the regular series is, in truth, all that constitutes the phenomena, and that to search for any thing more, is not to have an unattainable object in view, but to have no conceivable object whatever. *Then only* can the inquirer be expected to content himself with observing and classing the sequences, which nature presents to us spontaneously, or in obedience to our art, when he is convinced, that all the substances which exist in the universe—God and the things which he has created—are every thing which truly exists in the universe, to which nothing can be added, which is not itself a *new* substance; that there can be nothing in the events of nature, therefore, but the antecedents and consequents which are present in them; and that these, accordingly, or nothing, are the very causes and effects, which he is desirous of investigating.

After this examination of the notions connected with the uniform successions of events, our attention was next turned to the nature and origin of *hypothetical inquiry*, which we found reason to ascribe to the imperfection of our senses, that renders it impossible for us to know whether we have observed the whole train of sequences in any phenomenon, from our inability to distinguish

the various elements that may be the subjects of minute changes unobserved.

We are hence eager to supply, by a little guess-work of fancy, the parts unobserved, and suppose deficiencies in our observation where there may truly have been none; till at length, by this habitual process, every phenomenon becomes, to our imagination, the sign of something *intermediate* as its cause, the discovery of which is to be an explanation of the phenomenon. The mere succession of one event to another appears, to us, very difficult to be conceived, because it wants that intervening something, which we have learned to consider as a cause; but there seems to be no longer any *mystery*, if we can only suppose something intervening between them, and can thus succeed in doubling the difficulty, which we flatter ourselves with having removed; since, by the insertion of another link, we must now have two sequences of events instead of one simple sequence. This tendency of the imagination to form and rest on hypotheses,—or, in other words, to suppose substances present and operating, of the existence of which we have no direct proof,—we found to be one great source of error in our practice of philosophizing.

Another source of error, we found to be the *too great extension* of what are termed general laws; which though a less error in itself, is yet, in one respect, more dangerous than the former; because it is the error of better understandings,—of understandings that would not readily fall into the extravagant follies of hypotheses, but acknowledge the essential importance of induction, and think they are proceeding on it without the slightest deviation, almost at the very moment when they are abandoning it for conjecture. To observe the regular series of antecedents and consequents, and to class these as similar or dissimilar, are all which philosophers can do with complete certainty. But there is a constant tendency in the mind, to convert a *general* law into an *universal* law,—to suppose, after a wide induction, that what is true of many substances that have a very striking analogy, is as certainly true of *all* that have this striking analogy,—and that what is true of them in *certain* circumstances, is true of them in *all* circumstances,—or, at least, in all circumstances which are not remarkably different. The widest induction which we can make, however, is still limited in its nature; and, though we may have observed

substances in many situations, there may be some new situations, in which the event may be different, or even, perhaps, the very reverse of that which we should have predicted, by reasoning from the mere analogy of other circumstances. It appeared to me necessary, therefore, in consequence of the very ambiguous manner in which writers on this higher branch of logic speak of reasoning from general laws to particulars, to warn you, that the application to particulars can be made with certainty, only to the very particulars before observed and generalized,—and that, however analogous other particulars may seem, the application of the general law to them admits only of *probability*, which may, indeed, as the induction has been wider, and the circumstances of observed analogy more numerous, approach more or less to certainty, but must always be short of it, even in its nearest approximation.

Such, then, is *physical inquiry*, both as to its objects, and its mode of procedure, particularly as it regards the universe without; and the laws which regulate our inquiry in the internal world of thought are, in every respect, similar. The same great objects are to be had in view, and no other,—the analysis of what is complex, and the observation and arrangement of the sequences of phenomena, as respectively antecedent and consequent.

In this respect, also, I may remark, the philosophy of matter and the philosophy of mind completely agree—that, in both equally, our knowledge is confined to the phenomena which they exhibit. We give the name of *matter* to the unknown cause of various feelings, which, by the constitution of our nature, it is impossible for us not to refer to something external as their cause. What it is, independent of our perception, we know not; but as the subject of our perception, we regard it as that which is extended, and consequently divisible, impenetrable, mobile; and these qualities, or whatever other qualities we may think necessary to include for expressing the particular substances that affect our senses variously, constitute our whole definition of matter, because, in truth, they constitute our whole knowledge of it. To suppose us to know what it is in itself, in absolute independence of our perception, would be manifestly absurd: since it is only by our perception,—that is to say, by the feelings of our mind,—that it can be known to us at all; and these mere feelings of the mind must de-

pend, at least, as much on the laws of the mind affected, as on the laws of the substance that affects it. Whatever knowledge we may acquire of it, therefore, is relative only, and must be relative in all circumstances; though, instead of the few senses which connect us with it at present, we were endowed with as many senses as there are, perhaps, qualities of matter, the nature of which we are at present incapable of distinguishing;—the only effect of such increased number of senses being, to render more qualities of matter known to us, not to make matter known to us in its very essence, as it exists without relation to mind.

"Tell me," says Micromegas, an inhabitant of one of the planets of the Dog Star, to the secretary of the Academy of Sciences in the planet Saturn, at which he had recently arrived in a journey through the heavens,—"Tell me, how many senses have the men on your globe?"—I quote, as perhaps the name has already informed you from an ingenious philosophic romance of Voltaire, who, from various allusions in the work, has evidently had Fontenelle, the illustrious secretary of the French Academy of Sciences, in view, in the picture which he gives of the Saturnian secretary.—"We have seventy-two senses," answered the academician, "and we are, every day, complaining of the smallness of the number. Our imagination goes far beyond our wants. What are seventy-two senses! and how pitiful a boundary, even for beings with such limited perceptions, to be cooped up within our ring, and our five moons! In spite of our curiosity, and in spite of as many passions as can result from six dozen of senses, we find our hours hang very heavily on our hands, and can always find time enough for yawning."—"I can very well believe it," says Micromegas, "for, in our globe, we have very near *one thousand* senses; and yet, with all these, we feel continually a sort of listless inquietude and vague desire, which are forever telling us that we are nothing, and that there are beings infinitely nearer perfection. I have travelled a good deal in the universe. I have seen many classes of mortals far beneath us, and many as much superior; but I have never had the good fortune to find any, who had not always more desires than real necessities to occupy their life.—And, pray, how long may you Saturnians live with your few senses?" continued the Sirian.—"Ah! but a very short time, indeed!" said the little man of Saturn, with a sigh.—"It is the same with us," said the

traveller; "we are forever complaining of the shortness of life. It must be an universal law of nature."—"Alas!" said the Saturnian, "we live only five hundred great revolutions of the sun, (which is pretty much about fifteen thousand years of our counting.) You see well, that this is to die almost the moment one is born. Our existence is a point—our duration an instant—our globe an atom. Scarcely have we begun to pick up a little knowledge, when death rushes in upon us, before we can have acquired any thing like experience. As for me, I cannot venture even to think of any project. I feel myself but like a drop of water in the ocean; and, especially now, when I look to you and to myself, I really feel quite ashamed of the ridiculous appearance which I make in the universe."

"If I did not know that you were a philosopher," replied Micromegas, "I should be afraid of distressing you, when I tell you, that our life is seven hundred times longer than yours.—But what is even that? and, when we come to the last moment, to have lived a *single day*, and to have lived a *whole eternity*, amount to the very same thing. I have been in countries where they live a thousand times longer than with us; and I have always found them murmuring, just as we do ourselves.—But you have seventy-two senses, and they must have told you something about your globe. How many properties has matter with you?"—"If you mean *essential* properties," said the Saturnian, "without which our globe could not subsist, we count three hundred, extensive, impenetrable, mobile, gravitation, divisibility, and so forth."—"That small number," replied the gigantic traveller, "may be sufficient for the views which the Creator must have had with respect to your narrow habitation. Your globe is little; its inhabitants are so too. You have few senses; your matter has few qualities. In all this, Providence has suited you most happily to each other."

"The academician was more and more astonished with every thing which the traveller told him. At length, after communicating to each other a little of what they knew, and a great deal of what they knew *not*, and reasoning, as well and as ill, as philosophers usually do, they resolved to set out together, on a little tour of the universe."*

That, with the one thousand senses of the Sirian, or even the seventy-two senses of the inhabitant of Saturn, our notions of mat-

* Voltaire Œuvres, tom. xiv. p. 99—101. 4*to Edit.* of 1771.

ter would be very different from what they are at present, cannot be doubted; since we should assign to it qualities, corresponding with all the varieties of our six dozen or one thousand classes of sensations. But, even with all these sensations, it is evident, that we should still know as little of *matter*, independent of the phenomena which it exhibits in relation to us, as we know, at this moment. Our definition of it would comprehend more phenomena; but it would still be a definition of its phenomena only. We might perhaps be able to fill up the Saturnian catalogue of three hundred essential properties, but these would be still only the relations of matter to our own perception. A change in the mere susceptibility of our organs of sense, or of our sentient mind, would be relatively to us, like a change in the whole system of things, communicating, as it were, new properties to every object around us. A single sense additional, in man, might thus be to external nature, like the creation of the sun, when he first burst upon it in splendour, "like the god of the new world," and pouring every where his own effulgency, seemed to shed on it the very beauties which he only revealed.

If our knowledge of matter be relative only, our knowledge of mind is equally so. We know it only as susceptible of feelings that have already existed, and its susceptibilities of feelings which have not arisen, but which may, in other circumstances, arise, we know as little, as the blind can be supposed to know of colours, or as we, with all our senses, know of the qualities which matter might exhibit to us, if our own organization were different. Of the *essence* of mind, then, we know nothing, but in relation to the states or feelings that form, or have formed, our momentary consciousness. Our knowledge is not absolute but relative; though, I must confess, that the term *relative* is applied, in an unusual manner, when, as in the present instance, the relative and correlative are the same. It is unquestionably the same individual mind, which, in intellectual investigation, is at once the object and the observer. But the noble endowment of memory, with which our Creator has blessed us, solves all the mystery of this singular paradox. In consequence of this one faculty, our mind, simple and indivisible as it truly is, is, as it were multiplied and extended, expanding itself over that long series of sensations and emotions, in which it seems to live again, and to live with many lives. But for memo-

ry, there can be no question that the relation of thought to thought could not have been perceived; and that hence there could have been no philosophy whatever, intellectual or moral, physical or metaphysical. To this wonderful endowment, then, which gives us the past to compare with the present, we owe that most wonderful of relations, of which the same being is at once the *object* and the *subject*, contemplating itself, in the same manner, as it casts its view on objects that are distant from it, comparing thought with thought, emotion with emotion, approving its own moral actions, with the complacency with which it looks on the virtues of those whom it admires and loves, in the most remote nation or age, or passing sentence on itself, as if on a wretch whom it loathed, that was trembling with conscious delinquency, under the inquisition of a severe and all-knowing judge.

The past feelings of the mind, then, are, as it were, objects present to the mind itself, and acquire, thus truly, a sort of relative existence, which enables us to class the phenomena of our own spiritual being as we class the phenomena of the world without. The mind is that which we know to have been susceptible of all the variety of feelings which we remember; and it is only as it is susceptible of all these varieties of feeling, that we can have any knowledge of it. We define it therefore, by stating its various susceptibilities, including more or fewer of these, in our definition, as we may either have observed or remembered more or less, or generalized more or less what we have observed and remembered; precisely as in our definition of matter, we include more or fewer qualities, according to the extent of our previous observation and arrangement.

That we know *matter*, only as relative to our own susceptibility of being affected by it, does not lessen the value of the knowledge of it, which we are able to acquire; and, indeed, it is only as it is capable of affecting us, that the knowledge of it can be of any direct and immediate utility. It would, indeed, be the very absurdity of contradiction, to suppose ourselves acquainted with qualities which cannot affect us. But, even though this were possible, how profitless would the knowledge be, compared with the knowledge of the qualities which are capable of affecting us; like the knowledge of the seasons of the planet Saturn, or of the planets that have the Dog Star for their sun, compared with the

more important knowledge of the seasons of our own globe, by which we have the comfort of anticipating, in the labours of spring, the abundance of autumn, and gather in autumn the fruits, which, as products of vernal labour, are truly fruits of the spring.

To know *matter*, even *relatively*, as our limited senses allow us to know it, is to have knowledge which can scarcely be called limited. Nothing, indeed, can seem more narrow in extent, if we think only of the small number of our senses, by which alone the communication can be carried on. But what infinity of objects has nature presented to each! In the mere forms and colours that strike our eyes, what splendid variety! the proportion of all things that bloom or live, the earth, the ocean, the universe, and almost God himself appearing to our very senses, in the excellence and beauty of the works which He has made!

It is the same, with respect to the *mind*, though we know it only by its susceptibilities of affection, in the various feelings of our momentary consciousness, and cannot hope to know it, but as the permanent subject of all these separate consciousnesses; to know thus relatively only, the affections even of one single substance, is to have a field of the most boundless and inexhaustible wonders ever present and open to our inquiry! It may be said to comprehend every thing which we perceive, and remember, and imagine, and compare, and admire, all those mysterious processes of thought, which, in the happy efforts of the philosopher and the poet, are concerned in the production of their noblest results, and which are not less deserving of our regard, as they are every moment exercised by all, in the humble intellectual functions of common life. In analyzing and arranging the mental phenomena, then, we consider phenomena, that are diversified, indeed, in individuals, but, as species, are still common to all; for there is no power possessed by the most comprehensive intellect, which it does not share, in some proportion, with the dullest and rudest of mankind. All men perceive, remember, reason,—all, to a certain degree at least, from their little theories, both physical and metaphysical, of the conduct of their fellow men, and of the passing events of nature; and all, occasionally, enliven their social intercourse, or their solitary hours, with inventions of fancy, that last but for a moment indeed, and are not worthy of lasting longer, but which are products of the same species of in-

tellectual energy, that gave existence to those glorious works, to which ages have listened with increasing reverence, and which, immortal as the spirits that produced them, are yet to command the veneration of every future age. When we see before us, in its finished magnificence, a temple, appropriated to the worship of the Supreme Being, and almost worthy of being filled with his presence, we scarcely think that it is erected according to the same simple principles, and formed of the same stone and mortar, as the plain dwellings around us, adapted to the hourly and humble uses of domestic life; and by a similar illusion, when we consider the splendid works of intellectual art, we can scarcely bring ourselves to think, that genius is but a form of general tendencies of association, of which all partake; and that its magnificent conceptions, therefore, rise, according to the same simple laws which regulate the course of thought of the vulgar. In this universality of diffusion as general tendencies, that may be variously excited by varying circumstances, our intellectual powers are similar to those other principles of our nature,—our emotions, and whatever feelings more immediately connected with moral action have been usually distinguished by the name of our active powers. In the philosophy of both we consider, not a few distinguished individuals, as possessed of principles essentially distinct in kind, but the species *man*. They are to be found, wherever there is a human being; and we do not infer with more certainty, when we perceive the impression of a foot upon the sand, that man has been there, than we expect to find in him, whatever may be his state of barbarism or civilization, some form of the common powers, and passions, which, though directed perhaps to different objects, we have felt and witnessed in the society around us. "The two-legged animal," says Dr Reid, "that eats of nature's dainties what his taste or appetite craves, and satisfies his thirst at the crystal fountain; who propagates his kind as occasion and lust prompt; repels injuries, and takes alternate labour and repose; is like a tree in the forest, purely of nature's growth. But this same savage has within him the seeds of the logician, the man of taste and breeding, the orator, the statesman, the man of virtue, and the saint; which seeds, though planted in his mind by nature, yet, through want of culture and exercise, must lie forever

buried, and be hardly perceivable, by himself, or by others."* Even of those passions of a prouder kind, which attract our attention only when they are on a theatre that allows their full display, some vestiges are to be traced universally; though in different individuals, they may exist with very different degress of influence, and though their influence, according to the degree of power possessed by the individual, may be attended with very different consequences, to the few, or the many, comprehended within the wide or narrow circle, to which his power extends.

> ———" Not kings alone,
> Each villager has his ambition to;
> No sultan prouder than his fetter'd slave.
> Slaves build their little Babylons of straw,
> Echo the proud Assyrian in their hearts,
> And cry, Behold the wonders of my might."†

It is this universal diffusion of sympathies and emotions, indeed, which gives its whole force to morality, as a universal obligation; and renders *ethics* truly a *science*.

Nature, in requiring the fruits of virtue from all, has not fixed the seeds of it, only in a few breasts. "Nulli præclusa virtus est, omnibus patet, omnes admittit, omnes invitat, ingenuos, libertinos, servos, reges et exsules; non eligit domum, nec censum; nudo homine contenta est."‡ Virtue has no partial favours or exclusions. She is open to all, she admits all, she invites all. She asks no wealth nor ancestry; but she asks the man,—the master or the slave, the cottager and his lord, the sovereign and the exile.

Though we know *mind*, then only *relatively*, in the series of feelings, of which we are conscious, as we know matter relatively in the series of phenomena, which it exhibits to our observation, we have, in this relative knowledge, subjects worthy of the contemplation of beings permitted, in these shadowings of a higher power, to trace some faint image of the very majesty which formed them. Even of the humblest mind, as we have seen, the various affections, sensitive, intellectual, and moral, that arise in it as affections of our common nature, are truly admirable; and what an

* Inquiry into the Human Mind, Introd. p. 7. 8vo. *Edit.*

† Young's Night Thoughts, vii. v. 392—397.

‡ Seneca de Beneficiis, lib. iii. c. 18.

increase of sublimity do they acquire, in minds of higher powers! But still, it must be remembered, that even in minds the most sublime, as much as in the most humble, all which can be truly known is the successive phenomena which they exhibit, not the essence of the spiritual substance itself; and that, even of these successive phenomena, though we become gradually acquainted with more and more, we probably never can arrive at any bound which is to limit their number. The susceptibilities of the mind, by which, in different circumstances, it may exist in different states, are certainly as truly infinite as the space which surrounds us, or as that eternity which, in its progress, measures the successions of our feelings, and all the other changes in the universe. Every new thought, or combination of thoughts, is in truth a new state or affection, or phenomenon of the mind, and, therefore, a proof of the susceptibility of that new affection, as an original quality of the mind; and every rise in knowledge, from age to age, and from inquirer to inquirer, is thus only the developement of susceptibilities, which the mind possessed before, though the circumstances which at last called them forth, never existed till the moment of the developement. What should we think of the half-naked savage of some barbarous island, if, in the pride of his ignorance, he were to conceive his own thoughts and feelings to be the noblest of which the human intellect is capable? and, perhaps, even the mind of a Newton, is but the mind of such a savage, compared with what man is hereafter to become.

LECTURE X.

THE SAME SUBJECT CONTINUED.

GENTLEMEN, after laying down the general laws of physical inquiry, I had begun, in the conclusion of my last Lecture, to consider them, more particularly in their relation to the study of mind.

One very important circumstance of agreement in the physical investigations of mind and matter, we found to be, that, of both matter and mind, the successive phenomena are all which we truly know, though by the very constitution of our nature, it is impossible for us not to ascribe these to some *permanent subject*. *Matter* is the permanent subject of certain qualities, extension, and its consequent divisibility, attraction, repulsion; that is to say, it is the permanent exhibiter to us of certain varying phenomena which we observe. *Mind* is the permanent subject of certain qualities or states or affections of a different class—perception, memory, reason, joy, grief, love, hate; that is to say, of certain varying phenomena of which we are conscious. What *matter* is independent of our perception; what *mind* is independent of its temporary variety of feeling, it is impossible for us to discover; since whatever new knowledge of matter we can suppose ourselves to acquire, must be acquired by our perception, and must, therefore, be relative to it; and whatever new knowledge we can suppose ourselves to acquire of mind, must be itself a state or affection of the mind, and, therefore, only a new mental phenomenon to be added to those with which we were before acquainted, as one of the many states in which the permanent substance *mind* is capable of existing.

Since it is only by their relation to our own feelings, then, that substances can be known to us, beyond these relations it would be vain for us to think of penetrating; as vain, at least, as would be

tbe attempts of the deaf to discover, by a process of reasoning, the nature of the sensations of sound, or of the blind to determine, not the lines of direction merely, in which the various coloured rays of light pass after refraction, for these they may optically determine, but the various sensations, corresponding with all tbe varieties of tint into which the sun-beams are broken by the drops of a falling shower. Tbe substance matter, the substance mind, are, in this respect, to the whole race of metaphysical inquirers, what the rainbow, as a series of colours, is to opticians, who have never seen.

The absurdity of such inquiries, into any thing more than the mere phenomena, if it be not sufficiently evident of itself, may, perhaps, be rendered more apparent, by a very easy supposition. Let us imagine the permanent unknown substance *matter*, and the permanent unknown substance *mind*, to be rendered, by the same divine power which made them, altogetber different in their own absolute essence, as they exist independently, but to exhibit relatively, precisely the same phenomena as at present,—that spring, and summer, and autumn, and winter, in every appearance that can affect our organs of perception, succeed each other as now, pouring out tbe same profusion of foliage, and flowers, and fruits, and, after the last gladness of tbe vintage and tbe harvest, sweeping the few lingering blossoms, with tbose desolating blasts, which seem like the very destroyers of nature, while they are only leading in, with great freshness, under the same benevolent eye of Heaven, the same delightful circle of beauty and abundance,—tbat, in mind, the same sensations are excited by the same objects, and are followed by the same remembrances, and comparisons, and hopes, and fears;—in these circumstances, while all the phenomena whicb we observe, and all the phenomena of which we are conscious, continue exactly tbe same, can we believe, that we should be able to discover the essential change, which, according to this supposition, had taken place, in the permanent subjects of tbese unvaried pbenomena! And, if, as long as the external and internal pbenomena continued exactly the same, we should be incapable of discovering, or even suspecting, the slightest change, where, by supposition, tbere had been a change so great, how absurd is it to conceive that the changed or unchanged nature of the substance itself, as it exists independently of the phenomenon, ever can become known to us.

He, indeed, it may always safely be presumed, knows least of the mind, who thinks that he knows its substance best. "What is the soul?" was a question once put to Marivaux. "I know nothing of it," he answered, "but that it is spiritual and immortal." "Well," said his friend, "let us ask Fontenelle, and *he* will tell us what it is." "No," cried Marivaux, "ask any body but Fontenelle, for he has too much *good sense to know any more about it than we do.*"

It is to the phenomena only, then, that our attention is to be given, not to any vain inquiries into the absolute nature of the substances which exhibit the phenomena. This alone is legitimate philosophy,—philosophy which must forever retain its claim to our assent, amid the rise and fall of all those spurious speculations, to which our vanity is so fond of giving the names of *theory* and *system*. Whatever that may be, in itself, which feels, and thinks, and wills,—if our feelings, and thoughts, and volitions be the same —all which we can know, and compare, and arrange, must be the same; and, while we confine our attention to these, the general laws of their succession which we infer, and the various relations which they seem to bear to each other, may he admitted equally by those whose opinions, as to the absolute nature of the feeling and thinking principle, differ fundamentally. It requires no peculiar supposition, or belief, as to the nature of the mind, to know, that its trains of thought are influenced, by former habits, or casual association; and every fact, which the immaterialist has accurately observed and arranged, with respect to the influence of habit or association, may thus, with equal reason, form a part of the intellectual and moral creed of the materialist also.

On these two systems it is not at present my intention to make any remarks; all which I wish, now, is to explain to you, how independent the real philosophy of the mind is, of any fanciful conjectures, which may be formed, with respect to its essence. It differs from these, as Mr. Stewart has well observed, in the same manner "as the inquiries of Galileo, concerning the laws of moving bodies, differ from the disputes of the ancient Sophists, concerning the existence and the nature of motion," or as the conclusions of Newton, with respect to the law of gravitation, differ from his query concerning the mode in which he supposed that gravity might possibly be produced. The hypothesis, involved

in the query, you may admit or reject; the conclusions, with respect to the law of gravitation itself, as far as relates to our planetary system, are, I may say, almost beyond your power of rejecting.

The philosophy of mind then, and the philosophy of matter, agree, in this respect, that our knowledge is, in both, confined to the mere phenomena. They agree also, in the two species of inquiry which they admit. The phenomena of *mind*, in the same manner as we have seen in the case of *matter*, may be considered as complex and susceptible of analysis, or they may be considered as successive in a certain *order*, and bearing, therefore, to each other the reciprocal relation of causes and effects.

That we can know the phenomena, only as far as we have attended to their sequences, and that, without experiment, therefore, it would have been impossible for us to predict any of their successions, is equally true, in mind as in matter. Many of the successions, indeed, are so familiar to us, that it may appear to you, at first, very difficult to conceive, that we should not have been able, at least with respect to them, to predict, originally, *what* antecedents would have been followed by *what* consequents. We may allow certainly, that we should not have been able to foresee the pleasure which we receive from the finer works of imitative art—from the successions, or co-existences, in music, of sounds, that, considered separately, would scarcely be counted among the sources of delight—from the charm of versification, that depends on circumstances, so very slight, as to be altogether destroyed, and even converted into pain, by the change of quantity of a single syllable. But, that the remembrance of pleasure should not be attended with desire of enjoying it again, seems to us almost inconsistent with the very nature of the pleasing emotion. In like manner, we may allow, that we could not have predicted the sympathy which we feel with the distresses of others, when they arise from causes that cannot affect us, and yet make, for the time, the agony, which we merely behold, a part of our own existence. But we can scarcely think, that we require *any* experience, to know, that the contemplation of pain, which we may ourselves have to endure, should be the cause of that painful feeling, to which we give the name of *fear*, or that the actual suffering should be accompanied with the desire of relief.

The truth is, however, that, in all these cases, and in all of them equally,—it would have been impossible, but for experience, to predict the consequent of any of the antecedents. The pleasure, which we feel, in the contemplation of a work of art, the pain, which we feel, at the sight of the misery of others, are as much the natural effects of states of mind preceding them, as the fear of pain is the effect of the consideration of pain as hanging over us. Our various feelings, similar or dissimilar, kindred or discordant, are all mere states of the mind; and there is nothing, in any one state of the mind, considered in itself, which, necessarily, involves the succession of any other state of mind. That particular state, for example, which constitutes the mere feeling of pain, instead of being attended by that different state which constitutes the desire of being freed from pain, might have continued, as one uniform feeling, or might have ceased, and been succeeded by some other state, though in the original adaptation of our mental frames, by that Creator's wisdom which planned the sequences of its phenomena, the particular affection, which constitutes *desire*, had not been one of the innumerable varieties of affection, of which the mind was forever to be susceptible.

What susceptibilities the mind has exhibited in the ordinary circumstances in which it has been placed, we know, and they have been limited to a certain number, corresponding with the feelings which have arisen in these circumstances. But the Almighty Power, who fixed this particular number, might have increased or lessened the number at His pleasure, in the same manner, as He might, at His pleasure, have multiplied or diminished the whole number of his animated creatures; and, where there has been no limit, but the will of the *Limiter*, it is experience only which can give us any knowledge of the actual limitation. We are always too much inclined to believe, that we know what must have been, because we know what is,—and to suppose ourselves acquainted, not merely with the gracious ends which Supreme Goodness had in view, in creating us, but with the very object, which each separate modification of our intellectual and moral constitution was intended to answer. I would not, indeed, go so far as Pope, in that passage of the Essay on Man, in which he seems to imply, that our ignorance of the wise and harmonious intentions of Providence, in the constitution of our mind, is like the

ignorance of the inferior animals, as to the motives which influence the follies and inconsistencies of their capricious master.

> "When the proud steed shall know, why man restrains
> His fiery course, or drives him o'er the plains,
> When the dull ox, why now he breaks the clod,
> Is now a victim, and now Egypt's God,—
> Then shall man's pride and dulness comprehend
> His action's, passion's, being's, use and end;
> Why doing, suffering, check'd, impell'd; and why
> This hour a slave, the next a deity."*

Our Divine Author has not left us, even now, to darkness like this. We know, in a great measure, the use and end of our actions and passions, because we know *who* it is who has formed us to do and to bear,—and who, from His own moral excellence, cannot have given us any susceptibility, even that of suffering, which does not tend, upon the whole, to strengthen virtue, and to consecrate, as in some purifying sacrifice, the sufferer of a moment to affections more holy, and happiness more divine. Yet, though we know, in this general sense, our action's, passion's, being's, use and end, as subservient to the universal plan of Infinite Goodness, we are not so well acquainted with the particular uses of each state of the mind, as to have been able to predict it, merely as a part or consequence of the plan. The knowledge of every successive modification of our thought, is still as much the result of experience, as if the gracious plan, to which all these successive modifications are instrumental, were wholly unknown to us:—Yet, such is the influence of habit, in familiarizing us to phenomena, that we think, that experience is nothing, only in those cases, in which the power of experience has been most frequently and familiarly felt; and while in the rarer successions of feelings, we allow, that there are phenomena of the mind, which we could not have foreknown, we find it difficult to imagine, in the recurrences of the common mental phenomena, that, even originally, it could have required any peculiar foresight to predict, what we are now conscious of predicting with a readiness, that seems to us almost like the instant glance of intuition.

In the philosophy of external matter, the greater or less fa-

* Ep. i. v. 61—63. Works, vol. III. p. 5, 6.

miliarity of events produces an illusion exactly similar. There are certain phenomena, which, we readily admit, could not, of themselves, and without experience, have indicated to us, either the changes which preceded them, or the changes which were to follow; while there are other phenomena, more familiar, which seem to us to require no experience, for informing us, both of their antecedents and consequents,—merely because they have been of such frequent occurrence, that we do not remember the time, when we were ignorant of them, or of the circumstances, by which they are usually preceded and followed. That a magnetic needle should tend to the north, rather than to any other point,—and that glass, or amber, rubbed in a certain manner, should exhibit the very striking phenomena of electricity, transmitting this power through certain substances, and not transmitting it through others, which have nothing peculiar in their sensible qualities, to mark them as less or better fitted for this communication, appear to us to be facts, which we could not have known, till we had actually witnessed them. But that a stone, rolled from the hand, should continue to move in the same direction, after quitting the hand, seems a fact, which it must have been easy for us to foresee. We are not aware, that it is only the more familiar occurrence of the one event, than of the others, which makes its sequence appear more obvious; and that, but for this greater familiarity, we might as readily have supposed, that a stone, after quitting the hand which flung it, should have remained in the air, or fallen to the ground, as that the needle, without any tendency to the north, would remain stationary, to whatever point of the compass we might turn it.

Such is the influence of early acquaintance with the more frequent and obvious events, whether in mind or in matter. We have become familiar with them, and with their causes and consequences, long before reflection; and it is not very wonderful, that we should conceive ourselves to have *known always*, what we do not remember to have ever learned.

That to know, in the series of mental phenomena, *what* are the antecedents, and *what* their consequents, is one great branch of the Philosophy of Mind, I surely need not attempt to demonstrate; and it would be equally superfluous to demonstrate its importance, especially after the remarks—if even these were

necessary,—which I made in a former Lecture; since it is not merely, as a very interesting branch of speculative knowledge, that it is valuable, but, as I then showed, still more valuable, as the foundation of every intellectual art, especially of those noble and almost divine arts, which have, for their immediate object, the illumination and amendment of mankind—the art of training ignorance to wisdom, and even wisdom itself to knowledge still more sublime,—of fixing youthful innocence in the voluntary practice of virtue, that is as yet little more than an *instinct* of which it is scarcely conscious,—of breathing that moral inspiration, which strengthens feeble goodness, when it is about to fall, tames even the wildest excesses of the wildest passions, and leads back, as if by the invisible power of some guardian spirit, even Guilt itself, to the happiness which it had lost, and the holier wishes, which it rejoices to feel once more.

Since the phenomena of the mind, however, are obviously *successive*, like those of matter, the consideration of the sequences of the mental phenomena, and the arrangement of them in certain classes, may appear to you sufficiently analogous to the consideration and arrangement of the sequences of the phenomena of the material world. But that there should be any inquiries, in the philosophy of mind, corresponding with the inquiries into the composition of bodies, may appear to you improbable, or almost absurd; since the mind, and consequently its affections—which I use as a short general term for expressing all the variety of the modes in which it can be affected, and which, therefore, are only the mind itself as it exists in different states,—must be always *simple* and *indivisible*. Yet, wonderful, or even absurd, as it may seem, notwithstanding the absolute simplicity of the mind itself, and consequently of all its feelings or momentary states,—the Science of Mind is, in its most important respects, a source of analysis, or of a process which I have said to be virtually the same as analysis; and it is only, as it is in this virtual sense analytical, that any discovery, at least that any important discovery, can be expected to be made in it.

It is, indeed, scarcely possible to advance, even a step in intellectual physics, without the necessity of performing some sort of analysis, by which we reduce to simpler elements, some complex feeling that seems to us virtually to involve them. In the mind of

man, all is in a state of constant and ever-varying complexity, and a single sentiment may be the slow result of innumerable feelings. There is not a single pleasure, or pain, or thought, or emotion, that may not,—by the influence of that associating principle, which is afterwards to come under our consideration,—be so connected with *other* pleasures, or pains, or thoughts, or emotions, as to form with them, forever after, an union the most intimate. The complex, or seemingly complex, phenomena of thought, which result from the constant operation of this principle of the mind, it is the labour of the *intellectual inquirer* to *analyze*, as it is the labour of the *chemist* to reduce the compound bodies, on which he operates, however close and intimate their combination may be, to their constituent elements. The process, and the instruments by which the analyses are caried on, are, indeed, as different as matter is from mind,—cumbrous as matter, in the one case,—in the other, simple and spiritual as mind itself. The aggregates of matter we analyze by the use of other matter, adding substance after substance, and varying manipulation after manipulation;—the complex mental phenomena we analyze virtually by mere reflection; the same individual mind being the subject of analysis, the instrument of analysis, and the analysing inquirer.

When I speak, however, of the union of separate thoughts and feelings in one complex sentiment or emotion, and of the analytic power of reflection or reason, it must not be conceived, that I use these words in a sense precisely the same as when they are applied to matter. A mass of matter, as we have seen, is, in truth, not *one* body merely, but a *multitude* of contiguous bodies; all of which, at the time, may be considered as having a separate existence, and as placed together more by accidental apposition, than by any essential union;—and *analysis* is nothing more than what its etomology denotes, a *loosening* of these from each other. In strictness of language, this composition and analysis cannot take place in *mind*. Even the most complex feeling is still only *one* feeling; for we cannot divide the states or affections of our mind into separate self-existing fractions, as we can divide a compound mass of matter into masses, which are separate and self-existing,—nor distinguish *half* a joy or sorrow from a *whole* joy or sorrow. The conception of gold, and the conception of a mountain, may separately arise, and may be followed by the conception of a golden

mountain; which may be said to be a compound of the two, in the sense in which I use that word, to express merely, that what is thus termed compound or complex is the result of certain previous feelings, to which, as if existing together, it is felt to have the virtual relation of equality, or the relation which a whole bears to the parts that are comprehended in it. But the conception of a *golden mountain* is still as much *one* state or feeling of one simple mind, as either of the separate conceptions of gold and of a mountain which preceded it. In cases of this kind, indeed, it is the very nature of the resulting feeling to seem to us thus complex; and we are led, by the very constitution of our mind itself, to consider what we term a complex idea, as equivalent to the separate ideas from which it results, or as comprehensive of them,—as being truly to our conception—though to our conception only—and, therefore, only virtually or relatively to us the inquirers—the same, as if it were composed of the separate feelings *co-existing*, as the elements of a body co-exist in space.

It is this feeling of the relation of certain states of mind to certain other states of mind, which solves the whole mystery of mental analysis, that seemed at first so inexplicable,—the virtual *decomposition*, in our thought, of what is by its very nature, *indivisible*. The mind, indeed, it must be allowed, is absolutely simple in all its states; every separate state or affection of it must therefore, be absolutely simple; but in certain cases, in which a feeling is the result of other feelings preceding it, it is its very nature to appear to involve the union of those preceding feelings; and to distinguish the separate sensations, or thoughts, or emotions, of which, on reflection, it thus seems to be comprehensive, is to perform an intellectual process, which, though not a real analysis, is an analysis at least relatively to our conception. It may still, indeed, be said with truth, that the different feelings,—the states or affections of mind which we term *complex*,—are absolutely *simple* and *indivisible*, as much as the feelings or affections of mind which we term simple. Of this there can be no doubt. But the complexity with which alone we are concerned is not *absolute* but *relative*, —a seeming complexity, which is involved in the very feeling of relation of every sort. That we are thus impressed with certain feelings of relation of conceptions to conceptions, no one can doubt who knows, that all science has its origin in these very feelings;

and equivalence, or equality, is one of those relations, which, from its very constitution, it would be as impossible for the mind in certain circumstances, not to feel, as it would be impossible for it, in certain other circumstances, not to have those simple feelings which it compares. With perfect organs of vision, and in the full light of day, it is not possible for us to look on a tree, or a rock, without perceiving it; but it is not more possible for us to form a conception of two trees, without regarding this state of mind, simple though it truly is, when absolutely considered as virtually involving, or as equal to, two of those separate feelings, which constituted the conception of a single tree.

On this mere feeling of virtual equivalence, is founded all the demonstration of those sciences, which claim the glory of being peculiarly demonstrative; our equations and proportions of abstract number and quantity involving continually this analytic valuation of notions, as reciprocally proportional. Our conception of an angle of forty-five degrees is *one* state or affection of mind,—one state of one simple indivisible substance;—such, too, is our conception of a right angle. Our notion of *four* or *eight* is as much *one* affection of mind, as our notion of a simple unit. But, in reflecting on the separate states of mind which constitute these notions, we are impressed with certain relations which they seem, to us, reciprocally to bear, and we consider the angle of forty-five degrees as equal to half the angle of ninety degrees, and our notion of eight as involving or equal to two of four. If one state of mind, which constitutes the notion of a certain abstract number or quantity, had not been considered in this sort of virtual comprehensiveness, as bearing the relation of equality, or proportion, to other states of mind, which constitute other abstract notions of the same species, mathematics would not merely have lost their certainty, but there could not, in truth, have been any such science as mathematics.

The *intellectual analysis*, which appears to me to constitute so important a part of the science of mind, is nothing more than the successive developement, in application to the various mental phenomena, of this feeling of equivalence, or comprehensiveness, which is not confined to the mathematical notions of number and quantity, (though, from the greater simplicity of these, *their* equality or proportion may be more accurately distinguished,) but extends to every thought and feeling which we regard as complex,

that is to say, to almost every thought and feeling of which the mind is susceptible. We compare virtue with virtue, talent with talent, not, indeed, with the same precision, but certainly in the same manner, and with the same feeling of proportion, as we compare intellectually one angle with another; and we ask what ideas are involved in our complex notions of religion and government, with as strong a feeling that a number of ideas are virtually involved or comprehended in them, as when we ask, how often the square of two is repeated in the cube of six.

Analysis, then, in the Science of Mind, you will perceive, is founded wholly on the feeling of relation which one state of mind seems to us to bear to other states of mind, as comprehensive of them; but, while this seeming complexity is felt, it is the same thing to our analysis, as if the complexity, instead of being virtual and relative only, were absolute and real. It may be objected to the application of the term *analysis* to the Science of Mind, that it is a term which, its etymology shews, as I have already admitted, to be borrowed from matter, and to convey, as applied to the mind, a notion in some degree different from its etymological sense. But this is an objection which may be urged, with at least equal force, against every term, or almost every term, of our science. In our want of a peculiar metaphysical language, we are obliged in this, as in every other case, to borrow a metaphysical language from the material world; and we are very naturally led to speak of mental composition and analysis, since to the mind which feels the relation of equivalence or comprehensiveness, it is precisely the same thing as if our ideas and emotions, that result from former ideas and emotions, and are felt by us as if involving these in one complex whole, could be actually divided into the separate elements which appear to us thus virtually or relatively to be comprehended in them.

It is from having neglected this branch of the physical investigation of the mind,—by far the more important of the two,—and having fixed their attention solely on the successions of its phenomena, that some philosophers have been led to disparage the science as fruitless of discovery, and even to deride the pretensions or the hopes of those who do not consider it as absolutely exhausted;—I will not say now merely, in the present improved state of the science, but as not exhausted almost before philosophy

began, in the rude consciousness of the rudest savage, who saw, and remembered, and compared, and hoped, and feared; and must, therefore, it is said, have known what it is to see, and remember, and compare, and hope, and fear.

If the phenomena of the mind were to be regarded merely as successive,—which is one only of the two lights in which they may be physically viewed,—it might, indeed, be said, with a little more appearance of truth, that this mere succession must be as familiar to the unreflecting mind as to the mind of the philosopher; though, even in this limited sense, the remark is far from being accurate. But the phenomena have other relations, as well as those of succession,—relations which are not involved in the mere consciousness of the moment, but are discoverable by reflection only,—and to the knowledge of which, therefore, addition after addition may be made by every new generation of reflecting inquirers. From the very instant of its first existence, the mind is constantly exhibiting phenomena more and more complex,—sensations, thoughts, emotions, all mingling together, and almost every feeling modifying, in some greater or less degree, the feelings that succeed it;—and as, in chemistry, it often happens, that the qualities of the separate ingredients of a compound body are not recognizable by us, in the apparently different qualities of the compound itself,—so, in this spontaneous *chemistry* of the *mind*, the compound sentiment, that results from the association of former feelings, has, in many cases, on first consideration, so little resemblance to these constituents of it, as formerly existing in their elementary state, that it requires the most attentive reflection to separate, and evolve distinctly to others, the assemblages which even a few years may have produced. Indeed, so complex are the mental phenomena, and so difficult of analysis,—even in those most common cases, which may be said to be familiar to all,—that it is truly wonderful that the difficulty of this analysis, and the field of inquiry which this very difficulty opens, should not have occurred to the disparagers of intellectual discovery, and made them feel, that what *they* were not able to explain could not he so well known to all mankind as to be absolutely incapable of additional illustration. The *savage*, they will tell us, is conscious of what he feels in loving his country, as well as the sage; but, does he know as well, or can even the sage himself inform us with precision, what the various *ele-*

menary feelings have been, that have successively modified, or rather, that have constituted this local attachment? The peasant, indeed, may have the feeling of beauty, like the artist who produces it, or the speculative inquirer, who analyses this very complex emotion—

> "Ask the swain,
> Who journeys homeward, from a summer day's
> Long labour, why, forgetful of his toils
> And due repose, he loiters to behold
> The sunshine gleaming, as through amber clouds,
> O'er all the western sky? Full soon, I ween,
> His rude expression, and untutor'd airs,
> Beyond the power of language, will unfold
> The form of Beauty smiling at his heart,
> How lovely, how commanding!"*

But the mere emotion which beauty produces, is not the knowledge of the simpler feelings that have composed or modified it; and though the pleasure and admiration were to continue exactly the same, the peasant would surely have learned something, if he could be made to understand, that beauty was more than the form and colour which his eye perceived. What is thus true of beauty as differently understood by the peasant and the philosopher, is true, in like manner, of all the other complex mental phenomena. It would, indeed, be as reasonable to affirm, that, because we all move our limbs, we are all equally acquainted with the physiology of muscular motion; or, to take a case still more exactly appropriate, that we know all the sublimest truths of arithmetic and geometry, because we know all the numbers and figures of the mere relations of which these are the science,—as that we are all acquainted with the physiology of the mind, and the number of elements which enter into our various feelings, because we all perceive, and remember, and love, and hate. It is, it will be allowed, chiefly, or perhaps, wholly, as it is *analytical*, that the science of mind admits of *discovery;* but, as a science of analysis, in which new relations are continually felt on reflection, it presents us with a field of discovery as rich, and, I may say, almost as inexhaustible in wonders, as that of the universe without.

"It is thus," I have elsewhere remarked, "even in phenomena, which seem so simple as scarcely to have admitted combination,

* Pleasures of Imagination, Book III. v. 526—535.

what wonders have been developed by scientific inquiry! Perception itself, that primary function of the mind, which was surely the same before Berkeley examined the laws of vision as at present, is now regarded by us very differently, in relation to the most important of its organs; and it would not be easy to find, amid all the brilliant discoveries of modern chemistry, and even in the whole range of the physics of matter, a proposition more completely revolting to popular belief, than that, which it is now the general faith of philosophers, that the sense of sight, which seems to bring the farthest hills of the most extended landscape, and the very boundlessness of space before our view, is, of itself, incapable of shewing us a single line of longitudinal distance."*

If, as has been strongly affirmed, the science of mind be a science that is, by its very nature, insusceptible of improvement by discovery, it must have been so, before the time of Berkeley as now, and it might have been a sufficient answer to all the arguments which he adduced in support of his theory of vision, that the phenomena which he boasted to have analysed, were only the common and familiar phenomena of a sense that had been exercised by all mankind.

"The vulgar," I have said, "would gaze with astonishment, were they to perceive an electrician inflame gunpowder with an icicle; but they would not be less confounded by those dazzling subtleties with which metaphysicians would persuade them, that the very actions which they feel to be benevolent and disinterested, had their source in the same principle of selfishness, which makes man a knave or a tyrant. That this particular doctrine is false, is of no consequence; the whole theory of our moral sentiment presents results which are nearly as wonderful; and, indeed, the falseness of any metaphysical doctrine, if rightly considered, is itself one of the strongest proofs that the science of mind is a science which admits of discovery; for, if all men had equal knowledge of all the relations of all the phenomena of their mind, no one could advance an opinion on the subject, with real belief of it, which another could discover to be erroneous. In the different stages of the growth of a passion, what a variety of appearances does it assume; and how difficult is it often to trace, in the confu-

* Inquiry into the Relation of Cause and Effect, 2d edition, p. 32, 33.

sion and complication of the paroxysm, those calm and simple emotions, in which, in many cases, it originated!—The love of domestic praise, and of the parental smile of approbation, which gave excellence to the first efforts of the child, may expand, with little variation, into the love of honest and honourable fame; or, in more unhappy circumstances, may shoot out from its natural direction, into all the guilt and madness of atrocious ambition;—and can it truly be maintained, or even supposed, for a moment, that all this fine shadowing of feelings into feelings, is known as much to the rudest and most ignorant of mankind, as it is to the profoundest intellectual inquirer? How different is the passion of the miser, as viewed by himself, by the vulgar, and by philosophers! He is conscious, however, only of the accuracy of his reasonings on the probabilities of future poverty, of a love of economy, and of temperance, and certain too of strict and rigid justice. To common observers, he is only a lover of money. They content themselves with the passion, in its mature state; and it would not be easy to convince them, that the most self-denying avarice involves as its essence, or at least originally involved, the love of those very pleasures and accommodations, which are now sacrificed to it without the least apparent reluctance."*

> "This light and darkness, in our chaos join'd,
> What shall divide? The God within the mind."

There is, indeed, a chaos, in the mind. But there is a spirit of inquiry, which is forever moving over it, slowly separating all its mingled elements. It is only when these are separated, that the philosophy of mind can be complete, and incapable of further discovery. To say that it is now complete, because it has in it every thing which can be the subject of analysis, is as absurd, as it would be to suppose that the ancient chaos, when it contained merely the elements of things, before the spirit of God moved upon the waters of the abyss, was already that world of life, and order, and beauty, which it was after to become.

The difficulty which arises in the physical investigation of the mind, from the apparent simplification of those thoughts and feelings which, on more attentive reflection, are felt to be as if com-

* Inquiry into the Relation of Cause and Effect, 2d edition, p. 26—30. with some alterations and exclusions.

pounded of many other thoughts and feelings, that have previously existed together, or in immediate succession, is similar to the difficulty which we experience in the physics of matter, from the imperfection of our senses, that allows us to perceive masses only, not their elemental parts, and thus leads us to consider as *simple* bodies, what a single new experiment may prove to be composed of *various* elements.

In the *intellectual* world, the slow progress of discovery arises, in like manner, from the obstacles which our feeble power of discrimination presents to our mental analysis. But, in mind, as well as in matter, it must be remembered, that it is to this very feebleness of our discriminating powers, the whole analytic science owes its origin. If we could distinguish instantly and clearly in our complex phenomena of thought, their constituent elements—if, for example, in that single and apparently simple emotion, which we feel, on the sight of *beauty*, as it lives before us, or in the contemplation of that ideal beauty, which is reflected from works of art, we could discover, as it were, in a single glance, all the innumerable feelings, which, perhaps, from the first moment of life, have been conspiring together, and blending in the production of it—we should then feel as little interest in our *theories of taste*, as in a case formerly supposed, we should have done in our theories of combustion, if the most minute changes that take place in combustion had been at all times distinctly visible. The mysteries of our intellect, the "altæ penetralia mentis," would then lie for ever open to us; and what was said poetically of Hobbes, in the beautiful verses addressed to him on his work *De Natura Hominis*, would be applicable to all mankind, not poetically, but in the strictness of philosophic truth.

"Quæ magna cœli mœnia, et tractus maris,
Terræque fines, siquid aut ultra est, capit,
Mens ipsa tandem capitur; Omnia hactenus
Quæ nosse potuit, nota jam primum est sibi.

"Consultor audax, et Promethei potens
Facinoris animi! quis tibi dedit deus
Hæc intueri sæculis longe abdita,
Oculosque luce tinxit ambrosia tuos?
Tu mentis omnis, at tuæ nulla est capax.

Hoc laude solus fruere: divinum est opus
Animam creare; proximum huic, ostendere.

"Hic cerno levia affectuum vestigia,
Gracilesque Sensus lineas; video quibus
Vehantur alis blanduli Cupidines,
Quibusque stimulis urgeant Iræ graves,
Hic et Dolores et Voluptates suos
Produnt recessus; ipsi nec Timor latet."

LECTURE XI.

APPLICATION OF THE LAWS OF PHYSICAL INQUIRY, TO THE PHILOSOPHY OF MIND, CONCLUDED.—ON CONSCIOUSNESS, AND ON MENTAL INDENTITY.

In my last Lecture, Gentlemen, I considered, very fully, the two species of inquiry which the philosophy of *mind* admits in exact analogy to the two species of inquiry in the philosophy of *matter*,—the consideration of the mental phenomena, as *successive*, and therefore susceptible of arrangement in the order of their succession, as causes and effects,—and the consideration of them as *complex*, and therefore susceptible of analysis. I stated to you, that it was chiefly, if not wholly, in this latter view, as analytical, that I conceived the philosophy of mind to be a science of progressive discovery; though, as a science of analogy, it has not merely produced results, as astonishing, perhaps, in some cases, as any of those which the analysis of matter has exhibited, but presents still a field of inquiry, that may be considered as inexhaustible; since the mind cannot exist, without forming continually new combinations, that modify its subsequent affections, and vary, therefore, the products, which it is the labour of our intellectual analysis to reduce to their original elements.

What the *chemist* does, in matter, the *intellectual* analysis does in mind; the one distinguishing by a purely mental process of reflection, the elements of his complex feelings, as the other operates on his material compounds, by processes that are themselves material. Though the term analysis, however, may be used in reference to both processes, the mental, as well as the material, since the result of the process is virtually the same in both, it has been universally employed by philosophers, in the laws of the mind, without any accurate definition of the process; and I was

careful, therefore, to explain to you the peculiar meaning, in which it is strictly to be understood in our science; that you might not extend to the mind and its affections, that essential divisibility, which is inconsistent with its very nature; and suppose that, when we speak of complex notions, and of thoughts and feelings that are united by association with other thoughts and feelings, we speak of a plurality of separable things. The complex mental phenomena, as I explained to you, are complex only in relation to our mode of conceiving them. They are, strictly and truly, as simple and indivisible states of a substance, which is necessarily in all its states simple and indivisible—the *results*, rather than the compounds, of former feelings,—to which, however, they seem to us, and from the very nature of the feelings themselves, cannot but seem to us, to bear the same species of relation, which a *whole* bears to the parts that compose it. The office of intellectual analysis, accordingly, in the mode in which I have explained it to you, has regard to this relation only. It is to trace the various affections or states of mind that have successively contributed, to form or to modify any peculiar sentiment or emotion, and to develope the elements, to which, after tracing this succession, the resulting sentiment or emotion is felt by us to bear virtually that relation of seeming comprehensiveness of which I spoke.

If, indeed, our perspicacity were so acute that we could distinguish immediately *all* the relations of our thoughts and passions, there could evidently be no *discovery* in the science of mind; but, in like manner, what discovery could there be, in the analysis of matter, if our senses were so quick and delicate, as to distinguish immediately all the elements of every compound? It is only slowly that we discover the composition of the masses without; and we have therefore a science of chemistry:—It is only slowly that we discover the relations of complex thought to thought; and we have therefore a science of mental analysis.

It is to the imperfection of our faculties, then, as forcing us to guess and explore what is half concealed from us, that we owe our laborious experiments and reasonings, and consequently all the science which is the result of these; and the proudest discoveries which we make may thus, in one point of view, whatever dignity they may give to a few moments of our life, be considered

as proofs and memorials of our general weakness. If, in its relation to matter, philosophy be founded, in a very great degree, on the mere badness of our eyes, which prevents us from distinguishing accurately the minute changes that are constantly taking place in the bodies around us; we have seen, in like manner, that, in its relation to the mind, it is founded chiefly, or perhaps wholly, on the imperfection of our power of discriminating the *elementary* feelings, which compose our great complexities of thought and passion; the various relations of which are felt by us only on attentive reflection, and are, therefore, in progressive discovery, slowly added to relations that have before been traced. In both cases, the analysis, necessary for this purpose, is an operation of unquestionable difficulty. But it is surely not less so, in mind, than in matter; nor, when nature exhibits all her wonders to us, in one case, in objects that are separate from us, and foreign; and, in the other, in the intimate phenomena of our own consciousness, can we justly think, that it is of *ourselves* we know the most. On the contrary, strange as it may seem, it is of her *distant* operations, that our knowledge is least imperfect; and we have far less acquaintance with the sway which she exercises in our own mind, than with that by which she guides the course of the most remote planet, in spaces beyond us, which we rather *calculate* than *conceive*. The only science, which, by its simplicity and comprehensiveness, seems to have attained a maturity that leaves little for future inquiry, is not that which relates immediately to man himself, or to the properties of the bodies on his own planet, that are ever acting on his perceptive organs, and essential to his life and enjoyment; but that which relates to the immense system of the universe, to which the very orb, that supports all the multitudes of his race, is but an atom of dust, and to which himself, as an individual, is as nothing.

> "Could he, whose rules the rapid comet bind,
> Describe or fix one movement of his mind?
> Who saw its fires here rise, and there descend,
> Explain his own beginning or his end?
> Go, wondrous creature! mount where Science guides,
> Go, measure earth, weigh air, and state the tides;
> Instruct the planets in what orbs to run,
> Correct old Time, and regulate the Sun;

Go, soar with Plato to th' empyreal sphere,
To the first good, first perfect, and first fair;
Go, teach Eternal Wisdom how to rule—
Then drop into thyself, and be a fool!"*

That man should know so much of the *universe*, and so very little of *himself*, is, indeed, one of the circumstances, which, in the language of the same poet, most strongly characterize him, as the "jest and riddle" of that world, of which he is also no less truly "the glory."

"That the intelligence of any being," to use the words of D'Alembert, "should not pass beyond certain limits—that, in one species of beings, it should be more or less circumscribed, than in another—all this is not surprising, more than that a blade of grass should be less tall than a shrub; or a shrub than an oak. But that the *same* being should be at once arrested by the narrow circle which nature has traced around him, and yet constantly reminded, that, beyond these limits, there are objects which he is never to attain—that he should be able to reason, till he loses himself, on the existence and nature of these objects, though condemned to be eternally ignorant of them—that he should have too little sagacity to *resolve* an infinity of questions, which he has yet sagacity enough to *make* —that the principle within us, which thinks, should ask itself in vain, what it is which constitutes its thought, and that this thought, which sees so many things, so *distant*, should yet not be able to see itself, which is so *near*,—*that self*, which it is notwithstanding always striving to see and to know—these are contradictions, which, even in the very pride of our reasoning, cannot fail to surprise and confound us."

All that remains for us, in that impossibility which nature has imposed on us of attaining a more intimate knowledge of the essence and constitution either of mind or of matter, is to attend to the phenomena which they present, analysing whatever is complex, and tracing the order of every sequence. By attentive reflection on the phenomena themselves, and on all the circumstances which precede or follow them, we shall be able to discover the relations which they mutually bear, and to distinguish their casual coincidence, or succession, from those invariable relations which nature has established among them as causes and effects.

* Pope's Essay on Man, Ep. ii. v. 35—39; 19—24; and 29, 30.

This, humble as it may seem, is, as I have said, the true philosophy of man; because it is all of which man is capable. To inquire, as may be thought, more deeply into the *essences* of things, or the nature of certain supposed bonds by which they are connected, is to show, not that we have advanced far in the progress of science, but that we have gone far astray; not that we know *more* than philosophers of humbler views and pretensions, but that we know *less*; since it proves that we are unacquainted with the limits within which nature has bounded our prospect, and have not attained that prime knowledge, which consists in knowing how little can be known.

If the philosophy, not of mind only, but of the universe, is to be found, as Hobbes has boldly said, *within ourselves*,—in the same manner as the perfect statue is to be found in the rude block of the quarry, when all the superfluous mass, that adheres to it, has been removed,—in no respect can it more justly be said to be in our own minds than in this, that it is only by knowing the true extent, and consequently the limits, of our intellectual powers, that we can form any rational system of philosophic investigation. Then, indeed, Philosophy may be truly said, in his strong figurative language, to be Human Reason herself, hovering over all created things, and proclaiming their order, their causes, and effects. "Philosophiam noli credere eam esse, per quam fiunt lapides philosophici, neque illam quam ostentant codices metaphysici; sed Rationem Humanum naturalem per omnes res creatas sedulo volitantem, et de earum ordine, causis, et effectibus, ea quæ vera sunt renuntiantem. Mentis ergo tuæ, et totius mundi filia philosophia in te ipso est; nondum fortasse figurata, sed genitori mundo qualis erat in principio informi similes. Faciendum ergo tibi est quod faciunt statuarii, qui materiam exculpentes supervacraeum, imaginem non faciunt sed inveniunt."*

After these remarks on physical inquiry in general, and its particular application to our own science, I trust that we shall now proceed to observe, and analyse, and arrange the mental phenomena, with clearer views, both of the materials on which we have to operate, and of the nature of the operations which we have to perform. We may consider the mind as now lying open

* Ad Lectorem.—A Note prefixed to the Elementa Philosophiæ. 4to. Amstelod. 1663.

before us, presenting to us all its phenomena, but presenting them in *assemblages*, which it is to he our labour to separate and arrange. In this separation and arrangement, there are difficulties, I confess, of no slight kind. But, I trust, that you have the spirit, which delights in overcoming difficulties, and which, even if its most strenuous exertions should fail, delights in the very strenuousness of the endeavour. In what admits our analysis, and in what transcends it, we shall always find much that is truly wonderful in itself, and deserving of our profoundest admiration; and, even in the obscurest parts of the great field of mind, though we may see only dimly, and must, therefore, be cautious in inquiring, and fearful of pronouncing, we may yet, perhaps, he opening paths that are to lead to discovery, and, in the very darkness of our search, may perceive some gleams of that light, which, though now only dawning upon *us*, is to hrighten on the inquirers of other ages.

In proceeding to examine and compare the mental phenomena, the first circumstance that strikes us, prior to any attempt to arrange them in classes, is, that the mind which exhihits these is susceptihle of a *variety of feelings*, every new feeling heing a change of its state; and, indeed, it is hy such changes alone that it manifests itself, either in our own consciousness, or in the actions of our fellow men. If it could exist only in *one everlasting* state,—such as now constitutes the feeling of any particular moment,—it is quite superfluous to say, that it could not *reason* upon this state,—for this very reasoning would itself imply the change, which is supposed to be impossihle; and as little could this one unchanged and unchangeahle feeling be an object of reasoning to others, even if there were any mode of its hecoming manifest to them, which there evidently could not he. It is, perhaps, even not too extravagant an assertion of Hobhes, who supposes a mind so constituted as to perceive only one colour, and to perceive this constantly, and affirms, that, in that case, it would he ahsurd to say that it had any perception at all, being rather, as he expresses it, stupified than seeing. "Attonitum esse et fortasse aspectare eum, sed stupentem dicerem, videre non dicerem; adeo sentire semper idem, et non sentire ad idem recidunt."

Mind, then, is capahle of existing in *various states;* an enumeration of the leading classes of which. as I before remarked. is all

that constitutes our definition of it. It is that, we say, which perceives, remembers, compares, grieves, rejoices, loves, hates; and though the terms, whatever they may be, that are used by us, in any such enumeration, may be few, we must not forget that the terms are mere inventions of our own for the purpose of classification, and that each of them comprehends a variety of feelings, that are as truly different from each other, as the classes themselves are different. *Perception* is but a single word; yet, when we consider the number of objects that may act upon our organs of sense, and the number of ways in which their action may be combined, so as to produce one compound effect, different from that which the same objects would produce separately, or in other forms of combination, how many are the feelings which this single word denotes!—so many, indeed, that no arithmetical computation is sufficient to measure their infinity.

Amid all this variety of feelings, with whatever rapidity the changes may succeed each other, and however opposite they may seem, we have still the most undoubting belief, that it is the same individual mind, which is thus affected in various ways. The pleasure, which is felt at one moment, has indeed little apparent relation to the pain that was perhaps felt a few moments before; and the knowledge of a subject, which we possess, after having reflected on it fully, has equally little resemblance to our state of doubt when we began to inquire, or the total ignorance and indifference which preceded the first doubt that we felt. It is the same individual mind, however, which, in all these instances, is pleased and pained, is ignorant, doubts, reflects, knows. There is something "changed in all, and yet in all the same," which at once constitutes the thoughts and emotions of the hour, and yet *outlives* them,—something, which, from the temporary agitations of passion, rises, unaltered and everlasting, like the pyramid, that lifts still the same point to heaven, amid the sands and whirlwinds of the desert.

The consideration of the mind, as one substance, capable of existing in a variety of states, according as it is variously affected, and constituting, in these different states, all the complex phenomena of thought and feeling, necessarily involves the consideration of *consciousness*, and of *personal identity*. To the examination of these, accordingly, I now proceed, as essential to all the inquiries and

speculations, in which we are afterwards to be engaged; since, whatever powers or susceptibilities we may consider as attributes of the mind, this consideration must always suppose the existence of certain phenomena, of which we are conscious, and the identity of the sentient or thinking principle, in which that consciousness resides, and to which all the varieties of those ever-changing feelings, which form the subjects of our inquiry, are collectively to be referred.

Our first inquiry, then, is into the nature of

CONSCIOUSNESS.

In the systems of philosophy, which have been most generally prevalent, especially in this part of the Island, consciousness has always been classed as one of the intellectual powers of the mind, differing from its other powers, as these mutually differ from each other. It is accordingly ranked by Dr Reid, as separate and distinct, in his Catalogue of the Intellectual Powers; and he says of it, that "it is an operation of the understanding of its own kind, and cannot be logically defined. The objects of it are our present pains, our pleasures, our hopes, our fears, our desires, our doubts, our thoughts of every kind,—in a word, all the passions, and all the actions and operations of our own minds, while they are present." And in various parts of his works, which it would be needless to quote, he alludes to its radical difference from the other powers of the mind, as if it were a point on which there could be no question. To me, however, I must confess, it appears that this attempt to double, as it were, our various feelings, by making them not to constitute our consciousness, but to be the objects of it, as of a distinct intellectual power, is not a faithful statement of the phenomena of the mind, but is founded, partly on a confusion of thought, and still more on a confusion of language. Sensation is not the object of consciousness different from itself, but a particular sensation is the consciousness of the moment; as a particular hope, or fear, or grief, or resentment, or simple remembrance, may be the actual consciousness of the next moment. In short, if the mind of man, and all the changes which take place in it, from the first feeling with which life commenced, to the last with which it closes, could be made visible to any oth-

er thinking being, a certain series of feelings alone, that is to say, a certain number of successive states of the mind, would be distinguishable in it, forming, indeed, a variety of sensations, and thoughts, and passions, as momentary states of the mind, but all of them existing individually, and successively to each other. To suppose the mind to exist in two different states, in the same moment, is a manifest absurdity. To the whole series of states of the mind, then, whatever the individual momentary successive states may be, I give the name of our *consciousness*,—using that term, not to express any new state additional to the whole series, (for to that, which is already *the whole* nothing can be added, and the mind, as I have already said, cannot be conceived to exist at once in two different states,) but merely as a short mode of expressing the wide variety of our feelings; in the same manner, as I use any other generic word, for expressing briefly the individual varieties comprehended under it. There are not sensations, thoughts, passions, and also consciousness, any more than there is quadruped or animal, as a separate being, to be added to the wolves, tigers, elephants, and other living creatures, which I include under those terms.

The fallacy of conceiving consciousness to be something different from the feeling, which is said to be its object, has arisen, in a great measure, from the use of the personal pronoun *I*, which the conviction of our *identity*, during the various feelings, or temporary consciousnesses of different moments, has led us to employ, as significant of our permanent *self*, of that being, which is conscious, and variously conscious, and which continues, after these feelings have ceased, to be the subject of other consciousness, as transient as the former. I am conscious of a certain feeling, really means, however, no more than this—I feel in a certain manner, or, in other words, my mind exists in that state which constitutes a certian feeling; the mere existence of that feeling, and not any additional and distinguishable feeling that is to be termed *consciousness*, being all which is essential to the state of my mind, at the particular moment of sensation; for a pleasure, or pain, of which we are not conscious, is a pleasure or pain, that, in reference to us at least, has no existence. But when we say, I am conscious of a particular feeling, in the usual pharaphrastic phraseology of our language, which has no mode of expressing, in a single word, the mere ex-

istence of a feeling, we are apt, from a prejudice of grammar, to separate the sentient *I* and the feeling as different,—not different, as they really are, merely in this respect, that the *feeling* is one momentary and changeable state of the permanent substance *I*, that is, capable of existing also, at other moments, in other states, —but so *radically* different, as to justify our classing the feeling, in the relation of an object, to that sentient principle which we call *I*,—and an object to it, not in retrospect only, as when the feeling is remembered, or when it is viewed in relation to other remembered feelings,—but in the very moment of the primary sensation itself; as if there could truly be two distinct states of the same mind, at that same moment, one of which states is to be termed *sensation*, and the other different state of the same mind to be termed *consciousness*.

To estimate more accurately the effect, which this reference to self produces, let us imagine a human being to be born with his faculties perfect as in mature life, and let us suppose a sensation to arise for the first time in his mind. For the sake of greater simplicity, let us suppose the sensation to be of a kind as little complex as possible; such for example, as that which the fragrance of a rose excites. If, immediately after this first sensation, we imagine the sentient principle to be extinguished, what are we to call that feeling, which filled and constituted the brief moment of life? It was a simple sensation, and nothing more; and if only we say, that the sensation has existed,—whether we say, or do not say, that the mind was conscious of the sensation,—we shall convey precisely the same meaning; the consciousness of the sensation being, in that case, only a tautological expression of the sensation itself. There will be, in this first momentary state, no separation of *self* and the *sensation*,—no little proposition formed in the mind, I feel, or I am conscious of a feeling; but the *feeling* and the *sentient I* will, for the moment, be the same. It is this simple feeling, and this alone, which is the whole consciousness of the first moment; and no reference can be made of this to a *self*, which is independent of the temporary *consciousness*; because the knowledge of self, as distinct from the particular feeling, implies the remembrance of former feelings,—of feelings, which, together with the present, we ascribe to *one* thinking principle,—recognizing the

principle, the *self*, the *one*, as the *same*, amid all its transient diversities of consciousness.

Let us now, then, instead of supposing life, as in the former case, to be extinguished immediately after the first sensation, suppose another sensation to be excited, as for instance that which is produced by the sound of a flute. The mind either will be completely absorbed in this new sensation, without any subsequent remembrance,—in which case the consciousness of the sensation, as in the case of the fragrance that preceded it, will he only another more paraphrastic expression of the simple sensation—or the remembrance of the former feeling will arise. If the remembrance of the former feeling arise, and the two different feelings be considered by the mind at once, it will now, by that irresistible law of our nature, which impresses us with the conviction of our identity, conceive the two sensations, which it recognizes as different in themselves, to have yet belonged to the same being,—that being, to which, when it has the use of language, it gives the name of *self*, and in relation to which it speaks, as often as it uses the pronoun *I*.—The notion of *self*, as the lasting subject of successive transient feelings, being now, and not till now, acquired, through the remembrance of former sensations or temporary diversities of consciousness, the mind will often again, when other new sensations may have arisen, go through a similar process, being not merely affected with the particular momentary sensation, but remembering other prior feelings, and identifying it with them, in the general designation of self. In these circumstances the memory of the past will often mingle with and modify the present; and now indeed, to form the verbal proposition, I am conscious of a particular sensation,—since the very word *I* implies that this remembrance and identification has taken place,—may be allowed to express something more than the mere existence of the momentary sensation: for it expresses also that the mind, which now exists in the state of this particular sensation, has formerly existed in a different state. There is a remembrance of former feelings, and a belief that the present and the past have been states of one substance. But this belief, or in other words, this remembrance of former feelings, is so far from being essential to every thought or sensation, that innumerable feelings every moment arise, without any such identification with the past. They are *felt*, however, for

this is necessarily implied in their existence; but they exist, as transient thoughts or sensations only, and the consciousness, which we have of them, in these circumstances, is nothing more, than the thoughts or sensations themselves, which could not be thoughts or sensations if they were not felt.

In the greater number of our successions of momentary feelings, then, when no reference is made to former states of the mind, the consciousness is obviously nothing more than the simple momentary feeling itself as it begins and ceases; and when there is a reference to former states of the mind, we discover on analysis only a remembrance, like all our other remembrances, and a feeling of common relation of the past and the present affection of the mind to one permanent subject. It is the belief of our continued identity which involves this particular feeling of relation of past and present feelings; and consciousness, in this sense of the term, is only a word expressive of that belief.

That the fragrance of a rose, the sound of a flute, and in general all the other objects of sense, might have excited precisely the same immediate sensations as at present, Doctor Reid admits, though the belief of our personal identity had not been impressed upon us; for he ascribes this belief to an instinctive principle only, and acknowledges, that there is nothing in our sensations themselves, from which any such inference could be drawn by reason. If, then, this instinctive belief of identity had not been, as at present, a natural law of human thought,—operating irresistibly on the remembrance of our different feelings, we should have had no notion of *self*, of *me*, the sentient and thinking being, who exists at the present moment, and who existed before the present moment: —and what, then, would have been the consciousness, accompanying, and different from, our sensations, when they merely flashed along the mind and vanished? The most zealous defender of consciousness, as a separate intellectual power, must surely admit, that, in such circumstances, it would have been nothing more than *sensation* itself. It is the belief of our *identity* only, which gives us the notion of *self*, as the subject of various feelings, and it is the notion of self, as the subject of various former feelings, which leads us to regard the consciousness of the moment, as different from the sensation of the moment; because it suggests to us those former feelings, which truly were different from it, or at least that

subject mind, which unquestionably existed before the present sensation.

If it be said, that the faculty of consciousness is nothing more than this reference to the past, and consequent belief of identity, we may, in that case, very safely admit its existence; though the classification of it, as a peculiar intellectual power, would in that case be a most singular anomaly in arrangement, and would involve a very absurd, or at least a very awkward use of a term. To assert this signification of it, however, would be to admit every thing for which I have contended. But it certainly is not the sense, which has been attached to it by philosophers; and indeed, in *this* sense, *consciousness*, instead of having for its objects, as Doctor Reid says, *all* "our present pains, our pleasures, our hopes, our fears, our desires, our doubts, our thougbts of every kind; in a word, all the passions, and all the actions and operations of our own mind, while they are present," would be limited to the comparatively few, of which the consideration of our personal identity forms a part. In far the greater number of our feelings, as I have already said, the sensation dies away, almost in the moment,—not indeed, witbout being enjoyed or suffered, but without any reference to self, as the subject of various feelings, or remembrance of any prior state of mind, as distinct from the present. The belief of our identity, is surely not the only belief that arises from an instinctive principle; and if its existence entitle us, in our systematic arrangements, to the possession of a new intellectual power, every other belief that arises instinctively from a principle of our constitution, must give us a similar title to enlarge the catalogue of our faculties. The never-failing and instant faith, by which we expect, without the slightest doubt of the similarity of the future, that events will continue to follow each other, in the same order as at present,—that bodies will fall to the ground, fire burn, food satisfy the craving of our appetite—that immediate intuitive principle of belief, on which all our foresight depends, and according to which we regulate our whole conduct in providing for the future,—should certainly, in that case, be ascribed by us to some peculiar intellectual power, for wbich it would be easy to invent a name. It is not, by any inference of our reason, we believe, that the sound of a flute which preceded the fragrance of a rose, and the fragrance of a rose which followed the sound of a flute, excit-

ed sensations that were states of the same identical mind; for there is nothing, in either of the separate sensations, or in both together, from which such an inference can be drawn; and yet, notwithstanding the impossibility of inferring it, we believe this, at least as strongly, as we believe any of the conclusions of our reasoning. In like manner, it is not by any inference of reason we believe, that fire will warm us to-morrow, as it has warmed us to-day; for there is nothing, in the fire of to-day, or in the sensation of warmth, considered as a mere sequence of it, from which the succession of a similar sensation to the fire of to-morrow can be inferred; yet we also rely on this future sequence, at least as strongly, as we believe any of the conclusions of our reasoning. In both cases the parallel is complete; and in both, the evidence of a particular intellectual faculty, must consequently be alike,—or in neither is there sufficient evidence of such a power.

There is, indeed, one other sense, in which we often talk of our consciousness of a feeling, and a sense, in which, it must be allowed, that the consciousness is not precisely the same as the feeling itself. This is, when we speak of a feeling, not actually existing at present, but *past*—as when we say, that we are conscious of having seen, or heard, or done something. Such a use of the term, however, is pardonable only in the privileged looseness and inaccuracy of familiar conversation: the consciousness, in this case, being precisely synonymous with remembrance or memory, and not a power, different from the remembrance. The *remembrance* of the feeling, and the vivid *feeling* itself, indeed, are different. But the remembrance, and the consciousness of the remembrance, are the same—as the consciousness of a sensation, and the sensation, are the same; and to be conscious that we have seen or spoken to any one, is only to remember that we have seen or spoken to him.

Much of this very confusion with respect to memory, however, I have no doubt, has been always involved in the assertion of consciousness as a peculiar and distinct power of the mind. When we think of feelings long past, it is impossible for us not to be aware that our mind is then truly retrospective; and memory seems to us sufficient to account for the whole. But when the retrospect is of very recent feelings—of feelings, perhaps, that existed as distinct states of the mind, the very moment before our

retrospect began, the short interval is forgotten, and we think that the primary feeling, and our consideration of the feeling, are strictly simultaneous. We have a sensation;—we look instantly back on that sensation,—such is consciousness, as distinguished from the feeling that is said to be its object. When it is any thing more than the sensation, thought, or emotion, of which we are said to be conscious, it is a brief and rapid retrospect. Its object is not a present feeling, but a past feeling, as truly as when we look back, not on the moment immediately preceding, but on some distant event or emotion of our boyhood.

After thus distinguishing all that is truly *present* in consciousness, from common remembrance, I surely need not undertake, at any length, to distinguish it from that peculiar species of remembrance, which goes under the name of *conscience;* though their similar etymology may have a slight tendency to mislead. *Conscience* is our *moral memory;*—it is the *memory of the heart*, if I may apply to it a phrase, which, in its orginal application, was much more happily employed, by one of the deaf and dumb pupils of the Abbe Sicard, who, on being asked what he understood by the word *gratitude*, wrote down immediately, "*Gratitude is the memory of the heart.*"

The power of conscience does, indeed, what consciousness does not. It truly doubles all our feelings, when they have been such as virtue inspired; Hoc est vivere *bis*, vita posse priore frui;" and it multiplies them in a much more fearful proportion, when they have been of an opposite kind—arresting, as it were every moment of guilt, which, of itself, would have passed away, as fugitive as our other moments, and suspending them forever before our eyes, in fixed and terrifying reality. "Prima et maxima peccantium est pœna," says Seneca, "*peccasse;* nec ullum scelus, illud fortuna exornet muneribus suis, licet tueatur ac vindicet, impunitum est quoniam sceleris in scelere supplicium est."* "The first and the greatest punishment of guilt, is to have been guilty; nor can any crime, though fortune should adorn it with all her most lavish bounty, as if protecting and vindicating it, pass truly unpunished; because the punishment of the base or atrocious deed, is in the very baseness or atrocity of the deed itself." But this

* Epist. 97.

species of memory, which we denominate *conscience*, and, indeed, every species of memory, which must necessarily have for its object the past, is essentially different from the consciousness which we have been considering, that, in its very definition, is limited to *present* feelings, and of which, if we really had such an intellectual power, our moral conscience would, in Dr Reid's sense of the term, be an *object* rather than a part.

Consciousness, then, I conclude, in its simplest acceptation, when it is understood as regarding the present only, is no distinct power of the mind, or name of a distinct class of feelings, but is only a general term for all our feelings, of whatever species these may be, sensations, thoughts, desires;—in short, all those states or affections of mind, in which the phenomena of mind consist; and when it expresses more than this, it is only the remembrance of some former state of the mind, and a feeling of the relation of the past and the present as states of one sentient substance. The term is very conveniently used for the purpose of abbreviation, when we speak of the whole variety of our feelings, in the same manner as any other general term is used, to express briefly the multitude of individuals that agree in possessing some common property of which we speak; when the enumeration of these, by description and name, would be as wearisome to the patience, as it would be oppressive to the memory. But still, when we speak of the evidence of consciousness, we mean nothing more, than the evidence implied in the mere existence of our sensations, thoughts, desires,—which is utterly impossible for us to believe to be and not to be; or, in other words, impossible for us to feel and not to feel at the same moment. This precise limitation of the term, I trust, you will keep constantly in mind in the course of our future speculations.

LECTURE XII.

ON CONSCIOUSNESS, CONTINUED,—ON MENTAL IDENTITY,—IDENTITY IRRECONCILABLE WITH THE DOCTRINE OF MATERIALISM,—DIFFERENCE BETWEEN PERSONAL IDENTITY AND MENTAL IDENTITY,—OBJECTIONS TO THE DOCTRINE OF MENTAL IDENTITY STATED.

In my last Lecture, Gentlemen, I brought to a conclusion my remarks on the *nature* and *objects* of *Physical Inquiry*,—the clear understanding of which seemed to me, essentially necessary before we could enter with any prospect of success, on the physiological investigation of the Mind.

We then opened our eyes, as it were on the great field of thought and passion, and on all the infinite variety of feelings, which, in assemblages more or less complex, and in colours more or less brilliant or obscure, it is every moment presenting to our internal glance. The very attempt to arrange these transient feelings as phenomena of the mind, however, implies evidently some consideration of the nature of that varied consciousness in which they consist, and of the identity of the permanent substance, as *states* of *which* we arrange them. My last Lecture, therefore, was devoted to this primary consideration of *consciousness*,—which we found reason to regard, not as any separate and peculiar faculty of the mind, of which our various feelings are, to use Dr Reid's expression, *objects*, and which is, therefore, to be added, in every instance, to the separate pleasures, pains, perceptions, remembrances, passions, that constitute the momentary states of the mind,—but merely as a short general term, expressive of all these momentary states in reference to the permanent subject *mind*. The sensation of fragrance, for example, is the consciousness of one mo-

ment, as the remembrance of that sensation, or some other sensation, is, perhaps, the consciousness of the succeeding moment;—the mind, at every moment, existing in one precise state, which, as one state can be accurately denoted only by one precise name, or by names that are synonymous, not by names that are significant of total diversity.

All which we know, or can be supposed to know, of the mind, indeed, is a certain *series* of these states or feelings that have succeeded each other, more or less rapidly, since life began; the sensation, thought, emotion, of the moment being one of those states, and the supposed consciousness of the state being only the state itself, whatever it may be, in which the mind exists at that particular moment; since it would be manifestly absurd to suppose the same indivisible mind to exist at the very same moment in two separate states, one of sensation, and one of consciousness. It is not simply because we *feel*, but because we remember some *prior* feeling, and have formed a notion of the mind as the permanent subject of different feeling, that we conceive the proposition, "I am *conscious* of a sensation," to express more than the simple existence of the sensation itself; since it expresses, too, a reference of this to the same mind which had formerly been recognised as the subject of other feelings. There is a remembrance of some former feeling, and a reference of the present feeling to the same subject; and this mere remembrance, and the intuitive belief of identity which accompanies remembrance, are all that philosophers, by defective analyses, and a little confusion of language and thought, have asserted to be the result of a peculiar mental faculty, under the name of consciousness;—though consciousness, in this sense, far from embracing all the varieties of feeling,—that, in the greater number of instances, begin and cease, without any accompanying thought of that permanent substance to which the transient feeling is referable,—must be limited to the comparatively few, in which such a reference to self is made.

Consciousness, in short, whenever it is conceived to express more than the present feeling, or present momentary state of the mind, whatever that may be, which is said to be the *object* of consciousness,—as if it were at once something different at every moment from the present state or feeling of the mind, and yet the very state in which the mind is at every moment supposed to ex-

ist,—is a retrospect of some *past* feeling, with that belief of a common relation of the past and present feeling to one subject mind, which is involved in the very notion, or rather constitutes the very notion, of personal identity,—and all which distinguishes this rapid retrospect from any of the other retrospects, which we class as remembrances, and ascribe to memory as their source, is the mere briefness of the interval between the feeling that is remembered, and the reflective glance which seems to be immediately retrospective. A feeling of some kind has arisen, and we look instantly back upon that feeling; but a remembrance is surely still the same in nature, and arises from the same principle of the mental constitution, whether the interval which precedes it be that of a moment, or of many hours, or years.

I now then proceed, after these remarks on our consciousness as momentary, to a most important inquiry, which arises necessarily from the consideration of the successions of our momentary consciousness, and must be considered as involved in all our attempts to arrange them,—the inquiry into the *Identity* of the Mind, as truly *one* and *permanent*, amid all the variety of its fugitive affections.

In our examination of this very wonderful coincidence of sameness and diversity, I shall confine my remarks to the phenomena which are purely mental, omitting the objections drawn from the daily waste and daily aliment of our corporeal part, the whole force of which objection may be admitted, without any scruple by those who contend for the identity only of the thinking principle; since the individuality of *this* would be as little destroyed, though every particle of the body were completely changed, as the individuality of the body itself would be destroyed, by a change of the mere garments that invest it. The manner in which the mind is united to a system of particles, which are in a perpetual state of flux, is, indeed, more than we can ever hope to be able to explain; though it is really not more inexplicable, than its union to such a system of particles would be, though they were to continue forever unchanged.

I may remark, however, by the way, that though the constant state of flux of the corporeal particles furnishes no argument against the identity of the principle which feels and thinks, if feeling and thought be states of a substance, that is essentially distinct

from these changing particles, the unity and identity of this principle, amid all the corpuscular changes,—if it can truly be proved to be identical,—furnish a very strong argument, in disproof of those systems which consider thought and feeling as the result of material organization. Indeed the attempts which have been seriously made by materialists to obviate this difficulty, involve, in every respect, as much absurdity, though certainly not so much pleasantry, at least so much *intentional* pleasantry, as the demonstrations, which the Society of Freethinkers communicated to Martinus Scriblerus, in their letter of greeting and invitation. The arguments, which they are represented as urging in this admirable letter, ludicrous as they may seem, are truly as strong, at least, as those of which they are a parody; and indeed, in this case, where both are so like, a very little occasional change of expression is all which is necessary, to convert the grave ratiocination into the parody, and the parody into the grave ratiocination.

"The parts (say they) of an animal body," stating the objection which they profess to answer, "are perpetually changed, and the fluids which seem to be the subject of consciousness, are in a perpetual circulation; so that the same individual particles do not remain in the brain; from whence it will follow, that the idea of individual consciousness must be constantly translated from one particle of matter to another, whereby the particle A, for example must not only be conscious, but conscious that it is the same being with the particle B that went before.

"We answer, this is only a fallacy of the imagination, and is to be understood in no other sense than that maxim of the English law, that the *king never dies*. This power of thinking, self-moving, and governing the whole machine, is communicated from every particle to its immediate successor, who, as soon as he is gone, immediately takes upon him the government, which still preserves the unity of the whole system.

"They make a great noise about this individuality, how a man is conscious to himself that he is the same individual he was twenty years ago, notwithstanding the flux state of the particles of matter that compose his body. We think this is capable of a very plain answer, and may be easily illustrated by a familiar example.

"Sir John Cutler had a pair of black worsted stockings, which his maid darned so often with silk, that they became at last a pair

of silk stockings. Now supposing those stockings of Sir John's endued with some degree of consciousness at every particular darning, they would have been sensible, that they were the same individual pair of stockings both before and after the darning; and this sensation would have continued in them through all the succession of darnings; and yet after the last of all, there was not perhaps one thread left of the first pair of stockings; but they were grown to be silk stockings, as was said before.

"And whereas it is affirmed, that every animal is conscious of some individual self-moving, self-determining principle; it is answered, that, as in a House of Commons all things are determined by a *majority*, so it is in every animal system. As that which determines the house is said to be the reason of the whole assembly; it is no otherwise with thinking beings, who are determined by the greater force of several particles, which, like so many unthinking members, compose one thinking system."*

The *identity*, which we are to consider, is, as I have already said, the identity only of the principle which feels and thinks, without regard to the changeable state of the particles of the brain, or of the body in general. This unity and permanence of the principle, which thinks, if we had still to invent a phrase, I would rather call *mental* identity, than *personal* identity, though the latter phrase may now be considered as almost fixed by the general use of philosophers. On no system can there be this absolute identity, unless as strictly mental; for, if we adopt the system of materialism, we must reject the absolute lasting identity of the thinking principle altogether; and if we do not adopt that system, it is in the *mind* alone that we must conceive the identity to subsist. The *person*, in the common and familiar meaning of the term, though involving the mind, is yet more than the mere mind; and, by those, at least, who are not conversant with the writings of philosophers on the subject, sameness of person would be understood as not *mental* only, but as combining with the absolute identity of the mind, some sort of identity of the body also; though, it must be confessed, that, in its application to the body, the term *identity* is not used with the same strictness, as in its application to the mind; the bodily identity being not absolute, but admitting of considerable, and ultimately, perhaps, even of total, change, provided only the change

* Mart. Scrib. chap. vii.—Pope's Works, *edit.* 1757, v. vii. p. 82—84.

be so gradual, as not to be inconsistent with apparent continuity of existence. Still, however, identity of *person*, at least in the popular notion of it, is something more than identity of mind.

"All mankind," says Dr Reid, "place their personality in something, that cannot be divided or consist of parts. A part of a person is a manifest absurdity.

"When a man loses his estate, his health, his strength, he is still the same person, and has lost nothing of his personality. If he has a leg or an arm cut off, he is the same person he was before. The amputated member is no part of his person, otherwise it would have a right to a part of his estate, and be liable for a part of his engagements; it would be entitled to a share of his merit and demerit, which is manifestly absurd. A person is something indivisible, and is what Leibnitz calls a monad."*

That all mankind place their personality in something, which cannot be divided into two persons, or into halves or quarters of a person, is true; because the mind itself is indivisible, and the presence of this one indivisible mind is essential to personality. But, though essential to personality in man, mind is not all, in the popular sense of the word at least, which this comprehends. Thus, if, according to the system of metempsychosis, we were to suppose the mind, which animates any of our friends, to be the same mind, which animated Homer or Plato,—though we should have no scruple, in asserting the identity of the mind itself, in this corporeal transmigration,—there is no one, I conceive, who would think himself justifiable, in point of accuracy, in saying of Plato and his friend, that they were as exactly, in every respect, *the same person*, as if no *metempsychosis* whatever had intervened. It does not follow from this, as Dr Reid very strangely supposes, that a leg or arm, if it had any relation to our personality, would, after amputation, be liable to a part of our engagements, or be entitled to a share of our merit or demerit; for the engagement, and the moral merit or demerit, belong not to the *body*, but to the *mind*, which we believe to continue precisely the same, after the amputation, as before it. This, however, is a question merely as to the comparative propriety of a term, and as such, therefore, it is unnecessary to dwell upon it. It is of much more importance, to proceed to

* Essays on the Intellectual Powers, Essay III. chap. iv.—v. 1. p. 341. *Edit. Ed.* 1803.

the consideration of the actual identity of the mind, whether we term it simply *mental* or *personal* identity.

"That there is something undoubtedly which *thinks*," says Lord Shaftesbury, "our very doubt itself and scrupulous thought evinces. But in what subject that thought resides, and how *that* subject is continued *one and the same*, so as to answer constantly to the supposed train of thoughts or reflections, which seem to run so harmoniously through a long course of life, with the same relation still to one single and self-same person, this is not a matter so easily or hastily decided, by those who are nice self-examiners, or searchers after truth and certainty.

"'Twill not, in this respect, be sufficient for us to use the seeming logic of a famous* modern, and say, '*We think;* therefore *we are.*' Which is a notably invented saying, after the model of that like philosophical proposition, that '*What is, is.*' Miraculously argued! If '*I am, I am.*' Nothing more certain! For the *ego* or I being established in the first part of the proposition, the *ergo*, no doubt, must hold it good in the latter. But the question is, 'What constitutes the *we* or *I?*' And, 'Whether the I of this instant be the same with that of any instant preceding, or to come.' For we have nothing but memory to warrant us, and memory may be false. We may believe we have thought and reflected thus or thus; but we may be mistaken. We may be conscious of that, as truth, which perhaps was no more than dream; and we may be conscious of that as a past dream, which perhaps was never before so much as dreamt of.

"This is what metaphysicians mean, when they say, 'That *identity* can be proved only by *consciousness;* but that consciousness withal may be as well false as real, in respect of what is past.' So that the same successional *we* or *I* must remain still, on this account, undecided.

"To the force of this reasoning I confess I must so far submit, as to declare that for my own part, I take my being *upon trust.* Let others philosophize as they are able; I shall admire their strength, when, upon this topic, they have refuted what able metaphysicians object, and Pyrrhonists plead in their own behalf.

"Meanwhile, there is no impediment, hinderance, or suspension of action, on account of these wonderfully refined speculations.

* Monsieur Des Cartes. *Shaftesb.*

Argument and debate go on still. Conduct is settled. Rules and measures are given out, and received. Nor do we scruple to act as resolutely upon the mere supposition that *we are*, as if we had effectually proved it a thousand times, to the full satisfaction of our metaphysical or Pyrrhonean antagonist." *

In stating the objections, that may be urged against our mental indentity, by such metaphysical or Pyrrhonean antagonists, as those of whom Lord Shaftesbury speaks, I shall endeavour to exhibit the argument in as strong a light as possible, and in a manner that appears to me in some measure, new. It is surely unnecessary for me to warn you, that the argument, however specious, is a sophistical one; and the nature of the peculiar sophistry which it involves shall be afterwards pointed out to you. But I conceive it to be most important, in teaching you to reflect for yourselves,—by far the most important lesson which you can be taught,—that you should be accustomed to consider the force of objections that may be urged, as clearly by the force of that surer evidence which they oppose,—and that even sophistry itself, when it is to be exhibited and confuted, should, therefore, always be exhibited fairly. We pay truth a very easy homage, when we content ourselves with despising her adversaries. The duty which we owe to her is of a more manly kind. It is to gird ourselves for the battle,—to fit us for overcoming those adversaries, whenever they shall dare to present themselves in array; and this we cannot do, with absolute confidence, unless we know well the sort of arms, which they may use, strong or feeble as those arms may be. I can have no fear, that any argument of this kind, in whatever manner it may be stated, can have the slightest influence on your conviction; because it is directly opposed by a principle of our nature, which is paramount to all reasoning. We believe our indentity, as one mind, in our feelings of to day and our feelings of yesterday, as indubitably as we believe that the fire, which burned us yesterday, would, in the same circumstances, burn us to-day,—not from reasoning, but from a principle of instant and irresistible belief, such as gives to reasoning itself all its validity. As Lord Shaftesbury justly says, "We act as resolutely, upon the mere supposition that *we are*, as if we had effectually proved it a thousand times."

* Shaftesbury's Characteristics, vol. iii. p. 172—174. *Edit.* 1745.

To indentity, it may be said, it is necessary that the *qualities* be the same. That of which the qualities are different, cannot be the same; and the only mode of discovering whether a substance have the same or different qualities, is to observe, how it affects and is affected by other substances. It is recognized by us as the same, or, at least, as perfectly similar, when, in two corresponding series of changes, the same substances affect *it* in the same manner, and *it* affects, in the same manner, the same substances; and when either the same substances do not affect it in the same manner, or it does not affect, in the same manner, the same substances, we have no hesitation in considering it as *different*. Thus, if a white substance, resembling exactly, in every external appearance, a lump of sugar, do not *melt* when exposed to the action of boiling water, we do not regard it as *sugar*, because the water does not act on it as we have uniformly known it to act on that substance; or if the same white lump, in every other respect resembling sugar, affect our taste as *bitter* or acrid rather than sweet, we immediately, in like manner, cease to consider it as sugar, because it does not act upon our nerves of taste in the same manner as sugar acts upon them. The complete similarity, in other respects, is far from sufficient to make us alter our judgment; a single circumstance of manifest difference, in its mode either of acting upon other substances, or of being acted upon by them, being sufficient to destroy the effect of a thousand manifest resemblances.

Let this test of indentity, then, it may be said, be applied to the *mind*, at different periods, if the test be allowed to be a just one; and let it be seen, whether, in the series of changes in which it acts or is acted upon, the phenomena precisely correspond in every case. If the same objects do *not* act upon it in the same manner, it must then be *different*, according to the very definition to which we are supposed to have assented.—You, of course, understand, that I am at present only assuming the character of an objector, and that I state an argument, the principle of which you will afterwards find to be false.

When we compare the listless inactivity of the infant, slumbering, from the moment at which he takes his milky food, to the moment at which he awakes to require it again, with the restless energies of that mighty being which he is to become, in his ma-

turer years, pouring truth after truth in rapid and dazzling profusion, upon the world, or grasping in his single hand the destiny of empires, how few are the circumstances of resemblance which we can trace, of all that intelligence which is afterwards to be displayed, how little *more* is seen, than what serves to give feeble motion to the mere machinery of life. What prophetic eye can venture to look beyond the period of distinct utterance, and discern that variety of character by which even boyhood is marked, far less are the intellectual and moral growth of the years that follow—the genius, before whose quick glance the errors and prejudices, which all the ages and nations of mankind have received as truths, are to disappear—the political wisdom, with which, in his calm and silent meditations, he is to afford more security to his country than could be given to it by a thousand armies, and which, with a single thought, is to spread protection and happiness to the most distant lands—or that ferocious ambition, with which, in unfortunate circumstances of power, he is perhaps to burst the whole frame of civil society, and to stamp, through every age, the deep and dark impression of his existence, in the same manner as he leaves on the earth which he has desolated, the track of his sanguinary footsteps. The cradle has its equality almost as the grave. Talents, imbecilities, virtues, vices, slumber in it together, undistinguished; and it is well that it is so, since, to those who are most interested in the preservation of a life that would be helpless but for their aid, it leaves those delightful illusions which more than repay their anxiety and fatigue, and allows them to hope, for a single being, every thing which it is possible for the race of man to become. If clearer presages of the future mind were then discoverable, how large a portion of human happiness would be destroyed by this single circumstance! What pleasure could the mother feel, in her most delightful of offices, if she knew that she was nursing into strength, powers, which were to be exerted for the misery of that great or narrow circle, in which they were destined to move, and which to her were to be a source, not of blessing, but of grief, and shame, and despair!

> "These shall the fury passions tear,
> The vultures of the mind,"

says Gray, on thinking of a group of happy children;

"For see, how all around them wait,
The ministers of human fate,
And black Misfortune's baleful train;
Oh! shew them, where in ambush stand,
To seize their prey, the murd'rous band!
Oh! tell them, they are men!" ODE III.

To tell them they are men, though they were capable of understanding it, even in this sense of the word, would not communicate information so melancholy or so astonishing to themselves, as, by breaking too soon that dream of expectation, which is not to last forever, but which fulfils the benevolent purpose of nature while it lasts, it would communicate to the parent who watches over them, and who sees in them only those pure virtues, and that happiness as pure, which are perhaps more than the nature of man admits, and which, at least in the case before her, are never to be realized.

Is the mind, then, in infancy, and in mature life, precisely the same, when in the one case, so many prominent diversities of character force themselves upon the view, and, in the other case, so little appears to distinguish the future ornament of mankind, from him who is afterwards

"To eat his glutton meal with greedy haste,
Nor know the hand which feeds him?"

If we apply the test of identity, do we find that the same objects, in these different periods, act upon the mind in exactly the same manner; and are its own feelings, in the successive trains, intellectual and moral, of which they form a part, attended with consequents exactly the same?

Every age,—if we may speak of many ages, in the few years of human life,—seems to be marked with a distinct character. Each has its peculiar objects that excite lively affections; and in each, exertion is excited by affections, which, in other periods, terminate, without inducing active desire. The boy finds a world in less space than that which bounds his visible horizon; he wanders over his range of field, and exhausts his strength in pursuit of objects, which, in the years that follow, are seen only to be neglected; while, *to him*, the objects that are afterwards to absorb his whole soul, are as indifferent as the objects of his present passions are destined then to appear.

In the progress of life, though we are often gratified with the prospect of benevolence increasing as its objects increase, and of powers rising over the greatness of their past attainments, this gratification is not always ours. Not slight changes of character only appear, which require our attentive investigation to trace them, but, in innumerable cases, complete and striking contrasts press, of themselves, upon view. How many melancholy opportunities must every one have had in witnessing the progress of intellectual decay, and the coldness that steals upon the once benevolent heart! We quit our country, perhaps at an early period of life, and, after an absence of many years, we return with all the remembrances of past pleasure, which grow more tender as we approach their objects. We eagerly seek him, to whose paternal voice we have been accustomed to listen, with the same reverence as if its predictions had possessed oracular certainty,—who first led us into knowledge, and whose image has been constantly joined in our mind, with all that veneration which does not forbid love. We find him sunk, perhaps, in the imhecility of idiotism, unable to recognize us—ignorant alike of the past and of the future, and living only in the sensibility of animal gratification. We seek the favourite companion of our childhood, whose gentleness of heart we have often witnessed when we have wept together over the same hallad, or in the thousand little incidents that called forth our mutual compassion, in those years when compassion requires so little to call it forth. We find him hardened into man, meeting us scarcely with the cold hypocrisy of dissembled friendship—in his general relations to the world, careless of the misery which *he* is not to feel—and, if he ever think of the happiness of others, seeking it as an instrument, not as an end. When we thus observe all that made us *one*, and gave an heroic interest even to our childish adventures, absorbed in the chillness of selfish enjoyment, do we truly recognize in him the same unaltered friend, from whom we were accustomed to regret our separation, and do we use only a metaphor of little meaning, when we say of him, that he is become a different person, and that his mind and character are changed? In what does the identity consist? The same objects no longer act upon him in the same manner; the same views of things are no longer followed by similar approbation or disapprobation, grief, joy, admiration, disgust; and if we affirm *that sub-*

stance to be, in the strictest sense of identity, the *same* on which, in two corresponding series of phenomena, the same objects act differently, while itself also acts differently on the same objects; in short, in which the antecedents being the same, the consequents are different, and, the consequents being the same, the antecedents are different, what definition of absolute diversity can we give, with which this affirmation of absolute identity may not be equally consistent?

> "Behold the child, by nature's kindly law,
> Pleas'd with a rattle, tickled with a straw;
> Some livelier plaything gives his youth delight,
> A little louder, but as empty quite;
> Scarfs, garters, gold, amuse his riper stage;
> And beads and prayer-books are the toys of age.
> Pleas'd with this bauble still, as that before;
> Till, tir'd, he sleeps,—and life's poor play is o'er."*

The supposed test of identity, when applied to the mind in these cases, completely fails. It neither affects, nor is affected, in the same manner, in the same circumstances. It, therefore, if the test be a just one, is *not* the same identical mind.

This argument against the identity of the mind, drawn from the occasional striking contrasts of character in the same individual at different periods of life, or when, by great changes of fortune, he may have been placed suddenly in circumstances remarkably different, must, in some degree, have forced itself upon every one who has been at all accustomed to reflect; and yet, in no one instance, I may safely say, can it have produced conviction even for a moment. I have stated it to you, without attempting to lessen its force by any allusion to the fallacy on which it is founded; because the nature of this fallacy is afterwards to be fully considered by us.

There is another argument that may be urged against the identity of the sentient and thinking principle, which has at least equal semblance of force, though it does not occur so readily, because it does not proceed on those general and lasting changes of character with which every one must be struck, but on the passing phenomena of the moment, which are not inconsistent with a continuance of the *same general character*, and which, as common

* Pope's Essay on Man, Ep. II. v. 275—282.

to all mankind, and forming, indeed, the whole customary and familiar series of our thoughts and emotions, excite no astonishment when we look back on them in the order of their succession.

The mere diversity of our feelings at different moments, it may be said, is of itself incompatible with the strict and absolute *unity* which is supposed to belong to the thinking principle. If joy and sorrow, such as every one has felt, be different, that which is joyful, and that which is sorrowful, cannot be precisely the same. On the supposition of complete unity and permanence of the thinking principle, nothing is added to it, nothing is taken away from it; and, as it has no parts, no internal change of elementary composition can take place in it. But *that* to which nothing is added, from which nothing is taken away, and which has no parts to vary their own relative positions and affinities, is so strictly the same, it may be said, that it would surely be absurd to predicate of it any diversity whatever. Joy and sorrow imply an unquestionable diversity of some kind; and if this diversity cannot be predicated of that substance which is precisely the same, without addition, subtraction, or any internal change of composition whatever, that which is joyful, and that which is sorrowful, cannot have absolute identity; or if we affirm, that a diversity, so striking as to form an absolute *contrast*, is yet not inconsistent with complete and permanent unity and identity, we may, in like manner, affirm, that a substance which is hard, heavy, blue, transparent,—which unites with acids, not, with alkalies,—and which is volatilizable at a low temperature,—is precisely the same substance as that, which is soft, light, green, opaque,—which unites with alkalies, not with acids,—and which is absolutely infusible and fixed in the highest temperature to which we can expose it.

I have thus endeavoured to place, in the strongest possible light, the most imposing arguments which I can conceive to be urged against the *permanent identity* of the sentient and thinking principle, that, in combating even *Sophistry* itself, you may learn, as I have said, to combat with it on equal ground, and assume no advantage but that irresistible advantage which Truth must always afford to him who is the combatant of Error.

The positive evidence of the identity of the mind I shall proceed to consider in my next Lecture.

LECTURE XIII.

ON THE DIRECT EVIDENCE OF MENTAL IDENTITY; AND OBJECTIONS ANSWERED.

My last Lecture, Gentlemen, was employed in considering the great question of the Identity of the Mind, as one and permanent, amid all the infinite variety of our feelings; and particularly, in stating the two most forcible objections, which I can imagine to be urged against this identity,—*one* founded on the striking contrasts, intellectual and moral, which the same mind exhibits in different periods of life, and in different circumstances of fortune,—the *other*, more abstract, and, therefore, less obvious, but not less forcible, founded on the mere diversity of our temporary feelings, as itself inconsistent with identity, at least with that strict and absolute identity, to which, as in the case of the mind, nothing can have been added,—from which nothing can have been taken away,—and which, by its very nature, as simple and indivisible, must have been incapable of any elementary change.

Since the exposure of the fallacy, on which these objections are founded, would, however, afford only a sort of *negative* evidence of that great truth which they oppose, it will be of advantage, before entering on an examination of the objections themselves, to state, in the first place, the nature of that *positive* evidence, which does not, indeed, lead us to the belief of the unity and permanence of our spiritual being, by that slow process which is denominated reasoning, but constitutes to us, primarily and directly, an impossibility of disbelieving it. I do this the more readily, from the opportunity which it gives of making you acquainted with the paramount importance of those principles of *intuitive belief*, which are essential to philosophy in all its forms, as they are physically essential, indeed, to the very preservation of our animal

existence; and which the rash and unphilosophic extension of them by one class of philosophers, and the equally unphilosophic misapprehension of them by other writers who controverted them, have rendered more necessary, than it would otherwise have been, to state to you with precision.

Of these *first truths*, as they have been termed, the subject, which we are at present considering, affords one of the most striking examples. The belief of our identity is not the result of any series of propositions, but arises immediately, in certain circumstances, from a principle of thought, as essential to the very nature of the mind, as its powers of perception or memory, or as the power of reasoning itself, on the essential validity of which, and consequently on the intuitive belief of some first truth on which it is founded, every objection to the force of these very truths themselves must ultimately rest. To object is to argue; and to argue is to assert the validity of argument, and, therefore, of the primary evidence, from which the evidence of each succeeding proposition of the argument flows. To object to the authority of such primary intuitive belief, would thus be to reason against reason,—to affirm and deny at the same moment,—and to own that the very arguments which we urge are unworthy of being received and credited.

As the nature of the process of reasoning has not yet come under our review, it may not at first appear to you, how essential the truths of intuition are to those very truths which are usually opposed to them. But that they are thus essential, a very little attention will be sufficient to show you.

All belief, it is evident, must be either *direct* or *indirect*. It is direct, when a proposition, without regard to any former proposition expressed or understood, is admitted as soon as it is expressed in words, or as soon as it rises silently in the mind. Such are all the order of truths, which have been denominated, on this account, first truths. The belief is indirect, when the force of the proposition, to which assent is given, is admitted only in consequence of the previous admission of some former proposition, with which it is felt to be intimately connected; and the statement in words, or the internal developement of these relative propositions in the order in which their relation to the primary proposition is felt, is all that constitutes *reasoning*. The indirect belief which attends the

result of reasoning, even in the proudest demonstration, is thus only another form of some first truth, which was believed directly and independently of reasoning; and, without this primary intuitive assent, the demonstration itself, in all its beautiful precision and regularity, would be as powerless and futile as the most incoherent verbal wrangling.

Without some principles of immediate belief, then, it is manifest, that we could have no belief whatever; for we believe one proposition, because we discover its relation to some other proposition, which is itself, perhaps, related, in like manner, to some other proposition formerly admitted, but which, carried back as far as it may, through the longest series of ratiocination, must ultimately come to some primary proposition, which we admit from the evidence contained in itself, or, to speak more accurately, which we believe from the mere impossibility of disbelieving it. All reasoning, then, the most sceptical, be it remarked, as well as the most dogmatical, must proceed on some principles, which are taken for granted, not because we infer them by logical deduction, for this very inference must then itself be founded on some other principle assumed without proof; but because the admission of these first principles is a necessary part of our intellectual constitution. The ridicule, therefore, with which Dr Priestley and some other English metaphysicians, were disposed to regard the decision of philosophical questions, on certain ultimate principles of common sense, was surely, at least in its wide degree of extension, misplaced; though the phrase *common sense*, it will be admitted, was not the happiest that could have been chosen. The controversy, indeed, was truly a verbal and insignificant one, unless as far as it had reference to the unnecessary multiplication of these principles, by the philosophers of this part of the island whom Dr Priestley opposed; since, if traced to their ultimate evidence, it could have been only from some one or more of the principles of common sense, at least from those primary universal intuitions of direct belief, which were all that Dr Reid and his friends meant to denote by the term, that the very reasonings employed against them derived even the slightest semblance of force. An argument that rejects not the phrase common sense only, which is of little consequence, but also what the phrase was intended, by its authors, to imply, is an argument confessedly founded upon nothing; which,

therefore, as wholly unfounded, requires no answer, and which, at any rate, it would be vain to attempt to answer, because the answer, if it proceed on any ground whatever, must begin with assuming what the argument rejects, as inadmissible.

All reasoning, then, I repeat, whether sceptical or dogmatical, must take for granted, as its primary evidence, the truth of certain propositions, admitted *intuitively*, and independently of the reasoning, which follows, but cannot precede, the perception of their truth; and hence, as we cannot suppose that the subsequent ratiocination, though it may afford room for errors in the process, can at all add evidence to these primary truths; which, as directly believed, are themselves the ultimate evidence of each successive proposition, down to the last result of the longest argument; we must admit that our identity, if it be felt by us intuitively, and felt universally, immediately, irresistibly, is founded on the very same authority as the most exact logical demonstration, with this additional advantage, that it is not subject to those possibilities of error in the steps of the demonstration, from which no long series of reasoning can be exempt.

So little accustomed are we, however, to think of this primary fundamental evidence of every reasoning, while we give our whole attention to the consecutive propositions which derive from it their force, that we learn, in this manner, to consider truth and reasoning as necessarily connected, and to regard the assertion of truths that do not flow from reasoning, as the assertion of something which it would be equally unworthy of philosophy to assert or to admit; though every assertion and every admission, which the profoundest reasoner can make, must, as we have seen, involve the direct or indirect statement of some truth of this kind. Nor is it wonderful that we should thus think more of the reasoning itself, than of the foundation of the reasoning; since the *first truths*, which give force to reasoning but require no reasoning to establish them, must necessarily be of a kind which all admit, and which, therefore, as always believed by us, and undisputed by others, have excited no interest in discussion, and have never seemed to add to our stock of knowledge, like the results of reasoning, which have added to it truth after truth. Yet that they are thus uninteresting to us, is the effect only of their primary, and universal, and permanent force. They are the only truths, in short, which

every one admits; and they seem to us unworthy of being maintained as truths, merely because they are the only truths which are so irresistible in evidence, as to preclude the possibility of a denial.

It is not as the primary evidence of all our processes of reasoning, however, that they are chiefly valuable. Every action of our lives is an exemplification of some one or other of these truths, as practically felt by us. Why do we believe, that what we remember truly took place, and that the course of nature will be in future such as we have already observed it? Without the belief of these physical truths, we could not exist a day, and yet there is no *reasoning* from which they can be inferred.

These principles of intuitive belief, so necessary for our very existence, and too important, therefore, to be left to the casual discovery of reason, are, as it were, an internal never-ceasing voice from the Creator and Preserver of our being. The reasonings of men, admitted by some, and denied by others, have over us but a feeble power, which resembles the general frailty of man himself. These internal revelations from on high, however, are omnipotent like their Author. It is *impossible* for us to doubt them, because to *disbelieve* them would be to deny what our very constitution was formed to admit. Even the Atheist himself, therefore, if, indeed, there be one who truly rejects a Creator and Ruler of the universe, is thus every moment in which he adapts his conduct implicitly, and without reasoning, to these directions of the Wisdom that formed him, *obeying*, with most exact subserviency, that very *Voice* which he is professing to question or to deride.

That the assertion of principles of intuitive belief, independent of reasoning, may be carried to an extravagant and ridiculous length,—as, indeed, seems to me to have been the case in the works of Dr Reid, and some other Scotch philosophers, his contemporaries and friends,—no one can deny; nor that the unnecessary multiplication of these would be in the highest degree injurious to sound philosophy,—both as leading us to form false views of the nature of the mind, in ascribing to it principles which are no part of its constitution, and, still more, as checking the general vigour of our philosophic inquiry, by seducing us into the habit of acquiescing too soon, in the easy and indolent faith, that it is un-

necessary for us to proceed farther, as if we had already advanced as far as our faculties permit. It is the more unfortunate, because our very avidity for knowledge, which is only another name for that philosophic curiosity in which inquiry originates, is itself favourable to this too easy acquiescence; tending, consequently, by a sort of double influence, to repress the very speculation to which it gave rise. This it does, by rendering the suspense of ungratified curiosity so *painful* to us, as to resemble, in a very great degree, the uneasiness which we feel from the ungratified cravings of bodily appetite. We more readily, therefore, yield to the illusion which seems to remove this suspense: and are happy to think, however falsely, that we have now completed our inquiry, and that, without attempting any more elementary analysis, we may content ourselves with simply classing the results which we have already obtained. Though there is no human being who must not have felt doubts on some point or other, it is not every one who knows how to doubt. To the perfection of a doubt, indeed, it is essential,—if I may apply to it what rhetoricians say of an epic or dramatic narrative,—that it should have a beginning, a middle, and in many cases, too, though not in all, an end. The middle is a very easy matter; the great difficulty relates to the beginning and the end, and to the end not less than the beginning. We err equally, when the doubt ceases too soon, and when it does not cease where it ought to cease. There is a scepticism as different from the true spirit of philosophy, as the most contented ignorance, that has never questioned a single prejudice; a scepticism, which, instead of seeking to distinguish truth from falsehood, *professes* to deny altogether the competency of our faculties as to making such a distinction in any case, and to which any proposition, therefore, is as likely as its opposite. With this wild half reasoning extravagance, which is ignorant whether it affirms or denies, and which does not even know certainly that it has any uncertainty at all, it would be manifestly absurd to reason; and we may even truly say of it, notwithstanding the high character of perfect doubting which it affects, that it does not know how to doubt more than the all-credulous imbecility which it despises and derides; because it does not know in what circumstances doubt is legitimate, and in what circumstances it should cease. But, at the same time, he also, it may be said, does not know how to

doubt, who is completely satisfied with the result of an inquiry which he is capable of prosecuting still further,—even though it were only by the addition of a single step to the thousand which he may already have made. Truth is the last link of many long chains; the first links of all of which, Nature has placed in our hands. When we have fairly arrived at the last, and feel completely that there is no link beyond, it would be manifestly absurd to suppose, that we can still proceed further;—but if we stop before we have arrived at the last, maintaining, without stretching out our hand to make the experiment, that there cannot be yet another link after that which we have reached, it matters not how far we may have advanced. Truth is still *beyond* us—to be grasped only by an arm more vigorous and persevering.

If, instead of maintaining boldly, that we have reached the last link of the chain, we content ourselves with affirming, that we have reached the last which human effort can reach, we must beware that we do not measure the incapacity of the whole race of mankind by our own individual inability, or, which is far from improbable, that we do not mistake for inability, even in ourselves, what is only the irksomeness of long continued exertion. Our power is often much greater than we are willing to believe; and in many cases, as La Rochefoucault very justly says, it is only to excuse to ourselves our own indolence that we talk of things as impossible. "Non putant fieri," says Seneca, speaking of persons of this character, "quicquid facere non possunt. Ex infirmitate sua ferunt sententiam."—"Scis quare non possumus ista? Quia nos posse non credimus."—"Magno animo de rebus magnis judicandum est; alioqui videbitur illarum vitium esse quod nostrum est."

Much evil, then, it must be admitted, would arise in the Philosophy of Mind from a disposition to acquiesce too soon in instinctive principles of belief. But though these may be, and have been, multiplied unnecessarily, and beyond the truth of nature, it is not less certain, that of our mental nature such principles are truly a part. We should, indeed, draw *monsters*, not *men*, if we were to represent the human head and trunk with a double proportion of arms and legs; but we should also give an unfaithful portraiture of the human figure, and should draw monsters, not men, if we were to represent them with but one arm and leg, or

with no no arm or leg at all. In like manner, to suppose the mind endowed with more principles of intuition than belong to it, would be to imagine a species of *mental* monster. But it would not less be a mental monster, if we were to attempt to strip it of the principles which it truly possesses.

In contending, then, for the authority of certain *first principles* of belief, such as that on which I conceive the conviction of our identity to be founded, I am sufficiently aware, in how many instances, reference to these has been rashly made by philosophers; when a deeper and more minute analysis would have shewn, that the supposed first principles were not elementary laws of thought, but were resolvable into others more simple. It is not to be inferred, however, from the rash attempts to establish principles of intuitive belief which do not exist, that there are no such principles in our mental constitution, any more than it is to be inferred, from the general prevalence of bad reasoning, that it is impossible for a human being to reason accurately. I trust, at any rate, that I have already sufficiently warned you, against the danger of acquiescing too soon in any proposition, as a law *of thought*, precluding all further inquiry, from its own primary and independent evidence; and that I have impressed you, not merely with the necessity of admitting some principles of this sort, as essential to every reasoning, but with the necessity also, of admitting them, only after the most cautious examination.

The difficulty of ascertaining precisely, whether it be truth which we have attained, is, in many cases, much greater, than the difficulty of the actual attainment. Philosophy has in this respect been compared, by a very happy illustration,—which, therefore, homely and familiar as it is, I make no scruple to quote,—to "a game at which children play, in which one of them, with his eyes bandaged, runs after the others. If he catch any one, he is obliged to tell his name; and if he fail to name him, he is obliged to let him go, and to begin his running once more. It is the same," says Fontenelle, the author from whom I borrow this image, "in our seeking after truth. Though we have our eyes bandaged, we do sometimes catch it.—But then we cannot maintain with certainty that it *is* truth, which we have caught;—and in that moment it escapes from us."

If there be, as it has been already shewn that there must be,

intuitive truths; and, if we are not to reject, but only to weigh cautiously, the belief which seems to us intuitive, it will be difficult to find any, which has a better claim to this distinction, than the faith which we have, in our identity, as one continued sentient and thinking being, or rather, to speak more accurately, as one permanent being capable of many varieties of sensation and thought.

There is to be found in it, every circumstance which can be required to substantiate it as a law of intuitive belief. It is universal, irresistible, immediate. Indeed, so truly prior and paramount is it to mere reasoning, that the very notion of reasoning necessarily involves the belief of our identity as admitted. To reason, is to draw a conclusion from some former proposition; and how can one truth be inferred from another truth, unless the mind, which admits the one, be the mind, which admitted the other? In its order, as much as in its importance, it may be truly considered as the *first* of those truths which do not depend on reasoning, and as itself necessarily implied, perhaps in all, certainly in the greater number, of our other intuitions. I believe, for example, without being able to infer it, or even to discover the greater probability of it, by any process of reasoning, that the course of nature in future will resemble the past; and, since all mankind have the same irresistible tendency, I have no scruple in referring it to an original principle of our nature. In taking for granted this similarity, however, in the order of succession of two distinct sets of phenomena, I must previously have believed, that *I*, the same sentient being, who expect a certain order in the future phenomena of nature, have already observed a certain order in the past.

Since, then, the belief of our identity is intuitive and irresistible, the only inquiry which remains is as to the circumstances in which the belief arises. Identity is a *relative* term. It implies of course, in every instance, a double observation of some sort. The identity of our mind is its continuance, as the subject of various feelings, or at least as that which is susceptible of various feelings. The belief of it therefore, can arise only on the consideration of its successive phenomena; and is indeed involved in the mere consideration of these as successive.

The knowledge of our *mind* as a *substance*, and the belief of our *identity* during successive feelings, may be considered as the

same notion, expressed in different words. Our identity is the unity and sameness of that which thinks and feels,—itself substantially unchanged amid the endless variety of its thoughts and feelings,—capable of existing separately in all these different states; not ceasing therefore when they cease, but independent of their transient changes. The knowledge of *mind*, then, as a substance, implying the belief of identity during changes of state cannot be involved in any one of these separate states; and, if our feelings merely succeeded each other, in the same manner as the moving bodies of a long procession are reflected from a mirror, without any vestige of them as *past*, or consequently, any remembrance of their successions, we should be as incapable of forming a notion of the sentient substance *mind*, abstracted from the momentary sensation, as the mirror itself; though we should indeed differ from the mirror, in having what mind only can have, the sensations themselves, thus rapidly existing and perishing.

But, if it be only on the consideration of some *past* feeling, that the belief of the permanent substance mind can arise, it is to the principle which recals to us past feelings, that the belief is ultimately to be traced. We *remember*;—and in that remembrance is involved the belief, the source of which we seek. It is not merely a past feeling that arises to us, in what is commonly termed memory, but a feeling that is recognized by us as *ours*, in that past time of which we think,—a feeling, therefore, of that mind which now remembers what it before saw, perhaps, or heard, or enjoyed, or suffered. We are told by writers on this subject, that it is from a *comparison* of our present with our past consciousness, that the belief of our identity in these states arises; and this use of the term comparison, which is commonly applied to a process of a different kind, may perhaps mislead you as to this simpler process. It is true, indeed, that the belief arises from a feeling of the past, that is remembered, together with the consciousness of our remembrance as a present feeling,—a contemplation, as it were, of two successive states of the mind. But the comparison is nothing more than this.—It is not to be supposed that we discover in the two feelings some common quality or proportion, as when, in arithmetic or geometry we compare two numbers, or two regular figures; for the two feelings may have nothing common, except that very belief of identity which is involved in the remembrance itself. We re-

member the past,—we feel the present,—we believe, and cannot but believe, that the rememberer of the past existed in that past which he remembers. The *process* itself is sufficiently simple, however truly wonderful one of the feelings may be which forms the most important part of the process;—for we are not to forget that the remembrance itself, the revealer of the past, is not a past, but a *present* feeling. It is the mind existing for the present moment in a particular state, as much as any primary and immediate sensation is the mind existing in a particular state. That this state of remembrance, itself a present feeling, should be representative to us of some former feeling, so as to impress us irresistibly with the belief of that former state of the mind, is indeed most wonderful; but that it does impress us with this belief, is as undeniable as the belief itself is irresistible.

Our faith in our identity, then, as being only another form of the faith which we put in memory, can be questioned only by those who deny all memory, and with memory all reasoning of every kind,—who believe only the existence of the present moment, and who with respect to every thing else, are as incapable of opposing or questioning as they are of believing. If our memory be unworthy of the faith which we *intuitively* give to it, all that is founded on memory, and therefore demonstration itself, must equally deceive us. We cannot admit the most rigid demonstration, or expect it to be admitted, without having already admitted, intuitively, that identity, which in words only we profess to question, and to question which, even in words, is to assert the reality of that which we deny.

The belief of the identity of self, then, as the one permanent subject of the transient feelings remembered by us, arises from a *law of thought*, which is essential to the very constitution of the mind. It has accordingly all the qualities, which I can imagine to be required by the most rigid scrutinizer of our principles of intuitive assent. It is universal, and immediate, and irresistible. I do not believe, with more confidence, that the half of thirty-two is equal to the square of four, than I believe, that I, who computed the square of four, am the same with that mind, which computes the half of thirty-two, and asserts the equality of the two numbers.

This consideration is of itself decisive of the question of *iden-*

tity; since, if it be manifest, that there is an universal, immediate, and irresistible impression of our identity,—an impression, which cannot be traced to any law of thought more simple,—its truth is established by a species of evidence, which must be allowed to be valid, before the very objections can be put, in which it is professedly denied;—every objection, however sceptical, involving, as we have seen, and necessarily involving, the assertion of some such intuitive proposition, from which alone its authority, if it have any authority, is derived. In endeavouring to move the whole world of truth with his lever, there must still be some little spot at least, on which the sceptic must be content to rest his foot as firmly as others. *Δὸς πῦ στῶ*, he must still be condemned to say with Archimedes; and if we allow no resting-place to his foot,—or, even allowing him this, if we allow no fulcrum for the instrument which he uses, he may contract or lengthen his lever at pleasure; but all the efforts, which in such circumstances, he can make, will exhibit nothing so striking to those by whom the efforts are witnessed, as the laborious impotence of him who employs them. To deny any first principles of intuitive belief, that are not themselves to stand in need of a demonstration,—which, as a demonstration, or series of consecutive propositions, can be founded, in its primary evidence, only on some principle of the same kind,—is, indeed, for such a sceptical mechanic, to set his foot upon air, rather than on the ground, on which all around him are standing, and to throw away the single fulcrum on which his lever rests, and from which alone all its power is derived.

The belief of our mental identity, then, we may safely conclude, is founded on an essential principle of our constitution,—in consequence of which, it is *impossible* for us to consider our *successive* feelings, without regarding them as truly *our* successive feelings—states, or affections of one thinking substance. But though the belief of the identity of the substance which thinks, is thus established on the firmest of all grounds, the very ground, as we have seen, on which demonstration itself is founded,—even though no particular fallacy could be traced in the objections brought against it, which I detailed in my last Lecture,—it is still an interesting inquiry, in what the fallacy of the objections consists; and the inquiry is the more interesting, as it will lead us to some remarks and distinctions, which, I flatter myself, will throw some

light on the philosophy of all the changes, material as well as mental, that are every moment taking place in the universe.

The objections brought against the identity of the mind, from a supposed incompatibility of its *diversities* of state with *sameness* of substance, appear to me to depend on the assumption of a test of identity, transferred, without sufficient reason, from the obvious appearances of matter to mind, and which, if *matter* be accurately considered, is equally false, too, as applied to *it*. The cause of the transference, however, from the obvious material appearances, is a very natural one,—the same, which has included so many analogies, from external things, in the language, which we employ to express the intellectual functions. It is with the changes of the material substances around us, that all our operations, which leave any fixed and permanent marks of our agency, are immediately concerned. It is indeed only through them, that our communication with other minds can be at all carried on; and it is not wonderful, therefore, that, in considering the nature of *change*, of every kind, our philosophy should be strongly tainted with prejudices, derived from the material world, the *scene* of all the immediate and lasting changes, which it is in our power to produce. How much the mere materialism of our language has itself operated, in darkening our conceptions of the nature of the mind, and of its various phenomena, is a question, which is obviously beyond our power to solve; since the solution of it would imply, that the mind of the solver was itself free from the influence which he traced and described. But of this, at least, we may be sure, that it is almost impossible for us to estimate the influence too highly; for we must not think, that its effect has been confined to the works of philosophers. It has acted, much more powerfully, in the familiar discourse, and silent reflections of multitudes, that have never had the vanity to rank themselves as philosophers,—thus incorporating itself, as it were, with the very essence of human thought. In that rude state of social life, in which languages had their origin, the inventor of a word probably thought of little more, than the temporary facility, which it might give to himself and his companions, in communicating their mutual wants, and concerting their mutual schemes of co-operation. He was not aware, that, with this faint and perishing sound, which a slight difference of breathing produced, he was creating that,

which was afterwards to constitute one of the most imperishable of things, and to form, in the minds of millions, during every future age, a part of the complex lesson of their intellectual existence,—giving rise to lasting systems of opinions, which, perhaps, but for the invention of this single word, never could have prevailed for a moment, and modifying sciences, the very elements of which had not then begun to exist. The inventor of the most barbarous term may thus have had an influence on mankind, more important, than all which the most illustrious conqueror could effect, by a long life of fatigue, and anxiety, and peril, and guilt. Of the generalship of Alexander, and the valour of his armies,—of all which he suffered, and planned, and executed, what permanent vestiges remain, but in the writings of historians! In a very few years, after the termination of his dazzling career, every thing on the earth was almost as if he had never been. A few phrases of Aristotle achieved a much more extensive and lasting conquest, and are, perhaps, even at this moment, exercising no small sway on the very minds which smile at them with scorn, and which, in tracing the extent of their melancholy influence on the progress of science, in centuries that are past, are unconscious that they are describing and lamenting prejudices, of which they are themselves still, in a great measure, the slaves. How many truths are there, of which we are ignorant, merely because one man lived!

To return, however, to the objections, which we are to consider.

Diversity of any kind, it is said, is inconsistent with absolute identity, in any case, and in the *mind*, which is by supposition *indivisible*, nothing can be added to it or taken away, and no internal change can take place, in the relative positions and affinities of parts which it has not. Joy and sorrow are *different* in themselves; that which is joyful, therefore, and that which is sorrowful, cannot be *precisely* the same, or diversity of any kind might be consistent with absolute identity. That the joyful and sorrowful mind are precisely the same, is not asserted, if the sameness be meant to imply sameness of state; for it is admitted, that the *state* of the mind is different in joy and sorrow! and the only question is, whether this difference, to which we give the name of difference of state, be incompatible with complete and absolute sameness of substance.

The true key to the sophistry is, as I have already said, that it

assumes a false test of identity, borrowed, indeed, from the obvious appearances of the material world, but from these obvious appearances only. Because diversity of any kind seems, in these familiar cases, to be inconsistent with absolute identity, we draw hastily the *universal* conclusion, that it is inconsistent with absolute identity in any case. Paradoxical as the assertion may appear, however, we may yet safely assert, that, not in mind only, but, as we shall find, in matter also; some sort of diversity is so far from being inconsistent with absolute identity, that there is scarcely a single moment, if, indeed, there be a single moment, in which every atom in the universe is not constantly changing the tendencies that form its physical character, without the slightest alteration of its own absolute identity; so that the variety of states or tendencies of the same identical mind, in joy and sorrow, ignorance and knowledge, instead of being opposed, as you might think, by the general analogy of nature, is in exact harmony with that general analogy. It is from our view of *matter*, unquestionably, as implying, in all its visible changes of state, some loss of identity, some addition or subtraction of particles, or change of their form of combination, that the objection, with respect to the identity of the *mind*, during its momentary or lasting changes of state, is derived; and yet we shall find, that it is only when we consider even matter itself superficially and slightly, that we ascribe the changes which take place in it, to circumstances that affect its identity. To view it more profoundly and accurately, is to observe, even in matter, constant changes of state, where the identity has continued entire, and changes as opposite, as those of the mind itself, when, at different periods, it presents itself in different aspects, as sad and cheerful, ignorant and wise, cruel and benevolent.

The apparent mystery of the continued identity of one simple and indivisible mind, in all the variety of states, of which it is susceptible, is thus in a great measure, solved, when we find this union of variety and sameness to be the result of a law that is not limited to our spiritual being, but extends to the whole universe, or at least to every thing which we know in the universe. It can no longer appear to us peculiarly wonderful, that the mind should exist at different moments in opposite states, and yet be the same in its own absolute nature, when we shall find that this compatibility is true of every atom around us, as much as of the mind itself.

LECTURE XIV.

CONTINUATION OF THE ANSWER TO OBJECTIONS AGAINST THE DOCTRINE OF MENTAL IDENTITY.

My Lecture yesterday was, in a great measure, employed in illustrating the primary evidence of those principles of *intuitive assent*, to which we traced our belief of the identity of the mind as one and permanent, in all the variety of its ever-changing affections. I explained to you, particularly with a view to that vague and not very luminous controversy, in which Dr Priestley was engaged with some philosophers of this part of the Island, in what manner the truth of these intuitive propositions must be assumed or admitted by all who reason, even by the wildest sceptic who professes to question them; pointing out to you, at the same time, the danger to which two of the strongest principles of our constitution, our indolence and our love of knowledge, alike expose us —the danger of believing too soon that we have arrived at truths which are susceptible of any minuter analysis. In conformity, therefore, with the caution which this danger renders necessary, we examined the belief of our continued identity; and we found it to possess the distinguishing marks, which I ventured to lay down as the three great characters of intuition, that it is *universal*, *immediate*, and *irresistible*;—so universal, that even the very maniac, who conceives that he was yesterday emperor of the Moon, believes that he is to-day the very person who had yesterday that empire—so immediate, that we cannot consider any two feelings of our mind as successive, without instantly considering them as feelings of our mind, that is to say, as states of one permanent substance, and so irresistible that even to doubt of our identity, if it were possible for us truly to doubt of it, would be to believe that

our mind, which doubts, is that very mind which has reflected and reasoned on the subject.

Having thus stated the *positive* ground of belief, in our spiritual identity, I proceeded to consider the *negative* evidence which might arise from the confutation of the objections urged against it, —objections drawn from the supposed incompatibility of the changes of our mental affections, with that strict absolute identity of substance, to which nothing can have been added, and from which nothing can have been taken away. The test of identity, which this supposed incompatibility implies, I stated to be a very false one, transferred from matter to mind, and borrowed, not from a philosophical, but from a very superficial view even of matter itself. If it appear, on a closer inquiry, that matter itself, without the slightest loss of identity, exists at different moments, in states which are not merely different but opposite, and exists in almost infinite variety of such states, it cannot surely seem wonderful, that the mind also should, without the slightest loss of its identity, exist at different moments, in states that are different and opposite.

That a superficial view of matter, as it presents itself to our mere organs of sense, should lead us to form a different opinion, is, however, what might readily be supposed, because the analogies, which that superficial view presents, are of a kind that seem to mark a loss of identity whenever the state itself is altered.

In experimental philosophy, and in the obvious natural phenomena of the material world, whenever a body changes its state, some addition or separation has previously taken place. Thus, water becomes steam by the addition, and it becomes ice by the loss, of a portion of that matter of heat which is termed by chemists *caloric;* which loss and addition are, of course, inconsistent with the notion of absolute numerical identity of the corpuscles, in the three states of water as a solid, a liquid, and a gaseous vapour. *Perception*, by which the mind is metaphorically said to acquire knowledge, and *forgetfulness*, by which it is metaphorically said to lose knowledge, have, it must be confessed, a very striking analogy to these processes of corpuscular loss and gain; and, since absolute identity *seems* to be inconsistent with a change of state in the one set of phenomena, with which we are constantly familiar, we find difficulty in persuading ourselves, that it is not inconsistent with a change of state in the other set also. It is a difficulty of

the same kind as that which every one must have felt, when he learned, for the first time, the simple physical law, that matter is indifferent as to the states of motion and rest, and that it requires, therefore, as much force to destroy completely the motion of a body, as to give it that motion when at rest. We have not been accustomed to take into account the effects of *friction*, and of atmospherical resistance, in gradually destroying, without the interference of any visible force, the motion of a ball, which we are conscious of effort in rolling from our hand; and we think, therefore, that rest is the natural state of a body, and that it is the very nature of motion to cease spontaneously. "Dediscet animus sero, quod dedicit diu." It is a very just saying of a French writer, that "it is not easy to persuade men to put their *reason* in the place of their *eyes;* and that when, for example, after a thousand proofs, they are reasonable enough to do their best to believe, that the planets are so many opaque, solid, habitable orbs, like our earth, they do not believe it in the same manner as they would have done if they had never looked upon them in another light. There still comes back upon their belief something of the first notion which they had, that clings to them with an obstinacy, which it requires a continual effort to shake off."*

It is, then, because some substantial loss or gain does truly take place in the changing phenomena of the bodies immediately around us, to which we are accustomed to pay our principal attention, that we learn to regard a change of state in matter as significant of loss of identity, and to feel, therefore, some hesitation in admitting the mental changes of state to be consistent with absolute sameness of substance. Had our observation of the *material* phenomena been different, there would have been a corresponding difference in our view of the changes of the phenomena of the mind.

If, for example, instead of previously gaining or losing caloric, —as in the constitution of things of which we have our present experience,—the particles of the water had suddenly assumed the state of *vapour* on the sounding of a trumpet at a distance, and the state of *ice* immediately on the rising of the sun,— in short, if the different changes of state in bodies, by which their

* Fontenelle, Pluralitè des Mondes, Conversat. 6me.

physical character for the time seems, in many cases, to be wholly altered, had occurred without any apparent loss or gain of substance, we should then no longer have found the same difficulty in admitting the changes of state in mind as consistent with its identity; and the sentient substance, which previously existed in a different state, might then, on the sounding of a trumpet, have been conceived by us to begin to exist, in the state which constitutes that particular sensation of hearing, or, on the rising of the sun, to exist in that different state which constitutes the sun's change of colour as readily as the material substance, previously existing in the form of water, to begin at the same moment, without any essential or numerical change, and consequently with perfect identity, to exist in the new state of steam, or in the state of a chrystalline mass, as solid as the rock from which it hangs as an icicle, or that glitters with its gemmy covering.

But it may be said, that the very supposition which we now make is an absurd one; that the mere presence of the sun in the firmament, at a distance from the water, cannot be supposed to convert it into ice, unless the water gain or lose something, and consequently cease to have absolute identity; and that the case, therefore, is of no value, as illustrating the compatibility of change of state in our various sensations, with unaltered identity of the sentient mind. To this I might answer, that although the presence of the sun certainly does not operate in the manner supposed,—as the sequences of events are now arranged in the great system of nature,—it is only by experience, and not by intuition or reasoning, we know, that the presence of the sun has not the very effect which the separation of caloric now produces, and that there is nothing absolutely more wonderful in the one case than in the other. If our experience had been the reverse of this,—if the change of place of a few particles of caloric had not, as now, converted the liquid water into that solid congeries of crystals which we call ice,—we should then have found as little difficulty in conceiving that it should not have this effect, as we now find in adapting our belief to the particular series of events which constitute our present experience.

It is not necessary, however, to have recourse to suppositions of this kind; since the system of nature, even according to our present experience of it, furnishes sufficient proof of changes as

wonderful in the state of bodies produced obviously at a distance, and, therefore, without any loss or addition which can affect their identity. For sufficient evidence of this, I need appeal only to the agency of the celestial *gravitation;* that gigantic energy of nature which fills the universe, like the immediate presence of the Deity himself,—to which, in the immensity of its influence, the distances, not from planets to planets merely, but from suns to suns, are like those invisible spaces between the elements of the bodies around us, that seem actual contact to our eyes,—and in comparison with which, the powers, that play their feeble part in the physical changes on the surface of our earth, are as inconsiderable as the atoms, on which they exercise their little dominion, are to the massy orbs which *it* wields and directs at will,—

> "Those bright millions of the heavens,
> Of which the least full Godhead had proclaim'd,
> And thrown the gazer on his knee."—"Admire
> The tumult untumultuous! All on wing,
> In motion all; yet what profound repose!
> What fervid action, yet no noise!—as aw'd
> To silence by the presence of their Lord."

The action of these great planetary bodies on each other,—it surely cannot be denied,—leaves them separate identities, precisely as before; and it is a species of agency, so essential to the magnificent harmony of the system, that we cannot conceive it to have been interrupted, for a single moment, since the universe itself was formed. An action, therefore, has been constantly taking place on all the bodies in the universe,—and consequently a difference of some sort produced,—which yet leaves their identities unaffected. But, though the identity of the substance of the separate orbs is not affected by their mutual attractions, the *state*, or temporary physical character, of these orbs,—considered individually as one great whole,—*must* be affected,—or it would be absurd to speak of their mutual agency at all; for action implies the sequence of a change of some sort, and there can be no action, therefore, where the substances continue precisely the same, and their state also precisely the same, as before the action. Accordingly, we find, on our own globe, that great changes of state, such as form the most striking of its regular visible phenomena, are

produced by this distant operation. The waters of our ocean, for example, rise and fall,—and, therefore, must bave altered states, or physical tendencies, in consequence of which they rise and fall, as there is no corresponding addition or subtraction of matter, —at regular intervals,—which it is in our power to predict with infallible accuracy,—not because we can divine any loss of identity in the fluid mass,—any internal change in its elementary composition, or the nature and varieties of the winds, which are to sweep along its surface,—but because we know well, at what hours, and in what relative situation, a certain great body, at the distance of some hundreds of thousands of miles, is to be passing along the heavens.

If, then, the mere position of a distant heavenly body can cause the particles of our ocean to arrange themselves in a different configuration,—from that in which tbey would otherwise have existed, and, therefore, must have produced in the particles that change of state, whicb forces them, as it were, into this altered form,—without addition to them of any thing, or subtraction of any thing,—in short, leaving in them the same absolute numerical or corpuscular identity as before,—there surely can be no greater difficulty, in supposing, as in the case before imagined, that a certain position of the sun might have immediately caused the particles of a distant liquid, to arrange themselves in the particular configuration, that constitutes the solid ice, —whicb, though perhaps a more striking cbange of state, would not have been more truly a change of state, than that, which it now unquestionably produces, in modifying the rise or fall of our tides. And, if a distant body can produce in *matter* a change of state, without affecting its identity, by any addition or subtraction, we may surely admit, that the presence of an external body, as in perception, may, in *mind* also, produce a change of state, without affecting its identity ; unless indeed, (which is not impossible, because nothing is impossible to buman folly,) we should be inclined to reverse our prejudices, and maintain, that matter may be easily conceived to change the affinities or tendencies that form its physical cbaracter, in the particular circumstances observed, without any addition or subtraction of substance, but that some positive addition or subtraction of substance is, notwitbstanding, essential to the simple changes or affections of the mind.

If the *moon* were suddenly annihilated, our earth would still be the same identical planet, without the loss or gain of a single particle of substance. But the state of this planet, as a whole, and of every atom of this planet, would be instantly altered, in many most important respects,—so completely altered, indeed, that not an atom of the mass would tend to the other atoms of the mass, in the same manner as before. In like manner, if the *light*, —which now, operating on one of my organs of sense, causes my mind to exist in the state that constitutes the sensation of a particular colour,—were suddenly to vanish, the state of my mind would be instantly changed, though my mind itself, considered as a substance, would still continue unaltered. In both cases,—the spiritual, and the material,—and in both cases, alike,—*absolute identity*, in the strictest sense of the term, is *consistent* with innumerable *diversities*.

In the discussion of this supposed difficulty, I have chosen, for illustration, in the first place, to consider the *planetary attractions*, in preference to those which occur, in the minuter changes, that are simply terrestrial; because in the case of operations at a distance, it is impossible for us, not to perceive, that, even in matter, a change of state is not inconsistent with complete permanence of absolute corpuscular identity; while, in the compositions or decompositions, that occur spontaneously, or by artificial experiment, in the physical changes on the surface of our earth, the additions or subtractions of matter, that appear to us to constitute these phenomena, truly destroy the corpuscular identity of the substances, in which the change takes place; and the change of state is thus considered by us, as implying a positive substantial change. But when we examine even these phenomena a little more deeply, we shall find, that, like the great operations of gravitation on the masses of the universe,—the change, in these also, is not a positive change of substance, but is simply a change of state in a congeries of independent substances, which we term *one* substance, merely because the spaces, that are really between them, are imperceptible to our very imperfect organs; the addition or subtraction of matter being not that which constitutes the new states or tendencies of the particles which continue present, but merely that which gives occasion to those changes of state or tendency; —as the positions of the heavenly bodies do not constitute the phe-

nomena of our tides, but merely give occasion to that difference of state in the particles of the ocean, in consequence of which they assume of themselves a different configuration. Man is placed, as it has been truly said, on a point, between two infinities,—the infinitely *great*, and the infinitely *little*. It may be an extravagant speculation, to which I have before alluded,—but it is not absolutely absurd, to suppose, that in the unbounded system of nature, there may be beings, to whose vision the whole planetary attendants of each separate sun, which to us appear to revolve at distances so immense, may yet seem but one small cohesive mass, in the same manner, as to those animalculæ, whose existence and successive generations had been altogether unknown to man, till the microscope created them, as it were to his feeble sight,—and which, perhaps, are mighty animals compared with races of beings still more minute, that are constantly living in our very presence, and yet destined never to be known to us,—those bodies, which to us seem one small cohesive mass, may appear separated by distances, relatively as great, as to us are those of the planets. That light, itself a *body*, should pass freely through a mass of solid crystal, is regarded by us as a sort of physical wonder; and yet it is far from impossible, that, between the atoms which compose this apparently solid mass, whole nations of living beings may be dwelling, and exercising their mutual works of peace or hostility; while perhaps, if philosophy can be exercised, in brains of such infinitesimal dimensions, in the same manner as in our coarser organs, the nature of the atoms, or distant worlds around them, may be dividing with endless absurdities, the Ptolemies and Aristotles of the little republics. We have all so much of the nature of the inhabitants of Brobdignag, that a supposition of this kind,—which is perhaps truly in itself not a very probable one,—yet appears to us much more improbable, than it really is. We smile, as recognizing our own nature, when the sovereign of that country of giants is represented by the most unfortunate, or rather the most fortunate of all voyagers, as "turning to his first minister, who waited behind him with a white staff, near as tall as the mainmast of the Royal Sovereign, and observing how contemptible a thing was human grandeur, which could be mimicked by such diminutive insects." "And yet," said he, "I dare engage, those creatures have their titles and distinctions of honour; they contrive their

nests and burrows, that they call houses and cities; they make a figure in dress and equipage; they love, they fight, they dispute, they cheat, they betray." And we fully enter into the difficulty which the *savans* of the country, who had all agreed that the new-discovered animal could not have been produced according to the regular laws of nature, must have found, in giving him a name. "One of them seemed to think that I might be an embryo, or abortive birth. But this opinion was rejected by the other two, who observed my limbs to be perfect and finished; and that I had lived several years, as it was manifest from my beard, the stumps whereof they plainly discovered through a magnifying-glass. They would not allow me to be a dwarf, because my littleness was beyond all degrees of comparison; for the queen's favourite dwarf, the smallest ever known in that kingdom, was near thirty feet high. After much debate, they concluded unanimously, that I was only *relplum scalcath*, which is interpreted literally *lusus naturæ*; a determination exactly agreeable to the modern philosophy of Europe, whose professors, disdaining the old evasion of occult causes, whereby the followers of Aristotle endeavoured in vain to disguise their ignorance, have invented this wonderful solution of all difficulties, to the unspeakable advancement of human knowledge."*

Whatever may be thought of speculations of this kind, however, with respect to the relative distance of the atoms of bodies, it is not the less certain, that these atoms are separate substances, independent of the other similar or different substances that apparently adhere to them in continuity,—that they are, in truth, the only material substances which really exist, since the bodies which we term masses are only those very atoms under another name,—that they remain, and cannot but remain, identical, amid all the changes of chemical composition or decomposition,—and that the change which they suffer, therefore, however strikingly their physical character may be altered for the time, is a change not of *substance* but of *state* only. In the case of the formation of *ice*, for example, the elementary atoms themselves, which are all that truly exist in nature, are not, and cannot be, changed; but particles, which were formerly easily separable from adjacent parti-

* Gulliver's Travels, part ii. chap. 3.

cles, now resist this separation by a considerable force. There is a change in their *state*, therefore, since they now exist with a different degree of tendency toward each other,—a change, to which the separation of a quantity of caloric may, indeed, have given occasion, but which is to be distinguished from that momentary separation itself, since the solidity, which is only another name for the corpuscular resistance, continues after the separation is complete, and would continue forever, unless a change of temperature were again to restore that former state or tendency of the particles, in which they were easily separable. To him who has learned to consider bodies as, what they truly are, a multitude of separate and independent corpuscles, there is no change of identity, and cannot be any change of identity, in all the phenomena or changes of the universe. The atoms, which alone existed, continue as before; and all which constitutes the phenomenon, or varieties of successive phenomena, is a change of their place or tendency.

This *corpuscular* view of the material universe,—which, of course, admits an infinite variety of applications, corresponding with the infinite variety of its phenomena,—has many most striking analogies in that moral universe, with the phenomena of which we are chiefly concerned. Indeed, when we consider any of the masses before us, as deriving all its apparent magnitude from a number of separate bodies, of which it is composed,—any one of which, *individually*, would be too minute to be distinguishable by us,—it is scarcely possible not to think of the similarity which it presents to the multitudes of human beings that are as it were, massed together in the great nations of the earth; and in which any single individual, if he could be supposed to have exercised his powers separately, would have been truly as insignificant as a single atom separated from the mass of which it is a part. What we call the greatness of a nation, is nothing more than the union of a number of little interests and little passions joined in one common object; to which insignificant elements, so wonderful when combined, if we could distinctly reduce, by analysis, the most unrivalled power that has ever commanded the admiration and envy of the world, it would, at first view, run some little risk of appearing contemptible. The advantages of this social union of mankind, as silently felt at every moment, are unquestionably

so infinite in comparison, as almost to sink into nothing the occasional evils to which the aggregation and massing of so many powers, when ill directed, may give rise,—though these terrific evils, when they occur, may dwell more permanently in the mind;—like the visitations of storms and earthquakes, which we remember forever, while, with a sort of thankless forgetfulness, we scarcely think of the calm beauty and regularity which, season after season, passes over us. The rock which, descending from the top of a mountain, lays waste whatever it meets in its progress,—and to attempt to stop which, while its short career lasts, would be almost like instant annihilation,—derives this overwhelming force from an infinite number of independent corpuscles, any one of which, if it had fallen singly, would have been far less destructive than the flutter of an insect's wing; and that tyrannical power of a single man, before which, in unhappy ages of successful oppression, the earth has so often trembled,—as before some power of darkness, endowed with more than human sway,—has derived its irresistible might, not from powers included in itself,—which, in reference to the objects achieved by it, would have been feeble indeed,—but from the united powers of beings still feebler, who were trembling while they executed commands to which themselves alone gave omnipotence.

To this corpuscular view, however, though it is unquestionably the sort of view to which, in our ultimate physical inquiries into the phenomena of matter, we must come, you may, perhaps, not be sufficiently accustomed, to enter fully into the reasoning on the subject. It will probably be less difficult for you, if we take rather, as an illustration, the simpler case of *impulse;* in which the bodies affecting each other are not, as in chemistry, indistinguishable corpuscles, but *masses*, clearly defined, and easily perceptible.

I need not, of course, repeat the arguments formerly stated, to prove that *attraction*, however general it may be as a law of matter at all visible distances, does not continue, but gives place to an opposite tendency at those smaller distances, which we are unable to perceive with our weak organs, and which we learn to estimate only by effects that are inconsistent with absolute contact;—for example, by the well-known fact of the compressibility of bodies, which could not take place if their particles were

already in contact, and which by continually increasing resistance to the compressing force that would bring the corpuscles nearer, shews, that there is, at different degrees of nearness, a tendency continuing to operate, which is the very reverse of attraction. There is, therefore, every reason to believe,—since repulsion, as the fact of forcible compression shews, takes place while the particles of bodies are still at a certain distance,—that the motion produced in one body by another, and ascribed to immediate impulse, is produced, without actual contact, by this mutual repulsion, as it is called, of the bodies when brought within a certain invisible degree of vicinity to each other; or, in other words,—for repulsion means nothing more mysterious than this simple fact,—the tendency which bodies, in certain relative positions of apparent but not actual contact, have to fly off from each other with certain degrees of velocity, as in certain other relative positions, of distinguishable distance, they have a tendency to approach each other. This repulsion, or tendency from each other at one point of nearness, is of itself as easy to be conceived, as that *attraction*, or tendency toward each other at other points of distance, to which we give the name of *gravitation;* and it is only from our greater familiarity with the one, as operating at distances which are visible, while the other,—except in a few cases, such as those of magnetism and electricity,—operates only at distances which are imperceptible to us, that we feel a little more difficulty in admitting the *repulsion* than the *attraction* of matter. There is then,—however universal gravitation may seem, when we think only of perceptible distances,—a certain point of near approach, before actual contact, at which gravitation ceases; and, beyond this point, the tendency of bodies toward each other is converted, —as the force necessary to compress them evidently shews,—into a tendency from each other; *both* tendencies, indeed, being *inexplicable*, but the one in no respect more so than the other.

For this apparent digression, on a point of general physics, I make no apology, as it is absolutely necessary for illustrating the particular case to which I am to proceed. The consideration of it requires, what the whole of this discussion, indeed, has already required from you, no small exercise of patient attention; but I trust that I sufficiently prepared you for this, in a former Lecture, when I stated the importance of such attention, not merely in rela-

tion to the subject considered at the time, but as a part of your mental discipline, and the advantage which might thus be derived to your intellectual character, from the very difficulties which the subject presents. It is in philosophy, as in many a fairy tale. The different obstacles which the hero encounters, are not progressively greater and greater; but his most difficult achievements are often at the very commencement of his career. He begins, perhaps, with attacking the castle of some enchanter, and has to force his way, unassisted, through the griffins and dragons that oppose his entrance. He finishes the adventure, with the death of the magician—and strips him of some ring, or other talisman, which renders his subsequent adventures comparatively easy and secure. I cannot venture to say, indeed, that a perfect acquaintance with the difficulties of the present question, and of some of the late questions which have engaged us, will be such a talisman to you, in your future career of intellectual science. But I may safely say, that the habit of attentive thought, which the consideration of subjects, so abstract, necessarily produces, in those who are not too indolent to give attention to them, or too indifferent to feel interest in them, is more truly valuable than any talisman, of which accident or force might deprive you. The *magic* with which this endows you, is not attached to a *ring*, or a gem, or any thing external; it lives, and lives forever, in the very essence of your minds.

When a billiard ball, on being struck, approaches another, which is at rest, it soon arrives at the point of seeming, but not actual contact, at which their mutual attraction ceases, and the force which it has acquired still carrying it on, it passes this bounding point, and arrives at a point at which repulsion has already begun. Accordingly the body, formerly at rest, now flies off, on a principle precisely similar, (though the mere direction be opposite) to that by which the same ball, if dropped from a hand that supported it, would, without the actual impulse of any body, have quitted its state of rest, as in the present case, and have gravitated, or, which is the same thing, have moved of itself toward the earth.

Before the first ball, which you will, perhaps more easily remember by the name, A, arrived so very near to the second ball B, as to have come within the sphere of their mutual repulsion, this second ball was at rest, that is to say, it had no tendency to

move in any direction. This state of rest, however, is only one of the many states, in which a body may exist; and if, which must surely be allowed, a body having a tendency to continued motion, be in a different state, from one which has no such tendency, this change of state implying, it must be remarked, not even the slightest loss of identity, has been produced in the body B, by the mere vicinity of the body A. For the sake of illustration, let us now suppose this body A to be hot or luminous. It will still, as before, produce the new state of tendency to motion, in B, when it arrives within the limits of their sphere of repulsion. Is it less conceivable, then, that the mere presence of this hot or luminous body should produce the new sensation of warmth, or of colour, which are different states of the sentient mind, without affecting in the slightest degree the identity of the mind itself, than that it should produce, without any loss of absolute identity, in the body B, an immediate tendency, in that body, to move along with a certain velocity, a state as different from that in which it remains at rest, as the sensation of warmth, which is one state of the mind, is different from the sensation of colour, which is another state of the mind? Nor does the parallel end here; for, since a body at rest, acquiring a tendency to begin motion in one particular direction, as, for example, to move *north*, must be in a different state from that in which it would have been, if it had acquired an instant tendency to move *east*, or in any other direction; and, the direction once begun, being the same, since a body having a tendency to move with one velocity, must, at every moment of its progress, be in a different state from that in which it has a tendency to move with a different velocity, it is evident, that the mere presence of a body may produce, in a second body, according to the difference of their positions and relative magnitudes, a variety of states, that, when all the varieties of direction, and all the varieties of velocity are estimated together, may be considered as infinite,—equal at least in number, to the different states of which the mind is susceptible, in its almost infinite variety of feelings; and all this without any essential change, that can affect the identity of the quiescent or moving body, or any essential change, that can affect the identity of the mind.

I am aware, that, when you consider, for the first time, this assertion of an infinite variety of *states*, corresponding with all the

innumerable varieties of direction and velocity, in the tendencies of a simple billiard-ball, which, in the various circumstances supposed, appears to us precisely the same, in all its sensible qualities, you may be apt to conceive, that the assertion must be founded on a mistake, and, from the influence of former prejudice may be inclined to think, that, when it exhibits a tendency to begin to move east, at one time, and, at another time, a beginning tendency to move north, this does not arise from any difference of state in itself, but from its being merely carried along by the first ball, which was itself previously moving in one or other of these particular lines of direction. When the elastic billiard-ball, however, bounds away from the ball which strikes it, this supposition is manifestly inapplicable;—and, in all cases, it is the influence only of former prejudice which can lead you to this opinion,—the influence of that prejudice, by which you may have been accustomed to consider impulse, not as inducing a tendency to motion at some little distance, but as involving the necessity of actual contact. To destroy this prejudice, a very little reflection on the phenomena of elastic bodies, in their shocks and mutual retrocessions, is surely all that can be requisite; and if the motion of B, and consequently its tendency to motion, have begun, without contact of A, as it afterwards continues while A, the elastic body which struck it, is moving back in an opposite direction, it could not be by mechanical trusion, as carried along by A, which is still at some points of distance from it when its motion begins, and at still greater distance the longer the motion continues, that B has assumed any one of its variety of states,—that, for example, in which, in one case, it tends to move east, in another case to move north, in one case to move rapidly, in another slowly. To say that the body acquires this new tendency because it is impelled, is only to say that it is impelled because it is impelled. It is an equally idle use of language, to affirm, as if a word could obviate the difficulty instead of merely stating it,—that A, in communicating a different tendency to B, which was before at rest, does this by a principle, or power of repulsion; for this, as I have said, is merely to state in a single word, the regularity in certain circumstances of the very fact asserted. The different tendencies of B, and consequently the different states in which B exists,—are not the less different, in whatever manner the difference may have

been produced, or by whatever word, or combination of words, the difference may be expressed. There is no magic, in the phrase, *principle* of repulsion, or *power* of repulsion, which can render the *same*, states or tendencies that are in themselves opposite ;—for, as far as we understand the phrase, it expresses nothing more than the invariableness of the simple fact, that in certain circumstances of relative position, bodies have a tendency to fly off from each other, as in certain other circumstances of relative position, which constitute the phenomena of gravitation, they have a tendency to approach. Whatever term we may employ to denote it, it is still a physical fact, that at a certain point of near and seemingly close approach of another mass, a body which was before in a state of rest, acquires immediately a tendency to fly off in different directions, and with different velocities at different times, and consequently, that, if the tendency to begin or to continue motion, in one direction, and with one velocity, be a state different from that which constitutes the tendency to begin or to continue motion in another direction, and with another velocity, the ball B, in these different circumstances, however identical it may be in substance, exists in two different states ;—or all states, however different, may be said to be the same.

It may be admitted, then, that the *feeling of rapture* is a state of mind, completely different from that which constitutes the *feeling of agony*,—that the sensation of the fragrance of a rose, has no resemblance to our conception of a sphere or of an equilateral triangle,—and that, in general, all those thoughts and emotions, which,—more truly than the mere union of the immortal spirit within us with the body which it animates,—may be said to constitute *life*,

> " Love, Hope, and Joy, fair Pleasure's smiling train,—
> Hate, Fear, and Grief, the family of Pain ;"

these, as they prevail, in different hours, render the same individual mind more unlike to itself, if its states or tendencies alone, and not its substantial identity be considered, than the minds perhaps of any two human beings, at the same moment. But still, as we have seen, even from the analogy of the material world,—which was supposed to furnish a powerful objection, it is no argument

against the absolute identity of the mind, that exists in different states, however opposite, any more, than it is an argument against the absolute identity of a body, that it, at one moment, has a tendency to one particular motion,—at another moment a tendency to a different motion,—and at another moment, no tendency whatever to motion of any kind; since, in all these cases, as much as in the varying affections of the mind, there is a *change of state*, with absolute *identity of substance*.

LECTURE XV.

CONSIDERATION OF THE OBJECTIONS AGAINST MENTAL IDENTITY, CONTINUED; OPINION OF MR LOCKE RESPECTING IDENTITY; SOURCE OF HIS PARADOX ON THIS SUBJECT; AND REFLECTIONS SUGGESTED BY IT.

My last Lecture, Gentlemen, was employed in considering the general objection to the Identity of the Mind, drawn from the contrasts of its momentary feelings,—an objection founded on the supposed incompatibility of diversity of any kind, with strict and absolute *identity*. After the very full examination which it received, it is unnecessary to dwell at any length on the other objection, drawn from changes of general character, in the same individual, at different periods of life, or in different circumstances of fortune; since precisely the same arguments, from the general analogy of nature, which disprove the supposed incompatibility in the one case, disprove it also in the other. Even *matter* itself, we have seen, may, without the slightest alteration of its identity, exist in an almost infinite variety of states; having, in some of these states, qualities precisely the reverse of those, which it exhibited in other states, attracting what it repelled, repelling what it attracted;—and it surely is not more wonderful, therefore, that the same identical mind, also, should, in relation to the same objects, in different circumstances, be susceptible of an almost infinite variety of affections,—approving, disapproving, choosing, repenting. If we knew nothing more of the relations of two billiard balls to each other, than the phenomena which they exhibit, in the moment of their mutual percussion, when they have been forced, within a certain degree of close vicinity, by the impelling stroke, we should regard them, from their instant reciprocal repulsion, as having a natural tendency to fly off from each other;

and, in the state in which they then exist, there is no question that such is their tendency,—a tendency, which, in these circumstances, may be regarded as their genuine physical character. Yet we have only to imagine the two balls placed at a distance from each other, like that of the remotest planet from the sun; and, in traversing the whole wide void that intervenes, what a different physical character would they exhibit, in their accelerating tendency toward each other, as if their very nature were lastingly changed? If there are, then, such opposite tendencies in the same bodies, without any loss of identity, why may not the same minds also have *their* opposite tendencies, when, in like manner, removed, as it were, into circumstances that are different, loving, perhaps, what they hated before, and hating what they loved? If the change of state be not *temporary*, but *permanent*, the resulting affections may well be supposed to be permanently different; and, indeed, if they be different at all, cannot but be permanently different, like the altered state. It is as little wonderful, therefore, when any lasting change of circumstances is taken into account, that the same individual should no longer exhibit the same intellectual and moral appearances, as that matter, in its different states, should no longer exhibit the same obvious phenomena, *attracting*, perhaps, the very bodies which it before repelled, and *repelling* the very bodies which it before attracted, and attracting and repelling with differences of force, and consequent differences of velocity in the bodies moved, the varieties of which it would require all the powers of our arithmetic to compute.

When we observe, then, in a mind, which we have long known and valued, any marks of *altered character*,—when, for example, in one, who, by the favour, or rather by the cruelty of Fortune, has been raised, from a situation comparatively humble, to sudden distinctions of power and opulence, we see the neglect of all those virtues, the wider opportunity of exercising which seemed to him formerly the chief, or even the only, advantage that rendered such distinctions desirable,—the same frivolous vanity, which before appeared to him ridiculous in others, and the same contemptuous insolence of pride, which before appeared to him contemptible,—a craving and impatient desire of greater wealth, merely because he has no longer any use to make of it, unless, indeed that it has become more necessary to his *avarice*, than it ever was before to

his *want*,—and a gay and scornful indifference to miseries, that are still sometimes able to force themselves upon his view, the relief of which, that once seemed to him so glorious a privilege, would now not require of him even the scanty merit of sacrificing a single superfluity: When we perceive this contrast, and almost say within ourselves, Is this the same being? we should remember, that the influence of fortune is not confined to the mere trapping, which it gives or takes away,—that it operates *within* as much as *without*,—and that, accordingly, in the case now imagined by us, the new external circumstances have been gradually modifying the mind, in the same manner, as new external circumstances of a different kind modify the bodies, which happen to be placed in them, —not affecting their *identity*, but altering their *state*; and that, if we could distinguish, as accurately, the series of changes, which take place in mind, as we can distinguish those which take place in matter, we should not be more astonished, that, in circumstances of rare and unhappy occurrence, a disposition once apparently generous is generous no more, than we are to observe a body, attracted to another body, at one distance, and afterwards repelled from it, in consequence merely of a change of their mutual position,—a change so very slight, as to be altogether undistinguishable by our senses.

I have dwelt on this question at much greater length than I should otherwise have done, however interesting it truly is as a question of metaphysics, because I was anxious to obviate a prejudice which is very closely connected with this point, and which, most unfortunately for the progress of the Philosophy of Mind, has given a wrong bias to the speculations of many very enlightened men. No one, I am aware, can be so sincerely sceptical as to doubt, even for a moment, his own identity, as *one continued sentient being*, whatever ingenious sophistry he may urge in support of the paradox which he professes to hold. But still, while the compatibility of diversity with absolute identity, as now explained to you, was but obscurely felt,—a compatibility which, to the best of my remembrance, no writer, with whom I am acquainted, has attempted to illustrate,—the difficulty of reconciling the growth or decay of knowledge, and all the successive contrasts or changes of feeling, which our sensations, thoughts, emotions, exhibit, with the permanent indivisible unity of the same sentient principle, has

been sufficient, in many cases, to produce a vague and almost unconscious tendency to materialism, in minds that would not otherwise have been easily led away by a system so illusive; and, where it has not produced this full effect, it has at least produced a tendency, in many cases, to encumber the simple theory of the mental phenomena with false and unnecessary hypotheses, very much akin to those of absolute materialism. Without this absolute materialism, *mind* must still be left, indeed, as the ultimate subject of sensation, and the difficulty truly remains the same; but it is contrived to complicate, as much as possible, the corporeal part of the process, which precedes this ultimate mental part, by the introduction of phantasms, or other shadowy films, animal spirits, vibratiuncles, or other sensorial motions, that a wider room may thus be left for a play of changes, and the difficulty of accounting for the diversity of sensations be less felt, when it is to be divided among so many substances in almost constant motion; while the attention is, at the same time, led away from the immediate *mental* change, in which alone the supposed difficulty consists, to the mere *corpuscular* changes, in which there is no supposed difficulty.

It is a general law of our internal, as well as of our external perceptions, that we distinguish most readily what is least complicated. In a chorus of many voices, a single discordant voice may escape even a nice discriminator of musical sounds, who would have detected instantly the slightest deviation from the melody of a simple air. A juggler, when he wishes to withdraw a single card, is careful to present to us many; and, though the card which he withdraws is truly before our eyes at the very moment at which he separates it from the pack, we do not discover the quick motion which separates it, however suspiciously watchful we may be, because our vigilance of attention is distracted by the number of cards which he suffers to remain. It is not because the card which he removes is not before us, then, that we do not observe the removal of it, but because it is only one of many that are before us. It is precisely the same in those complicated material processes, with which some theorists encumber the simple phenomena of the mind. The difficulty which seems, to them, to attend any diversity whatever in a substance that is identical, simple, indivisible, and incapable of addition or substraction, remains, indeed, ultimate-

ly in all its force, and would strike us equally, if this supposed difficulty were to be considered alone. But many hypothetical vibrations, or other motions, are given to our consideration at the same moment, that glance upon our mental view like the rapid movements of the juggler's hand. We, therefore, do not feel so painfully as before a difficulty which occupies our attention only in part; and, in our feeble estimation of things, to render a difficulty less visible to us, is almost like a diminution of the difficulty itself.

For obviating this tendency to *materialism*, or to what may be considered almost as a species of *semi-materialism* in the physiology of the mind, it is of no small consequence to have accurate views of the nature of our mental identity. Above all, it is of importance, that we should be sufficiently impressed with the conviction, that absolute identity, far from excluding every sort of diversity, is perfectly compatible, as we have seen, with diversities that are almost infinite. When we have once obtained a clear view of this compatibility, as independent of any additions or subtractions of substance, we shall no longer be led to convert our simple mental operations into long continued processes, of which the last links only are mental, and the preceding imaginary links corporeal; as if the introduction of all this play of hypotheses were necessary for saving that identity of mind, which we are perhaps unwilling to abandon altogether; for it will then appear to us not more wonderful, that the *mind*, without the slightest loss of identity, should at one moment begin to exist in the state which constitutes the sensation of the fragrance of a rose, and at another moment should begin to exist in the state which constitutes the sensation of the sound of a flute, or in the opposite states of love and hate, rapture and agony—than that the same *body*, without the slightest change of its identity, should exist, at one moment, in the state which constitutes the tendency to approach another body, and at another moment in the opposite state which constitutes the tendency to fly from it, or that, with the same absolute identity, it should exist, at different moments in the different states, which constitute the tendencies to begin motion in directions that are at right angles to each other, so as to begin to move in the one case north, in the other east, and to continue this motion, at one time with one velocity, at other times with other velocities,

and consequently, with other tendencies to motion that are infinite, or almost infinite.

With these remarks, I conclude what appears to me to be the most accurate view of the question of our personal, or, as I have rather chosen to term it, our mental identity. We have seen, that the belief of this arises, not from any inference of reasoning, but from a principle of intuitive assent, operating universally, immediately, irresistibly, and therefore justly to be regarded, as essential to our constitution,—a principle, exactly of the same kind, as those, to which reasoning itself must ultimately be traced, and from which alone its consecutive series of propositions can derive any authority. We have seen, that this belief,—though intuitive,—is not involved in any *one* of our separate feelings, which, considered merely as present, might succeed each other, in endless variety, without affording any notion of a sentient being, more permanent than the sensation itself; but that it arises, on the consideration of our feelings as *successive*, in the same manner, as our belief of proportion, or relation in general, arises, not from the conception of *one* of the related objects or ideas, but only after the previous conception of *both* the relative and the correlative; or rather, that the belief of identity does not arise as subsequent, but is involved in the very remembrance which allows us to consider our feelings as successive; since it is impossible for us to regard them as successive, without regarding them as feelings of our sentient self;—not flowing, therefore, from experience or reasoning, but essential to these, and necessarily implied in them,—since there can be no result in experience, but to the mind which remembers that it has previously observed, and no reasoning but to the mind which remembers that it has felt the truth of some proposition, from which the truth of its present conclusion is derived. In addition to this positive evidence of our identity, we have seen, that the strongest objections which we could imagine to be urged against it, are, as might have been expected, sophistical, in the false test of identity which they assume,—that the contrasts of momentary feeling, and even the more permanent alterations of general character, in the same individual, afford no valid argument against it; since, not in *mind* only, but in *matter* also,—(from a superficial and partial view of the phenomena of which the supposed objections are derived,)—the most complete identity of

substance, without addition of any thing, or subtraction of any thing, is compatible with an infinite *diversity of states*.

I cannot quit the subject of identity, however,—though from my belief of its importance, I may already, perhaps, have dwelt upon it too long,—without giving you some slight account of the very strange opinions of Mr Locke on the subject. I do this, both because some notice is due, to the paradoxes,—even though they be erroneous,—of so illustrious a man, and because I conceive it to be of great advantage, to point out to you occasionally the illusions, which have been able to obscure the discernment of those *bright* spirits, which nature sometimes, though sparingly, grants, to adorn at least that intellectual gloom, which even they cannot irradiate; that, in their path of glory, seem to move along the heavens by their own independent light, as if almost unconscious of the darkness below, but cannot exist there for a moment, without shedding, on the feeble and doubtful throngs beneath, some faint beams of their own incommunicable lustre. It is chiefly, as connected with these eminent names, that fallacy itself becomes instructive, when simply exhibited,—if this only be done, not from any wish to disparage merits, that are far above the impotence of such attempts, but with all the veneration which is due to human excellence, united as it must ever be to human imperfection. "Even the errors of great men," it has been said, "are fruitful of truths;" and, though they were to be attended with no other advantage, this one at least they must always have, that they teach us how very possible it is for man to err; thus lessening at once our tendency to slavish acquiescence in the unexamined opinions of others, and—which is much harder to be done—lessening also, as much as it is possible for any thing to lessen, the strong conviction, which we feel, that we are ourselves unerring.—The first, and most instructive lesson, which man can receive, when he is capable of reflection, is to *think for himself*; the second, without which the first would be comparatively of little value, is to reject, in *himself*, that infallibility, which he rejects in *others*.

The opinion of Locke, with respect to personal identity, is, that it consists in consciousness alone; by which term, in its reference to the past, he can mean nothing more than perfect memory. As far back as we are conscious, or remember; so far and no farther, he says, are we the same persons. In short, what we

do not remember, we, as persons, strictly speaking, never did. The identity of that which remembers, and which is surely independent of the remembrance itself, is thus made to consist in the remembrance, that is confessedly fugitive; and, as if that every possible inconsistency might be crowded together in this simple doctrine, the same philosopher, who holds, that our personal identity consists in *consciousness*, is one of the most strenuous opponents of the doctrine, that the soul always thinks, or is *conscious;* so that, in this interval of thought, from consciousness to consciousness,—since that which is essential to identity is, by supposition, suspended, the same identical soul, as far as individual personality is concerned, is not the same identical soul, but exists when it does not exist.

"There is another consequence of this doctrine," says Dr Reid, "which follows no less necessarily, though Mr Locke probably did not see it. It is that a man be, and at the same time not be, the person that did a particular action.

"Suppose a brave Officer to have been flogged when a boy at school, for robbing an orchard, to have taken a standard from the enemy in his first campaign, and to have been made a General in advanced life: Suppose also, which must be admitted to be possible, that when he took the standard, he was conscious of his having been flogged at school; and that when made a General, he was conscious of his taking the standard, but had absolutely lost the consciousness of his flogging.

"These things being supposed, it follows, from Mr Locke's doctrine, that he who was flogged at school is the same person who took the standard; and that he who took the standard is the same person who was made a General. Whence it follows, if there be any truth in logic, that the General is the same person with him who was flogged at school. But the General's consciousness does not reach so far back as his flogging, therefore, according to Mr Locke's doctrine, he is not the person who was flogged. Therefore the General is, and at the same time is not, the same person with him who was flogged at school."*

But it is needless to deduce consequences, from this very strange paradox; since its author himself has done this, most free-

* Reid's Essays on the Intellectual Powers, Essay III. Chap. vi.

ly and fully, and often with an air of pleasantry, that, but for the place in which we find it, as forming a part of a grave methodical essay on the understanding, would almost lead us to think, that he was himself smiling, in secret, at his own doctrine, and propounding it with the same mock solemnity with which the discoverer of Laputa has revealed to us all the secrets of the philosophy of that island of philosophers.

He allows it to follow, from his doctrine, that, if we remembered *at night*, and never but at night, one set of the events of our life; as, for instance, those which happened five years ago; and never but in the day time, that different set of events, which happened six years ago; this, "day and night man," to use his own phrase, would be two as distinct persons, as Socrates and Plato; and, in short, that we are truly as many persons as we have, or can be supposed to have, at different times, separate and distinct remembrances of different series of events. In this case, indeed, he makes a distinction of the visible *man*, who is the same, and of the *person* who is different.

"But yet possibly it will still be objected," he says, "suppose I wholly lose the memory of some parts of my life, beyond a possibility of retrieving them, so that perhaps I shall never be conscious of them again; yet am I not the same person that did those actions, had those thoughts that I once was conscious of, though I have now forgot them? To which I answer, that we must here take notice what the word I is applied to; which, in this case, is the man only. And the same man being presumed to be the same person, I is easily here supposed to stand also for the same person. But if it be possible for the same man to have distinct incommunicable consciousness at different times, it is past doubt the same man would at different times make different persons; which we see is the sense of mankind in the solemnest declaration of their opinions; human laws not punishing the mad man for the sober man's actions, nor the sober man for what the mad man did, thereby making them two persons: which is somewhat explained by our way of speaking in English, when we say such an one is not himself, or is beside himself; in which phrases it is insinuated, as if those who now, or at least first used them, thought that self was changed, the self-same person was no longer in that man."*

* Essay concerning Human Understanding, B. ii. c. xxvii. sect. 20.

Such is the doctrine of a philosopher, whose intellectual excellence was unquestionably of the highest rank, and whose powers might be considered as entitling him to exemption, at least, from those *gross* errors which far weaker understandings are capable of discovering, if even this humble relative privilege had not been too great for man. He contends, that our remembrance of having done a certain action, is not merely to us, the rememberers, the *evidence* by which we believe that we were the persons who did it, but is the very circumstance that makes us *personally* to have done it,—a doctrine, which, if the word *person* were to be understood in the slightest degree in its common acceptation, would involve, as has been justly said, an absurdity as great as if it had been affirmed, that our belief of the creation of the world actually made it to have been created.

If we could suppose Mr Locke to have never thought on the subject of personal identity, till this strange doctrine, and its consequences, were stated to him by another, it may almost be taken for granted, that he would not have failed instantly to discover its absurdity, as a mere verbal paradox; and, yet, after much reflection on the subject, he does not perceive that very absurdity, which he would have discovered, *but for reflection*. Such is the strange nature of our intellectual constitution. The very functions, that, in their daily and hourly exercise, save us from innumerable errors, sometimes lead us into errors, which, but for them, we might have avoided. The philosopher is like a well armed and practised warrior, who, in his helmet and coat of mail, goes to the combat with surer means of victory, than the ill disciplined and defenceless mob around him, but who may yet sometimes fall where others would have stood, unable to rise and extricate himself, from the incumbrance of that very armour, to which he has owed the conquests of many other fields.

What, then, may we conceive to have been the nature of the illusion, which could lead a mind like that of Mr Locke, to admit, *after* reflection, an absurd paradox, and all its absurd consequences, which, *before* reflection, he would have rejected?

It is to be traced chiefly, I conceive, to a source which is certainly the most abundant source of error in the writings and silent reflections of philosophers, especially of those who are gifted with originality of thought,—the ambiguity of the language they use,

when they retain a word with one meaning, which is generally understood in a different sense; the common meaning, in the course of their speculations, often mingling insensibly with their own, and thus producing a sort of confusion, which incapacitates them from perceiving the precise consequences of either. Mr Locke gives his own definition of the word person, as comprised in the very consciousness which he supposes to be all that is essential to personal identity; or at least he speaks of consciousness so vaguely and indefinitely, as to allow this meaning of his definition to be present to his own mind, as often as he thought of personality. "To find," he says, "wherein personal identity consists, we must consider what *person* stands for; which, I think, is a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places, which it does only by that consciousness, which is inseparable from thinking."*

Having once given this definition of a person, there can be no question, that personal identity, in *his* sense, is wherever *consciousness* is, and only where consciousness is. But this is true of a person, only as defined by him; and, if strictly analysed, means nothing more, than that consciousness is wherever consciousness is,—a doctrine, on which, certainly, he could not have thought it worth his while to give any very long commentary. It appears more important however, even to himself, and worthy of the long commentary which he has given it, because, in truth, he cannot refrain from still keeping, in his own mind, some obscure impression of the more common meaning of the term, and extending to a *person*, as thus commonly understood, what is true only of a person, as defined by him. It is as if some whimsical naturalist should give a definition of the word *animal*, exclusive of every winged creature, and should then think that he was propounding a very notable and subtile paradox, in affirming that no animal is capable of rising for a few minutes above the surface of the earth. It would be a paradox, only inasmuch as it might suggest to those who heard it, a meaning *different* from that of the definition; and, but for this misconception, which the author of it himself might share, would be so insignificant a truism, as not to deserve even the humblest of all praise, that of amusing absurdity.

* Essay concerning Human Understanding, B. ii. c. xxvii. sect. 9.

When, in such cases as this, we discover that singular inconsistency, which is to be found even in the very *excellence* of every thing that is *human*,—the perspicacity which sees, at an immeasurable distance, in the field of inquiry, what no other eye has seen, and which yet, in the very objects which it has grasped, is unable to distinguish what is visible to common eyes, are we to lament the imperfection of our mental constitution, which leaves us liable to such error? Or, as in other instances, in which, from our incapacity of judging rightly, we are tempted at first to regret the present arrangement of things, are we not rather to rejoice that we are so constituted by nature? if man had not been formed to *err*, in the same manner as he is formed to reason, and to know, that perfect system of faculties, which excluded error, must have rendered his discernment too quick, not to seize instantly innumerable truths, the gradual discovery of which, by the exercise of his present more limited faculties, has been sufficient to give glory and happiness to whole ages of philosophical inquiry. If, indeed, the field had been absolutely boundless, he might still have continued to advance, as at present, though with more gigantic step, and more searching vision, and found no termination to his unlimited career. But the truths which relate to us physically, on this bounded scene of things in which we are placed, numerous as they are, are still in some measure finite, like that scene itself; and the too rapid discoveries, therefore, of a few generations, as to the most important properties of things, would have left little more for the generations which were to follow, than the dull and spiritless task of learning what others had previously learned, or of teaching what themselves had been taught.

Philosophy is not the mere *passive possession* of knowledge; it is, in a much more important respect, the active exercise of acquiring it. We may truly apply to it what Pascal says of the conduct of life in general. "We think," says he, "that we are seeking *repose*, and all which we are seeking is *agitation*." In like manner, we think that it is *truth* itself which we seek, when the happiness which we are to feel most strongly, is in the mere search; and all that would be necessary, in many cases, to make the object of it appear indifferent, would be to put it fairly within our grasp.

"Our hopes, like towering falcons, aim
At objects in an airy height;
But all the pleasure of the game,
Is afar off to view the flight."

What little value do we set on discoveries that have been long familiar to us, though their own essential value must still continue the same. Even on the whole mass of knowledge, that has been gradually and slowly transmitted to us, we reflect with little interest, unless as it may lead to something yet unknown; and the result of a single new experiment, which bears no proportion to the mass to which it is added, will yet be sufficient to rouse and delight every philosopher in Europe. It is a very shrewd remark of a French writer, in reference to the torpor, which the most zealous inquirer feels, as to every thing which he *knows*, and his insatiable avidity for every thing which he does *not* know, that "if Truth were fairly to show herself as she is, all would be ruined; but it is plain, that she knows very well, of how great importance it is, that she should keep herself out of sight."

If we were to acquire, by an unhappy foresight, the knowledge which is not yet ours, it is very evident, that we must soon regard it, in the same manner, as the knowledge which we have already acquired. The charm of novelty, the delights of gratified curiosity, would not be for us. The prey would be at our feet; and it would be vain, therefore, to expect that ardour of soul, which is kindled, amid the hopes and the fears, the tumult and the competition of the chace.

"If man were *omnipotent*, without being *God*," says Rousseau, "he would be a miserable creature: he would be deprived of the pleasure of *desiring*; and what privation would be so difficult to be borne!" It may be said, at least with equal truth, that, if man were *omniscient*, without the other perfections of the Divinity, he would be far less happy than at present. To infinite benevolence, indeed, accompanied with infinite power, a corresponding infinity of knowledge must afford the highest of all imaginable gratifications, by its subservience to those gracious plans of good, which are manifested in the universe, and which, in making known to us the existence of the Supreme Being, have made him known to us, as the object of grateful love and admiration. But if, in other respects, we were to continue as at present,—with our

erring passions, and moral weaknesses of every sort,—to be doomed to have nothing *to learn*, would be a punishment, not a blessing. In such circumstances, if they were to continue forever, the annihilation of our intellectual being would not be an evil so great, as the mere extinction of our curiosity, and of all the delights and consolations which it affords, not merely when we gratify it, but when we are merely seeking to gratify it.

> "Else wherefore burns,
> In mortal bosoms, this unquenched hope
> That breathes from day to day sublimer things,
> And mocks possession! Wherefore darts the mind,
> With such resistless ardour, to embrace
> Majestic forms, impatient to be free,
> Proud of the strong contention of her toils,
> Proud to be daring?"*—
>
> "Why departs she wide†
> From the dull track and journey of her times,
> To grasp the good she knows not? In the field
> Of things which may be, in the spacious field
> Of science, potent arts, or dreadful arms,
> To raise up scenes, in which her own desires
> Contented may repose,—when things which are
> Pall on her temper like a twice told tale."‡

It is sufficient, that we are endowed with powers of discovery. Our gratitude is due to Heaven for the gift; and the more due for that gracious wisdom, which has known how to *limit* the powers which it gave, so as to produce a greater result of good by the very limitation. Our prejudices, which sometimes forbid reasoning, and the errors, to which our imperfect reasoning often leads us, we should consider, when all their remote relations are taken into account, as indirect sources of happiness; and though we may wish, and justly wish, to analyse them, and to rise above their influence,—for, without this exertion, and consequent feeling of progress, on our part, they would be evil rather than good, —we must not forget, that it is to them we owe the luxury, which

* Pleasures of Imagination, (first form of the poem,) B. i. v. 166—171. 173—5.

† ——Why departs the soul
Wide from the track.—ORIG.

‡ Pleasures of Imagination, (second form of the Poem,) B. i. v. 213—220.

the immediate analysis affords, and the acquisition of the innumerable truths, which the prevalence of these errors, in past ages, has left to be discovered by the ages which succeed.

In this, and in every thing which relates to man, Nature has had in view, not the individual or the single generation only, but the *permanent race*. She has therefore, not exhausted her bounty on any one period of the long succession; but, by a provision, which makes our very weakness instrumental to her goodness, she has given to all, that distant and ever-brightening hope, which, till we arrive at our glorious destination,

> "Leads from goal to goal,
> And opens still, and opens on the soul."

With enough of *mental vigour* to advance still farther in the tracks of science that are already formed, and to point out new tracks to those who are to follow, we have enough of *weakness* to prevent us from exploring and exhausting, what is to occupy, in the same happy search, the millions of millions that are to succeed us. Truth itself, indeed, will always be progressive; but there will still, at every stage of the progress, be something to *discover*, and abundance to *confute*. "In 24,000 years," to borrow the prediction of a very skilful prophet,—"In 24,000 years, there will arise philosophers, who will boast, that they are destroying the errors which have been reigning in the world for 30,000 years past; and there will be people who will believe, that they are then only just beginning to open their eyes."

In these remarks, on the nature of our varied consciousness, and on the unity and identity of the mind in all its varieties,—we have considered the mental phenomena in their *general* aspect. We have now to consider them as arranged in kindred classes,—or rather to attempt the difficult task of the classification itself.

To this I shall proceed in my next Lecture.

LECTURE XVI.

ON THE CLASSIFICATION OF THE PHENOMENA OF MIND.

After considering the Phenomena of the Mind *in general*, we are now to proceed to consider them, in the *separate classes* in which they may be arranged. The phenomena themselves, indeed, are almost infinite, and it might seem, on first reflection a very hopeless task, to attempt to reduce, under a few heads, the innumerable feelings, which diversify almost every moment of our life. But to those, who are acquainted with the wonders, which classification has performed, in the other sciences, the task, difficult as it is, will still seem not absolutely hopeless; though in one respect, its difficulty will be more highly estimated by them, than by others;—since *they* only, who know the advantage of the fixed and definite nature of the objects of classification, in other sciences, can feel, how much greater the obstacles must be, to any accurate arrangement, in a science, of which the objects are indefinite, and complex, incapable of being fixed for a moment in the same state, and destroyed by the very effort to grasp them. But, in this, as in other instances, in which nature has given us difficulties with which to cope, she has not left us to be wholly overcome; or, if we must yield, she has at least armed us for so vigorous a struggle, that we gain additional intellectual strength, even in being vanquished. "Studiorum salutarium, etiam citra effectum, salutaris tractatio est." If she has placed us in a labyrinth, she has at the same time furnished us with a clue, which may guide us, not indeed through all its dark and intricate windings, but through those broad paths, which conduct us into day. The single power, by which we discover resemblance or relation in general, is a sufficient aid to us, in the perplexity and confusion of our first attempts at arrangement. It begins, by converting thousands, and

more than thousands, into one, and, reducing, in the same manner, the numbers thus formed, it arrives at last at the few distinctive characters of those great comprehensive tribes, on which it ceases to operate, because there is nothing left to oppress the memory, or the understanding. If there had been no such science as chemistry, who could have ventured to suppose, that the innumerable bodies, animate and inanimate, on the surface of our globe, and all, which we have been able to explore in the very depths of the earth itself, are reducible, and even in the imperfect state of the science, have been already reduced, to a few simple elements? The science of mind, as it is a science of analysis, I have more than once compared to *chemistry*, and pointed out to you, and illustrated, its various circumstances of resemblance. In this too, we may hope the analogy will hold,—that, as the innumerable aggregates, in the one science, have been reduced and simplified, the innumerable complex feelings in the other will admit of a corresponding reduction and simplification.

The classes which we form, in the mental as well as in the material universe, depend, as you cannot but know, on certain relations which we discover in the phenomena; and the relations according to which objects may be arranged, are of course various, as they are considered by different individuals in different points of view. Some of these relations present themselves immediately, as if to our very glance; others are discoverable only after attentive reflection;—and though the former, merely as presenting themselves more readily, may seem on that account, better suited for the general purpose of arrangement, it is not the less true that the classification, which approaches nearest to perfection, is far from being always that which is founded on relations, that seem at first sight the most obvious. The rudest wanderer in the fields may imagine, that the profusion of blossoms around him,—in the greater number of which he is able, himself, to discover many striking resemblances,—may be reduced into some order of arrangement. But he would be little aware, that the principle according to which they are now universally classed, has relation, not to the parts which appear to him to constitute the whole flower, but to some small part of the blossom, which he does not perceive, at the distance at which he passes it, and which scarcely attracts his eye, when he plucks it from the stem.

To our *mental* classifications the remark is equally applicable. In these too, the most obvious distinctions are not always those which answer best the purposes of systematic arrangement. The phenomena of the mind, are only the mind itself existing in certain states; and, as many of these states are in their nature agreeable, and others disagreeable, this difference, which is to the sentient being himself the most important of all differences, may be supposed, to afford the most obvious principle of classification. What is pleasant, what is painful, are perhaps the first classes, which the infant has formed long before he is capable of distinguishing them by a name; and the very imbecility of idiotism itself, to which nothing is true or false, or right or wrong,—and to which there is no future, beyond the succeeding moment,—is yet capable of making this primary distinction, and of regulating, according to it, its momentary desires.

> "The love of pleasure is man's eldest-born,
> Born in his cradle, living to his tomb.
> Wisdom,—her younger sister, though more grave,
> Was meant to minister, not to dethrone*
> Imperial Pleasure, queen of human hearts."†

The distribution, which we should be inclined to make, of our mental phenomena, according to this obvious principle, would be into those which are pleasing, those which are painful, and those which are neither painful nor pleasing. But, however obvious this first distinction may seem, as a principle of arrangement, the circumstances, on which the differences depend, are so very indefinite, that the distinction,—though it may be useful to have it in view, in its most striking and permanent cases,—cannot be adopted, as the basis of any regular system. To take the mere pleasures and pains of *sense*, for example,—to what intelligible division could we reduce these, which are not merely fugitive in themselves, but vary, from pain to pleasure, and from pleasure to pain, with a change of their external objects, so slight often, as to be scarcely appreciable, and, in many cases, even when the external objects have continued exactly the same? How small, and how variable a boundary separates the warmth which is pleasing from

* Instead of "not to dethrone," the original has "and not to mar."

† Night Thoughts, viii. 595—599.

the heat which pains! A certain quantity of light is grateful to the eye. Increase it;—it becomes, not indifferent,—though that would be a less change,—but absolutely painful; and, if the eye be inflamed, even the small quantity of light,—which was agreeable before, and which seemed, therefore, to admit of being very safely classed among the sources of pleasure,—is now converted into a source of agony. Since it is impossible, therefore, to fix the limits of pain and pleasure, and every affection or state of mind, agreeable, disagreeable, or indifferent, may, by a very trifling change of circumstance, be converted into an opposite state, it is evident, that any division, founded on this vague and transient distinction, must perplex, and mislead us, in our attempts to systematize the almost infinite diversities of thought and feeling, rather than give us any aid in the arrangement.

The great leading division of the mental phenomena which has met with most general adoption by philosophers, is into those which belong to the *understanding*, and those which belong to the *will*;—a division which is very ancient, but though sanctioned by the approbation of many ages, very illogical; since the will, which, in this division, is nominally opposed to the intellect, is so far from being opposed to it in reality, that, even by the asserters of its diversity, it is considered as exercising, in the intellectual department, an empire almost as wide, as in the department allotted to itself. We reason, and plan, and invent, at least as *voluntarily*,—as we esteem, or hate, or hope, or fear. How many emotions are there too, which cannot, without absolute torture, be forced into *either* division! To take only a few instances, out of many,—to what class are we to reduce grief, joy, admiration, astonishment, which perhaps are not phenomena of the mere understanding, and which,—though they may lead indirectly to desires or volitions,—have nothing, in themselves, that is voluntary, or that can be considered as in any peculiar degree connected with the *will*? The division of the mental phenomena into those which belong to the *understanding*, and those which belong to the *will*, seems, therefore, to be as faulty, as would be the division of animals, into those which have legs and those which have wings; since the same animals might have both legs and wings, and since whole tribes of animals have neither one nor the other.

Another division of the phenomena of mind, similar to the former, and of equal antiquity, since it corresponds with the very ancient division of philosophy into the contemplative and the active, is into those which belong to the *intellectual* powers, and those which belong to the *active* powers. "Philosophia et contemplativa est et activa; spectat simulque agit." I must confess, however, that this division of the mental phenomena, as referable to the intellectual and the active powers of the mind,—though it has the sanction of very eminent names, appears to me to be faulty, exactly in the same manner as the former, which, indeed, it may be considered almost as representing, under a change of name. Its parts are not opposed to each other, and it does not include all the phenomena which it should include. Is mere grief, for example, or mere astonishment, to be referred to our intellectual or to our active powers? I do not speak of the faculties which they may or may not call into action; but of the feelings themselves, as present phenomena or states of the mind. And, in whatsoever manner we may define the term *active*, is the mind more active, when it merely desires good and fears evil, when it looks with esteem on virtue, and with indignation, or disgust, and contempt on vice, than when it pursues a continued train of reasoning, or fancy, or historical investigation? when, with Newton, it lays down the laws of planetary motion, and calculates, in what exact point of the heavens, any one of the orbs, which move within the immense range of our solar system, will be found to have its place at any particular moment, one thousand years hereafter; when, with Shakespeare, it wanders beyond the universe itself, calling races of beings into existence, which nature never *knew*, but which nature might almost *own*—or when, with Tacitus, it enrols slowly, year after year, that dreadful reality of crimes and sufferings, which even dramatic horror, in all its license of wild imagination, can scarcely reach—the long unvarying catalogue, of tyrants,—and executioners,—and victims, that return thanks to the gods and die,—and accusers rich with their blood, and more mighty, as more widely hated, amid the multitudes of prostrate slaves, still looking whether there may not yet have escaped some lingering virtue, which it may be a merit to destroy, and having scarcely leisure to feel even the agonies of remorse, in the continued sense of the precariousness of their own gloomy exis-

tence? When it thus records the warning lessons of the past, or expatiates in fields, which itself creates, of fairy beauty or sublimity, or comprehends whole moving worlds within its glance, and calculates and measures infinitude—the mind is surely active, or there are no moments in which it is so. So little, indeed, are the intellectual powers opposed to the active, that it is only when some intellectual energy co-exists with desire, that the mind is said to be active, even by those who are unaccustomed to analytical inquiries, or to metaphysical nomenclature. The love of power, or the love of glory, when there is no opportunity of intellectual exertion, may, in the common acceptation of the word, be as passive as tranquillity itself. The passion is active only when, with intellectual action, it compares means with ends, and different means with each other, and deliberates, and resolves, and executes. Chain some revolutionary usurper to the floor of a dungeon, his ambition may be active still, because he may still be intellectually busy in planning means of deliverance and vengeance; and, on his bed of straw, may conquer half the world. But, if we could fetter his reason and fancy, as we can fetter his limbs, what activity would remain, though he were still to feel that mere desire of power or glory, which, though usually followed by intellectual exertion, is itself as prior to these exertions, all that constitutes ambition, as a passion? There would, indeed, still be in his mind the awful elements of that force, which bursts upon the world with conflagration and destruction; but, though there would be the *thunder*, it would be the thunder sleeping in its cloud. To *will*, is to act with desire; and, unless in the production of mere muscular motion, it is only *intellectually* that we can act. To class the active powers, therefore, as distinct from the intellectual, is to class them, as opposed to that, without which, as active powers, they cannot even exist.

It may, certainly, be contended, that, though the mental phenomena, usually ranked under this head, are not immediately connected with action, they may yet deserve this generic distinction, as leading to action indirectly,—and if they led, in any peculiar sense, to action, however indirectly, the claim might be allowed. But, even with this limited meaning, it is impossible to admit the distinction asserted for them. In what sense, for example, can it be said, that *grief* and *joy*, which surely are not to be classed un-

der the intellectual powers of the mind, lead to action even indirectly, more than any other feelings, or states, in which the mind is capable of existing? We may, indeed, *act* when we are joyful or sorrowful, as we may act when we perceive a present object, or remember the past; but we may also remain at rest, and remain equally at rest, in the one case, as in the other. Our intellectual energies, indeed, even in this sense, as indirectly leading to action, are, in most cases, far more active, than sorrow, even in its very excess of agony and despair; and, in those cases in which sorrow *does* truly lead to action, as when we strive to remedy the past, the mere regret which constitutes the sorrow, is not so closely connected with the conduct which we pursue, as the intellectual states of mind that intervened—the successive judgments, by which we have compared projects with projects, and chosen at last the plan, which, in relation to the object in view, has seemed to us, upon the whole, the most expedient.

If, then, as I cannot but think, the arrangement of the mental phenomena, as belonging to two classes of powers, the intellectual and the active, be at once incomplete, and not accurate, even to the extent to which it reaches, it may be worth while to try at least some other division, even though there should not be any very great hope of success. Though we should fail in our endeavour to obtain some more precise and comprehensive principle of arrangement, there is also some advantage gained, by viewing objects, according to new circumstances of agreement or analogy. We see, in this case, what had long passed before us unobserved, while we were accustomed only to the order and nomenclature of a former method; for, when the mind has been habituated to certain classifications, it is apt, in considering objects, to give its attention only to those properties which are essential to the classification, and to overlook, or at least comparatively to neglect, other properties equally important and essential to the very nature of the separate substances that are classed, but not included in the system as characters of generic resemblance. The individual object, indeed, when its place in any system has been long fixed and familiar to us, is probably conceived by us less, as an *individual*, than as one of a class of individuals, that agree in certain respects, and the frequent consideration of it, as one of a class, must fix the peculiar relations of the class, more strongly in the mind, and

weaken proportionally the impression of every other quality that is not so included. A *new* classification, therefore, which includes, in its generic character, those neglected qualities, will of course draw to them attention, which they could not otherwise have obtained; and, the more various the views are, which we take of the objects of any science, the juster consequently, because the more equal, will be the estimate which we form of them. So truly is this the case, that I am convinced, that no one has ever read over the mere terms of a new division, in a science, however familiar the science may have been to him, without learning more than this new division itself, without being struck with some property or relation, the importance of which he *now* perceives most clearly, and which he is quite astonished that he should have overlooked so long before.

I surely need not warn you, after the observations which I made in my Introductory Lectures, on the Laws and Objects of Physical Inquiry in General, that every *classification* has reference only to our mode of considering objects; and that, amid all the varieties of systems which our love of novelty, and our love of distinction, or our pure love of truth and order may introduce, the phenomena themselves, whether accurately, or inaccurately classed, continue unaltered. The mind is formed susceptible of certain affections. These states or affections we may generalize more or less; and, according to our generalization, may give them more or fewer names. But whatever may be the extent of our vocabulary, the mind itself,—as independent of these transient designations, as He who fixed its constitution,—still continues to exhibit the same unaltered susceptibilities, which it originally received; as the flowers, which the same divine Author formed, spring up, in the same manner, observing the same seasons, and spreading to the sun the same foliage and blossoms, whatever be the system and the corresponding nomenclature according to which botanists may have agreed to rank and name their tribes. The great Preserver of nature has not trusted us, with the dangerous power of altering a single physical law which He has established, though He has given us unlimited power over the *language* which is of our own creation. It is still with us, as it was with our common sire in the original birthplace of our race. The Almighty presents to us all the objects that surround us, wherever we turn our

view; but He presents them to us, only that we may give them names. Their powers and susceptibilities they already possess, and we cannot alter these, even as they exist in a single atom.

It may, perhaps, seem absurd, even to suppose, that we should think ourselves able to change, by a few generic words, the properties of the substances which we have classed; and if the question were put to us, as to this effect of our language, in any particular case, there can be no doubt, that we should answer in the negative, and express astonishment that such a question should have been put. But the illusion is not the less certain, because we are not aware of its influence; and, indeed, it could no longer be an illusion, if we were completely aware of it. It requires, however, only a very little reflection on what has passed in our own minds, to discover, that, when we have given a *name* to any quality, that quality acquires immediately, in our imagination, a comparative importance, very different from what it had before; and though nature in itself be truly unchanged, it is ever after, relatively to our conception, different. A difference of words is, in this case, more than a mere verbal difference. Though it be not the expression of a difference of doctrine, it very speedily becomes so. Hence it is, that the same warfare, which the rivalries of individual ambition, or the opposite interests, or supposed opposite interests, of nations have produced, in the great theatre of civil history, have been produced, in the small but tumultuous field of science, by the supposed incompatibility of a few abstract terms; and, indeed, as has been truly said, the sects of philosophers have combated, with more persevering violence, to settle what they mean by the constitution of the world, than all the conquerors of the world have done to render themselves its masters.

Still less, I trust, is it necessary to repeat the warning, already so often repeated, that you are not to conceive, that any classification of the states or affections of the mind, as referable to certain powers or susceptibilities, makes these powers any thing different and separate from the mind itself, as originally and essentially susceptible of the various modifications of which these powers are only a shorter name. And yet what innumerable controversies in philosophy have arisen, and are still frequently arising, from this very mistake, strange and absurd as the mistake may seem. No sooner, for example, were certain affections of the

mind classed together, as belonging to the *will*, and certain others, as belonging to the *understanding*,—that is to say, no sooner was the mind, existing in certain *states*, denominated the understanding, and in certain other states denominated the will,—than the understanding and the will ceased to be considered as the same individual substance, and became immediately, as it were, two opposite and contending powers, in the empire of mind, as distinct, as any two sovereigns, with their separate nations under their controul; and it became an object of as fierce contention to determine, whether certain affections of the mind belonged to the *understanding*, or to the *will*, as, in the management of political affairs, to determine, whether a disputed province belonged to one potentate, or to another. Every new diversity of the faculties of the mind, indeed, converted each faculty into a *little independent mind*,—as if the original mind were like that wonderful animal, of which naturalists tell us, that may be cut into an almost infinite number of parts, each of which becomes a polypus, as perfect as that from which it was separated. The only difference is, that those who make us acquainted with this wonderful property of the *polypus*, acknowledge the divisibility of the parent animal; while those, who assert the spiritual multiplicity, are at the same time assertors of the absolute indivisibility of that which they divide.

After these warnings, then, which, I trust, have been almost superfluous, let us now endeavour to form some classification of the mental phenomena without considering, whether our arrangement be similar or dissimilar to that of others. In short, let us forget, as much as possible, that any prior arrangements have been made, and think of the phenomena only. It would, indeed, require more than human vision, to comprehend all these phenomena of the mind, in our gaze at once,—

> "To survey,
> Stretch'd out beneath us, all the mazy tracts
> Of passion and opinion,—like a waste
> Of sands, and flowery lawns, and tangling woods,
> Where mortals roam bewilder'd."

But there is a mode of bringing all this multitude of objects, within the sphere of our narrow sight, in the same manner, as the expanse of landscape, over which the eye would be long in wander-

ing,—the plains, and hills, and woods, and waterfalls,—may be brought, by human art, within the compass of a mirror, far less than the smallest of the innumerable objects which it represents.

The process of *gradual generalizing*, by which this reduction is performed, I have already explained to you. Let us now proceed to avail ourselves of it.

All the feelings and thoughts of the mind, I have already frequently repeated, are only the mind itself existing in certain states. To these successive states our knowledge of the mind, and consequently our arrangements, which can comprehend only what we know, are necessarily limited. With this simple word *state*, I use the phrase *affection* of mind as synonymous, to express the momentary feeling, whatever it may be,—with this difference only, that the word *affection* seems to me better suited for expressing that momentary feeling, when considered as an *effect*,—the feeling itself as a state of the mind, and the relation which any particular state of mind, may bear to the preceding circumstances, whatever they may be that have induced it. Our *states* of mind, however, or our *affections* of mind, are the simplest terms, which I can use for expressing the whole series of phenomena of the mind in all their diversity, as existing phenomena, without any mixture of hypothesis, as to the particular mode in which the successive changes may be supposed to arise.

When we consider, then, the various states or affections of the mind, which form this series, one circumstance of difference must strike us, that some of them arise immediately, in consequence of the presence of external objects,—and some, as immediately, in consequence of certain preceding affections of the mind itself. The one set, therefore, are obviously the result of the laws both of matter and of mind,—implying, in external objects, a power of affecting the mind, as well as, in the mind, a susceptibility of being affected by them. The other set result from the susceptibilities of the mind itself, which has been formed by its divine Author to exist in certain states, and to exist in these in a certain relative order of succession. The affections of the one class arise, because some external object is present;—the affections of the other class arise, because some previous change in the states of the mind has taken place.

To illustrate this distinction by example, let us suppose our-

selves, in walking across a lawn, to turn our eyes to a particular *point*, and to perceive there *an oak*. That is to say, the presence of the oak, or rather of the light reflected from it, occasions a certain new state of the mind, which we call a sensation of *vision*, an affection, which belongs to the mind alone, indeed, but of which we have every reason to suppose, that the mind, *of itself*, without the presence of light, would not have been the subject. The peculiar sensation, therefore, is the result of the presence of the light reflected from the oak; and we perceive it, because the mind is capable of being affected by external things. But this affection of the mind, which has an external object for its immediate cause, is not the only mental change which takes place. Other changes succeed it, without any other external impression. We compare the oak with some other tree which we have seen before, and we are struck with its superior magnificence and beauty;—we imagine how some scene more familiar to us would appear, if it were adorned with this tree, and how the scene before us would appear, if it were stripped of it;—we think of the number of years, which must have passed, since the *oak* was an *acorn*;—and we moralize, perhaps, on the changes, which have taken place, in the little history of ourselves and our friends, and, still more, on the revolutions of kingdoms,—and the birth and decay of a whole generation of mankind,—while it has been silently and regularly advancing to maturity, through the sunshine and the storm. Of all the variety of states of the mind, which these processes of thought involve, the only one, which can be ascribed to an external object as its direct cause, is the primary perception of the oak; the rest have been the result not immediately of any thing external, but of preceding states of the mind;—that particular mental state, which constituted the perception of the oak, being followed immediately by that different state, which constituted the remembrance of some tree observed before, and this by that different state which constituted the comparison of the two; and so successively, through all the different processes of thought enumerated. The mind, indeed, could not without the presence of the oak,—that is to say, without the presence of the light which the oak reflects,—have existed in the state which constituted the perception of the oak. But as little could any external object, without this primary mental affection, have produced immediate-

ly, any of those other states of the mind, which followed the perception. There is, thus, one obvious distinction of the mental phenomena; as in relation to their causes, external or internal; and, whatever other terms of subdivision it may be necessary to employ, we have, at least, *one* boundary, and know what it is we mean, when we speak of the external and internal affections of the mind.

The first stage of our generalization, then, has been the reduction of all the mental phenomena to two definite classes, according as the causes, or immediate antecedents, of our feelings are themselves mental or material. Our next stage must be the still further reduction of these, by some new generalizations of the phenomena of each class.

The former of these classes,—that of our *external* affections of the mind,—is, indeed, so very simple, as to require but little subdivision. The other class, however, that of the internal affections or states of the mind,—comprehends so large a proportion of the mental phenomena, and these so various, that, without many subdivisions, it would be itself of little aid to us in our arrangement.

The first great subdivision, then, which I would form, of the internal class, is into our *intellectual states of mind*, and our *emotions*. The latter of these classes comprehends all, or nearly all the mental states, which have been classed, by others, under the head of active powers. I prefer, however, the term *emotions*, partly, because I wish to avoid the phrase *active powers*,—which, I own, appears to me awkward and ambiguous, as opposed to other powers, which are not said to be passive; and partly, for reasons before mentioned, because our intellectual states or energies,—far from being opposed to our active powers,—are, as we have seen, essential elements of their activity,—so essential, that, without them, *these* never could have had the name of *active;* and because I wish to comprehend, under the term, various states of the mind, which cannot, with propriety, in any case, be termed *active*, —such as grief, joy, astonishment,—and others which have been commonly, though, I think, inaccurately, ascribed to the intellectual faculties,—such as the feelings of beauty and sublimity,—feelings, which are certainly much more analogous to our other emotions,—to our feelings of love or awe,—for example,—than to our

mere remembrances or reasonings, or to any other states of mind, which can strictly be called intellectual. I speak at present, it must be remembered, of the mere feelings produced by the contemplation of beautiful or sublime objects,—not of the judgment, which we form, of objects, as more or less fit to excite these feelings; the judgment being truly *intellectual*, like all our other judgments; but being, at the same time, as distinct from the *feelings* which it measures, as any other judgment from the external or internal objects which it compares.

The exact meaning of the term *emotion*, it is difficult to state in any form of words,—for the same reason which makes it difficult, or rather impossible, to explain, what we mean by the term thought, or the terms sweetness or bitterness. What can be more opposite than pleasure and pain! the real distinction of which is evidently familiar, not to man only, but to every thing that lives; and yet if we were to attempt to show, in what their difference consists, or to give a verbal definition of either, we should find the task to be no easy one. Every person understands, what is meant by an *emotion*, at least as well, as he understands what is meant by any intellectual power; or, if he do not, it can be explained to him, only by stating the number of feelings to which we give the name, or the circumstances which induce them. All of them, indeed, agree in *this* respect, that they imply peculiar vividness of feeling, with *this* important circumstance, to distinguish them from the vivid pleasures and pains of sense,—that they do not arise immediately from the presence of external objects, but subsequently to the primary feelings, which we term sensations or perceptions. Perhaps if any definition of them be possible, they may be defined to be *vivid feelings*, arising immediately from the consideration of objects, perceived, or remembered, or imagined, or from other prior emotions. In some cases,—as in that of the emotion which beauty excites,—they may succeed so rapidly to the primary perception, as almost to form a part of it. Yet we find no great difficulty of analysis, in separating the *pleasing effect* of beauty, from the perception of the mere form and colour, and can very readily imagine the same accurate perception of *these*, without the feeling of beauty, as we can imagine the same feeling of beauty to accompany the perception of forms and colours very different.

"Sure the rising sun,
O'er the cerulean convex of the sea,
With equal brightness, and with equal warmth,
Might roll his fiery orb; nor yet the soul
Thus feel her frame expanded, and her powers
Exulting in the splendour she beholds,
Like a young conqueror moving through the pomp
Of some triumphal day. When join'd at eve,
Soft murmuring streams, and gales of gentlest breath,
Melodious Philomela's wakeful strain
Attemper, could not man's discerning ear,
Through all its tones, the sympathy pursue;
Nor yet this breath divine of nameless joy
Steal through his veins, and fan the awaken'd heart,
Mild as the breeze, yet rapturous as the song."*

Our emotions, then, even in the cases in which they seem most directly to *co-exist* with perception, are still easily distinguishable from it; and, in like manner, when they arise from the *intellectual states* of memory, imagination, comparison, they are equally distinguishable from what we *remember*, or *imagine*, or *compare*. They form truly a separate order of the internal affections of the mind,—as distinct from the intellectual phenomena, as the class, to which they both belong, is distinguishable from the class of external affections, that arise immediately from the presence of objects without.

* Pleasures of Imagination, Book III. v. 464—478.

LECTURE XVII.

CLASSIFICATION OF THE PHENOMENA OF MIND.—CLASS I. EXTERNAL STATES.—INTRODUCTORY.

In my last Lecture, Gentlemen, I endeavoured to prepare the way, for arranging, in certain classes, that almost infinite variety of phenomena, which the mind exhibits,—pointing out to you the peculiar difficulty of such a classification, in the case of phenomena so indefinite and fugitive, as those of the mind, and the nature of that generalizing principle of analogy or resemblance, on which every classification, whether of the material or mental phenomena, must alike proceed. I then took a slight view of the primary, leading, divisions of the phenomena of the mind, which have met with most general adoption,—the very ancient division of them, as of two great departments, belonging to the *understanding* and the *will*,—and the similar division of them, as referable to two classes of powers, termed the *intellectual* and *active powers* of the mind. I explained to you the reasons, which led me to reject both these divisions, as at once incomplete, from not comprehending all the phenomena, and inaccurate, from confounding even those phenomena, which they may truly be considered as comprehending.

After rejecting these, it became necessary to attempt some new arrangement, especially as we found reason to believe that some advantage could scarcely fail to arise from the attempt itself, even though it should fail as to its great object; and we, therefore, proceeded to consider and arrange the phenomena, as nearly as possible, in the same manner as we should have done, if no arrangement of them had ever been made before.

In thus considering them, the first important distinction which occurred to us, related to their *causes*, or immediate antecedents.

as foreign to the mind, or as belonging to the mind itself; a distinction too striking to be neglected as a ground of primary division. Whatever that may be, which feels and thinks, it has been formed to be susceptible of certain changes of state, in consequence of the mere presence of external objects, or at least of changes produced in our mere bodily organs, which, themselves, may be considered as external to the mind; and it is susceptible of certain other changes of state, without any cause external to itself, one state of mind being the immediate result of a former state of mind, in consequence of those laws of succession of thoughts and feelings, which He, who created the immortal soul of man, as a faint shadow of His own eternal spirit, has established in the constitution of our mental frame. In conformity with this distinction, we made our first division of the phenomena of the mind, into its *external* and *internal* affections; the word *affection* being used, by me, as the simplest term for expressing a mere change of state induced, in relation to the affecting cause, or the circumstances, whatever they may have been, by which the change was immediately preceded.

The class of *internal affections*,—by far the more copious and various of the two,—we divided into two great orders, our *intellectual* states of mind, and our *emotions*, words which are, perhaps, better understood, before any definition is attempted of them, than after it, but which are sufficiently intelligible without definition, and appear to exhaust completely the whole internal affections of the mind. We have sensations or perceptions of the objects that affect our bodily organs; these I term the sensitive or external affections of the mind; we remember objects—we imagine them in new situations—we compare their relations; these mere conceptions or notions of objects and their qualities, as elements of our general knowledge, are what I have termed the intellectual states of the mind; we are moved with certain lively feelings, on the consideration of what we thus perceive, or remember, or imagine, or compare, with feelings, for example, of beauty, or sublimity, or astonishment, or love, or hate, or hope, or fear; these, and various other vivid feelings, analogous to them, are our *emotions*.

There is no portion of our consciousness, which does not appear to me to be included in one or other of these three divisions. To know all our sensitive states or affections,—all our intellectual

states,—and all our emotions, is to know all the states or phenomena of the mind;

> "Unde animus scire incipiat, quibus inchoet ortus
> Principiis seriem rerum tenuemque catenam
> Mnemosyne; Ratio unde, rudi sub pectore tardum
> Augeat imperium, et primum mortalibus ægris
> *Ira, dolor, metus*, et *curæ* nascantur inanes."*

It must not be conceived, however, that, in dividing the class of internal affections of the mind, into the two distinct orders of intellectual states, and emotions; and, in speaking of our emotions as subsequent in their origin, I wish to be understood, that these never are combined, at the same moment, in that sense of combination, as applied to the mind, which I have already explained too frequently, to need again to define and illustrate it. On the contrary, they very frequently concur; but, in all cases in which they do concur, it is easy for us to distinguish them by reflective analysis. The emotion of *pity*, for example, may continue in the mind, while we are *intellectually* planning means of relief, for the sufferers who occasioned it; but, though the pity and the reasoning *co-exist*, we have little difficulty in separating them in our reflection. It is the same with all our vivid desires, which not merely lead to action, but accompany it. The sage, who in the silence of midnight, continues still those labours which the morning began, watching, with sleepless eye, the fate of some experiment, that almost promises to place within his hand the invisible thread, which leads into the labyrinths of nature, or exploring those secrets of the mind itself, by the aid of which he is afterwards to lay down rules of more accurate philosophizing, and to become the legislator of all who think, is not cheered, in his toils, merely by occasional anticipations of the truths that await his search. The pleasure of future discovery is, as it were, a constant light, that shines upon him and warms him; and, in the very moments in which he watches, and calculates, and arranges, there are other principles of his nature, in as lively exercise as his powers of observation and reasoning. The warrior, at the head of an army, which he has often led from victory to victory, and which he is leading again to new fields of conflict, does not think of glory

* Gray de Principiis Cogitandi, Lib. I. v. 1—5.

only in the intervals of meditation or action. The passion which he obeys, is not a mere inspiring genius, that occasionally descends to rouse or invigorate. It is the *soul* of his continued existence,—it marches with him, from station to station,—it deliberates with him in his tent,—it conquers with him in the field,—it thinks of new successes, in the very moment of vanquishing; and, even at night, when his body has yielded at last to the influence of that fatigue, of which it was scarcely conscious, while there was room for any new exertion by which fatigue could be increased, and when all the anxieties of military command are slumbering with it, the passion that animates him, more active still, does not quit him as he rests, but is wakeful in his very sleep, bringing before him dreams, that almost renew the tumults and the toils of the day. Our emotions, then, may *co-exist* with various sensations, remembrances, reasonings,—in the same manner as these feelings, sensitive or intellectual, may variously co-exist with each other. But we do not think it less necessary to class our sensations of vision as different from our sensations of smell, and our comparison, as itself different from the separate sensations compared, because we may, at the same moment, both see and smell a rose, and may endeavour to appreciate the relative amount of pleasure which that beautiful flower thus doubly affords. In like manner, our intellectual states of mind, and our emotions, are not the less to be considered as distinct classes, because any vivid passion may continue to exist together with those intellectual processes of thought, which it originally prompted, and which, after prompting, it prolongs.

In all these cases, however, in which an emotion *co-exists* with the results of other external or internal influences, it is still easy to distinguish its subsequence to the feelings that preceded it. Pity, for example, as in the case to which I have before alluded, may co-exist with a long train of thoughts, that are busily occupied in endeavouring to relieve most effectually the misery which is pitied; but the misery must have been itself an object of our thought, before the state of mind which constitutes pity, could have been induced. The emotion which we feel, on the contemplation of beauty, may continue to co-exist with our mere perception of the forms and colours of bodies; but these forms and colours must have been perceived by us, before the delightful emotion could

have been originally felt. In short, our emotions, though like the warmth and radiance, which seem to accompany the very presence of the sun, rather than to flow from it—they may seem in many cases to be a part of the very feelings which excite them, are yet, in every instance, as truly secondary to these feelings, as the light which beams on us, on the surface of our earth, is subsequent to the rising of the great orb of day.

As yet, we have advanced but a short way, in our generalization of the mental phenomena: though, as far as we have advanced, our division seems sufficiently distinct and comprehensive. The mind is susceptible of certain existing affections, of certain intellectual modifications which arise from these, and of certain emotions which arise from both; that is to say, it is capable of existing in certain states, the varieties of which correspond with these particular designations. We see, we remember, or compare, what we have seen, regard what we see, or remember, or compare, with desire or with aversion; and of these, or of states analogous to these, the whole of life, sensitive, intellectual, or moral, is composed. Every minute, therefore, of every hour, in all its variety of occupation, is but a portion of this complicated tissue. Let us suppose ourselves, for example, looking down from an eminence, on the prospect beneath.—On one side all is desolation,—and we see perhaps, at a little distance, some half-roofless hovel, as miserable, as the waste immediately around it, which has scarcely the appearance of a dwelling for any living thing, but seems rather, as if Nature herself had originally placed it there, as a part of the general sterility and ruggedness. On the other side, all is plenty and magnificence;—and we see, amid lawns and wooded banks, a mansion as different in aspect, as if the beings that inhabited it were of a different race,—which, as a part of the scene, where it is placed, accords so harmoniously with the whole, that, without it, the scene itself would appear incomplete, and almost incongruous, as if stripped of some essential charm. To view these separate dwellings, and all the objects around them—if no other feeling arose—would be to have a series of external or sensitive affections only. But it is scarcely possible for us to view them, without the instant rise of those intellectual states of mind which constitute comparison, and of those affections of another order, which constitute the emotions of admi-

ration and desire in the one case, and in the other the emotions that are opposite to admiration and desire, together perhaps with some of those bitter emotions which the sight of misery makes in every breast that is not unworthy of so sacred an influence.

In this example, our intellectual states of mind, and our emotions, have for their objects things really existing without; but the external affections of our senses, though the most permanent, and usually the most vivid, and therefore the best remembered, of all the sources of our internal feelings are far from being necessary, in every instance, to the production of these. There is a constant, or almost constant succession of internal affections of mind, of thoughts, and emotions, following thoughts and emotions, which even though we were to be rendered incapable of a single new sensation,—if our animal life could in these circumstances be long protracted,—would still preserve to us also that *intellectual* and *moral* existence, which is the only life, that is worthy of the name. The knowledge which we acquire from *without*, lives in us *within;* and, in such a case as that which I have now imagined, our memory would be to us in some measure every sense, which we had lost, creating to us again that very world which had vanished before us. If we could compare and love or hate only things actually present, we should be far from the maturity and perfection of an infant's mind, and should scarcely be advanced to the rank of idiocy, which limited as it is in its range, still comprehends in its little sphere of foresight and memory, some few moments at least of the past, and even a moment or two of the future. It is with the future and with the past, that, intellectually and morally, we are chiefly conversant. To these high capacities of our being, the subjects, which can exercise our powers and feelings, however distant in time or place, are as it were *everlastingly present*,—like that mysterious eternal *now*, of which theologians speak,—in which past, present, and future are considered, as, in every moment of every age, alike visible to the omniscient glance of the Divinity. We love the virtues, of which we read, with the same sort of emotion, with which we love the virtues that are mingling with us in the present hour. The patriot of the most remote age,—of whom we know nothing, but the historical tale, of his voluntary perils or sufferings, in some generous cause,—is like the friend of our familiar intercourse;

and the sacrifices, that wrought the happiness of millions of beings, who are now not merely *unknown* to us, but of whom not a single name is remembered on the earth, awake a sort of veneration, that is almost combined with gratitude, as if we were in the presence of a personal deliverer. It is the same with absolute *unreality*, nor merely with that which no longer exists, but with that which never had existence. We are struck with the beauty of what we only imagine, in the same manner, though perhaps not with the same liveliness of feeling, as we are struck with the beauty of external things. Our emotions then, however dependent they may have been originally, are *now* no longer dependent, on these external things. They may arise, from memory or imagination, as readily as from perception; but when they arise from memory or imagination, they are as truly distinguishable from what we remember and imagine, as they are distinguishable from our perceptions of mere forms and colours and other sensible qualities, when they arise from what we perceive.

To have arranged all the varieties of feelings of which the mind is susceptible, in the three great divisions to which our arrangement as yet has extended,—though it is unquestionably to have made some advance in our generalization,—is yet to have made only a small part of the necessary progress; since each of these three orders comprehends almost innumerable phenomena, which require the aid of more minute division. In the class of our external affections, indeed, this subdivision is very simple and easy; since our separate organs of sense furnish, of themselves, a very evident ground of distinction. But the two orders of our internal affections have no such obvious and tangible distinction, to serve as the basis of their subdivisions. They admit, however,—as I trust we shall find,—of distinctions, which, though not equally *obvious*, are almost equally definite, and require only a very little reflection, to be understood as clearly, as the organic relations, according to which we distinguish our sensations of sound, or smell, or sight. It is not my intention, however, to proceed, at present, to the consideration of these subdivisions; since the nature of the more minute arrangement will, I conceive, be better understood, when we come to treat of each separate order fully, than they could be now, by the mere enumeration of a few names, of the propriety of which, as mere names, and, still

more of the propriety of the arrangement which they involve, you could not be expected to form any accurate judgment, without a fuller elucidation.

All which I must request you, then, at present, to keep in remembrance, is the *primary* division, which we have made, of the different states of the mind into two great classes, and the *secondary* division which we have made of *one* of these classes, into its two very comprehensive orders.—You will remember, then, that the various affections, of which the mind is susceptible, are either *external*, as they arise from causes without the mind, or *internal*, as they arise from previous states, of the mind itself;—that of these internal affections, some are mere conceptions or notions of former feelings, or of objects and of the qualities or relations of objects, as remembered or variously combined or compared,—results of different susceptibilities of our intellectual constitution, to which different names have been given, conception, memory, imagination, abstraction, reason, and other synonymous terms;—that these internal affections or states of the mind, which I have denominated its intellectual states, are distinctly separable, in our reflective analysis, from certain vivid feelings, that may arise instantly in the mind, on the consideration of these mere intellectual results, or on the perception of objects without,—feelings of admiration, love, desire, and various other analogous, or opposite states of the mind;—but that there is such an order of vivid feelings, which arise, in many cases, on the mere consideration of what we perceive or remember, or imagine, or compare, and that this order is what I wish to be distinguished by the name of *emotions*.

According to this division, therefore, of the mental phenomena, into those which are of external and those which are of internal origin, and the subdivision which we have made of this latter class, I shall proceed to consider, first, The external powers or susceptibilities of the mind; 2dly, The intellectual powers or susceptibilities of the mind; and, 3dly, Its susceptibilities of emotion,—beginning with that class, which we have every reason to suppose to be first, in the actual order of developement,—the powers or susceptibilities of the mind, in its immediate relation to its own bodily organs.

Certain states of our bodily organs are directly followed by certain states or affections of our mind;—certain states or affec-

tions of our mind are directly followed by certain states of our bodily organs. The nerve of sight, for example, is affected in a certain manner; vision, which is an affection or state of the mind, is its consequence. I will to move my hand; the hand obeys my will, so rapidly, that the motion, though truly subsequent, seems almost to accompany my volition, rather than to follow it. In conformity with the definitions before given of power and susceptibility, the one as implying a reference to something consequent, the other a reference to something antecedent, I should be inclined to consider the sensation which follows the presence of an external object as indicating a mental susceptibility of being so affected;—the production of muscular motion by the will, as indicating a mental power. But the terms are of less consequence, if you understand fully the distinction that is implied in them; and you may be allowed still, in compliance with the general language, to speak of the power or faculty of sensation or perception, if you mean nothing more, as often as you use these terms, than that the mind is affected in a certain manner, and, therefore, must have had a previous susceptibility of being thus affected whenever certain changes have previously taken place, in that nervous system, with which it is connected.

In considering the susceptibilities of the mind, I comprehend, under its *external* affections, all those phenomena or states of the mind, which are commonly termed *sensations;* together with all our internal organic feelings of pleasure or pain, that arise from states of the nervous system, as much as our other sensations. Many of these are commonly ranked under another head, that of *appetites*,—such as hunger, thirst, the desire of repose, or of change of muscular position, which arises from long-continued exertion; the oppressive anxiety, which arises from impeded respiration, and various other diseases, arising from bodily uneasiness. But these appetites evidently admit of being analysed into two distinct elements,—a pain of a peculiar species, and a subsequent desire of that which is to relieve the pain,—states of mind, of which one may immediately succeed the other; but which are, unquestionably, as different in themselves, as if no such succession took place, —as different as the pleasure of music is from the mere desire of enjoying it again, or as the pain of excessive heat, in burning, from the subsequent desire of coolness. The pain, which is *one*

element of the appetite, is an *external* affection of the mind, to be classed with our other sensations,—the succeeding desire, which is another element of it, is an *internal* affection of the mind, to be classed with our other emotions of desire. We might have felt the same pain of hunger, though we had not been aware, that it arose from want of food, and consequently could not have felt any desire of food, but merely the general desire of relief which attends every disagreeable sensation. We might have felt the same uneasiness, which we term thirst, though we had not been aware, that it would be relieved by a draught of any beverage,—and the same pain of impeded respiration or fatigue, though nature had not led us instinctively, in the one case to perform the muscular actions necessary for expiration and inspiration; in the other, to change our posture, and thus give repose to the wearied limbs. Whatever be the organic states, which occasion these painful feelings, that are elementary in our appetites, there can be no doubt, that some organic affections precede them, as truly as some affection of an external organ precedes the pain of a burn, or the painful temporary blindness, when we are dazzled with excessive light. And though, in the case of the appetite, we may give the same name to the pain, and to the desire of that which is to relieve the pain; or rather, may give one name to the combination of the two feelings,—which is not to be wondered at, where the two feelings are so universally and so immediately successive,—this error, or rather this mere abbreviation of language, is no reason that we should consider the elementary pain itself, as different, in kind, from our other pains, that have not merely half a term to express them, but a whole undivided word of their own. The pain, of which the appetite desires the relief, is a *sensation*, as much as any other internal bodily pain which we feel,—a state or affection of the mind, arising, immediately and solely, from a state or affection of the body,—which is the only definition that can be given of a *sensation*.

The pain of hunger and thirst, then, and, in general, every internal pain arising from a state of the bodily organs,—and distinct from the subsequent desires which they occasion,—are as truly *sensations*, as any other sensations; and the desires that follow these particular sensations, are as truly *desires*, as any other desires of which we have the consciousness. We may, indeed, if

we resolve to invent a new name, for those particular desires, that terminate immediately in the relief of bodily pain, or the production of bodily pleasure, give to such desires the name of *appetites;* but it is surely a very simple analysis only, that is necessary to separate, from the desire of relief, the feeling of the pain which we wish to be relieved; since it is very evident, that the pain *must* have existed primarily *before* any such desire could be felt.

That the various species of *uneasiness*, which are elementary parts of our appetites, recur, at intervals, in which there is some degree of regularity, does not alter their nature, when they *do* recur, so as to render a peculiar arrangement necessary for including them. The mental states, which constitute the uneasiness that is felt, recur thus at intervals, not from any thing peculiar in the mind itself, the phenomena of which alone we are considering, but because the body is only at intervals in the state, which precedes or induces those peculiar mental affections. If, instead of the *two* or *three* periods, at which the appetite of hunger recurs, the nervous system were, one hundred times in the day, at intervals the most irregular, in that state, which is immediately followed by the feeling of hunger, the painful feeling,—and the consequent desire of food, which has been found to relieve it,—would of course, be felt one hundred times in the day. The regularity, therefore, of the recurrence of this state of the nerves, is a phenomenon, which belongs to the consideration of the physiologist of the *body*, not of the physioligist of the *mind*, whose immediate office is finished, when he can trace any particular feeling of the mind to some affection of our organic frame, as its invariable antecedent; and who knowing, therefore, that the feeling of pain in any of our appetites, is the effect or result of some organic affection, is not surprised that it should not recur, when that organic affection has not previously taken place,—any more than he is surprised that we do not enjoy the fragrance of roses or violets, when there are no particles of odour to be inhaled by us; or do not listen to songs and choral harmonies, when there is no vibration to be transmitted to the auditory nerve. It is at certain regular periods, that the full light of day, and the twilight of morning and evening, are perceived by us. But we do not think it necessary, on this account, to give any peculiar name to these visual perceptions, to distinguish them from others less

regular, because we know, that the reason of the *periodic* recurrence of these perceptions, is that the various degrees of sunshine, which produce them, exist only at such intervals. We are *hungry*, when the nerves of the stomach are in a certain state; we perceive the sun, when the organ of vision is in a certain state. It is as little wonderful, that we should *not* have the feeling of hunger, except when the nerves of the stomach are in this state, as that we should *not* have the perception of the meridian sun, when the sun itself is beneath our horizon.

Since the mere pains of appetite, however, most important as they truly are, for the ends which they immediately answer, are yet of little importance in relation to our general knowledge, it is unnecessary to dwell on them at length. But I cannot quit the consideration of them, without remarking that admirable provision which the gracious Author of Nature has made by them, for the preservation not of our *being* merely, but of our *well-being*—of that health and vigour, without which, a frail and feverish existence, at least in its relation to this earthly scene, would be of little value. The daily waste of the body requires daily supply to compensate it; and if this supply be neglected, or be inadequate—or, on the other hand, if it be inordinately great, *disease* is the necessary consequence. To preserve the *medium*, therefore, or at least to prevent any very great deviation from it, *He*, who planned our feelings and faculties as well as our bodily frame, has made it painful for us to omit what is so important to life; and painful also to prolong the supply in any great proportion, after the demands of nature have been adequately satisfied. If food had afforded gratification only as relieving the pain of hunger, these natural boundaries of appetite would have required no aid from *moral* or *physical* lessons of temperance. But the indulgence of nature, in conferring on us the sense of taste, and making food a luxury as well as a relief, we abuse, as we abuse her other kindnesses. The pleasures of this most intemperate of senses, may lead, in some degree, beyond the due point of supply, the greater number of mankind; and may drive, to excesses more injurious, all those herds of unthinking sensualists who prefer the sickly enjoyment of an hour, to the health and virtue, and intellectual as well as physical comfort, of more frugal repasts. Yet even to them, nature points out in the feeling of satiety, where intemperance begins, or where

it has already begun; and if they persist, notwithstanding this feeling, how much more would they be in danger of over-loading the powers of life, if there had been no such feeling of growing uneasiness, to suppress the avidity of insatiable indulgence.

"Though a man knew," says Dr Reid, "that his life must be supported by *eating*, reason could not direct him when to eat, or what; how much, or how often. In all these things, appetite is a much better guide than reason. Were reason only to direct us in this matter, its calm voice would often be drowned in the hurry of business, or the charms of amusement. But the voice of appetite rises gradually, and, at last, becomes loud enough to call off our attention from any other employment."*

If indeed, the necessary supply were long neglected, the morbid state of the body which would ensue, though no pain of actual hunger were to be felt, would convince, at last, the sufferer of his folly. But the providence of our gracious Creator, has not trusted the existence of man to the dangerous admonition of so rough a monitor, which might, perhaps, bring his folly before him only when it was too late to be wise. The pain of hunger—that short disease, if it may be so termed, which it is in our power so speedily to cure, prevents diseases that more truly deserve the name. Between *satiety* on one side, and *want* on the other, the stream of health flows tranquilly along, which, but for these boundaries, would speedily waste itself and disappear; as the most magnificent river, which, if dispersed over a boundless plain, would flow almost into nothing, owes its abundance and majestic beauty to the very *banks* that seem to confine its waters within too narrow a channel.

Besides those particular feelings of bodily uneasiness, which, as attended with desire, constitute our appetites, there are other affections of the same class, which, though not usually ranked with our external sensations or perceptions, because we find it difficult to ascribe them to any local organ, are unquestionably to be arranged under the same head; since they are feelings which arise, as immediately and directly from a certain state of a part of the nervous system, as any of the feelings which we more commonly ascribe to external sense. Of this kind is that muscular pleasure of *alacrity* and action, which forms so great a part of the

* On the Active Powers, Essay III. c. 1.

delight of the *young* of every species of living beings, and which is felt, though in a less degree, at every period of life, even the most advanced; or which, when it ceases in age, only gives place to another species of muscular pleasure—that which constitutes the pleasure of ease—the same species of feeling, which doubles, to ever one, the delight of exercise, by sweetening the repose to which it leads, and thus making it indirectly, as well as directly, a source of enjoyment.

In treating of what have been termed the *acquired perceptions of vision*, which are truly what give to vision its range of power, and without which the mere perception of colour would be of little more value than any other of the simplest of our sensations, I shall have an opportunity of pointing out to you some most important purposes, to which our muscular feelings are instrumental; and in the nicer analysis which I am inclined to make of the perceptions commonly ascribed to touch,—if my analysis be accurate—we shall find them operating at least as powerfully. At present, however, I speak of them merely as sources of animal pleasure or pain, of pleasure during moderate exercise and repose, and of pain during morbid lassitude, or the fatigue of oppression and unremitted labour.

The pleasure which attends good health, and which is certainly more than mere freedom from pain, is a pleasure of the same kind. It is a pleasure, however, which, like every other long continued bodily pleasure, we may suppose, to be diminished by habitual enjoyment; and it is therefore, chiefly, on recovery from sickness, when the habit has been long broken by feelings of an opposite kind, that we recognize what it must originally have been; if, indeed it be in our power to separate, completely, the mere animal pleasure from those mingling reflecting pleasures which arise from the consideration of past pain, and the expectation of future delight. To those among you, who know what it is to have risen from the long captivity of a bed of sickness, I need not say, that every function is, in this case, more than mere vigour; it is a happiness, but to breathe and to move; and not every limb merely, but almost every fibre of every limb, has its separate sense of enjoyment. "What a blessed thing it is to breathe the fresh air!" said Count Struensee, on quitting his dungeon, though he was quitting it only

to be led to the place of execution, and cannot, therefore, be supposed to have felt much more than the mere animal delight.

> "He does not scorn it, who, imprisoned long
> In some unwholèsome dungeon, and a prey
> To sallow sickness, which the vapours, dank
> And clammy of his dark abode have bred,
> Escapes at last to liberty and light;
> His cheek recovers soon its healthful hue;
> His eye relumines its extinguish'd fires;
> He walks, he leaps, he runs—is wing'd with joy,
> And riots in the sweets of every breeze."*

On these mere animal gratifications, however, I need not dwell any longer. There is much more to interest our curiosity, in the sensations and perceptions which more frequently go under those names; to the consideration of which I shall proceed in my next Lecture.

* Cowper's Task, book i.

LECTURE XVIII.

ON THE MORE DEFINITE EXTERNAL AFFECTIONS OF MIND IN GENERAL.

In my Lecture yesterday, after some further elucidation of the *triple division* which we formed of the mental phenomena, as external or sensitive affections of the mind, intellectual states of the mind,—emotions,—I proceeded to consider the first of these divisions, of which the characteristic distinction is, that the phenomena included in it have their causes or immediate antecedents *external* to the mind itself. In this division, I comprehended, together with the feelings which are universally ascribed to certain organs of sense, many feelings, which, though unquestionably originating in states of our bodily organs, as much as our other sensations, are yet commonly ranked as a different order—such as our various appetites, or rather that elementary uneasiness which is only a part, but still an essential part of our appetites, and which is easily distinguishable from the mere desire, which is the other element; since, however rapid the succession of them may be, we are yet conscious of them as successive. The particular uneasiness, it is evident, must have been felt as a sensation before the desire of that which is to relieve the uneasiness could have arisen. To the same class, too, I referred the various organic feelings, which constitute the animal pleasure of good health, when every corporeal function is exercised in just degree; and in a particular manner, our *muscular* feelings, whether of mere general lassitude or alacrity; or those fainter differences of feelings which arise in our various motions and attitudes, from the different muscles that are exercised, or from the greater or less contraction of the same muscles. These muscular feelings, though they may be almost unnoticed by us, during the influence of stronger sensations,

are yet sufficiently powerful, when we attend to them, to render us, independently of sight and touch, in a great measure sensible of the position of our body in general, and of its various parts; and comparatively indistinct as they are, they become,—in many cases, as in the acquired perceptions of vision, for example, and equally too, as I conceive, in various other instances, in which little attention has been paid to them by philosophers,—*elements* of some of the nicest and most accurate judgments which we form.

It is, however, to that widest and most important order of our external affections, which comprehends the feelings more commonly termed *sensations*, and universally ascribed to particular organs of sense, that we have now to proceed. In these, we find the rude elements of all our knowledge, the materials on which the mind is ever operating, and without which, it seems to us almost impossible to conceive that it could ever have operated at all, or could, even in its absolute inactivity, have been conscious of its own inert existence.

This order of our external feelings comprehends all those *states* of mind, however various they may be, which immediately succeed the changes of state, produced, in any of our organs of sense, by the presence of certain external bodies. The mental affections are themselves,—as I have said,—commonly termed *sensations;* but we have no verb, in our language, which exactly denotes what is expressed in the substantive noun. To *feel* is, in its two senses, either much more limited or much more general, being confined, in its restricted meaning, to the sensations of one organ, that of touch,—and as a more general word, being applicable to all the varieties of our consciousness, as much as to those particular varieties, which are immediately successive to the affections of our organs of sense. We are said, in this wider use of the term, to feel indignation, love, surprise, as readily as we are said to feel the warmth of a fire, or the coldness of snow.

In defining our sensations, to be those mental affections, which are immediately successive to certain organic affections, produced by the action of external things, it is very evident, that I have made two assumptions,—first of the existence of external things, that affect our organs of sense; and, secondly of organs of sense, that are affected by external things;—unless, indeed, the assumption of the existence of organs of sense be considered,—as in phi-

losophic truth it unquestionably is—only another form of the assumption of the existence of external things, since, in relation to the sentient mind, the organs thus supposed to exist, are, in strictness of language, *external*, as much as the objects supposed to act upon them. All of which we are truly conscious, in sensation, is the mental affection, the last link of the series, in the supposed process; what we term our perceptions of organs of sense, or of other external things that act upon these—our ideas, for example, of a brain or an eye, a house or a mountain, being as truly states of our own percipient mind, and nothing but states of our own mind, as our feeling of joy or sorrow, hope or fear, love or hate, —to which we never think of giving an *existence*, nor a direct and immediate *cause* of existence, *out* of ourselves. By the very constitution of our nature, however, or by the influence of associations as irresistible as intuition itself,—it is impossible for us not to feel this essential reality in the causes of one set of our mental affections, in the same manner as it is impossible for us to ascribe it to another set. The brain, the eye, the house, the mountain, we believe, and cannot but believe, to have external existence, independent of our own; the joy and sorrow, hope and fear, love and hate, we believe, and cannot but believe, to be merely states of our own mind, occasioned by other former states of mind, and dependent, therefore, for their continuance, on our own continued existence only. Even in our wildest dreams,—in which we imagine all things that are possible, and almost all things which are impossible; we never consider our joy or sorrow, as directly indicative of any thing separate from ourselves, and independent of us,

> "While o'er our limbs sleep's soft dominion spread,
> What tho' our soul fantastic measures trod,
> O'er fairy fields; or mourn'd along the gloom
> Of pathless woods; or down the craggy steep
> Hurl'd headlong, swam with pain the mantled pool;
> Or scaled the cliff,—or danced on hollow winds,
> With antic shapes, wild natives of the brain;"

it was still only the cliff, the wood, the pool, which we considered as *external:* the *sorrow* with which we mourned along our gloomy track, the *pain* with which we swam the turbid water, the *horror* which we felt at the antic shapes, with which we mingled in

the ghostly dance, were felt to be wholly *in ourselves*, and constituted, while they lasted, the very feeling of our own existence.—The belief of an external world is, however, to come afterwards under our full examination:—It is sufficient, for the present, to know, that in the period after infancy, to which alone our memory extends, we are led, irresistibly, to believe in it; and that the belief of it, therefore, in whatever manner it may have originated in the imperfect perceptions of our infancy, is now, when those perceptions are mature, so completely beyond the power of argument to overcome, that it exists, as strongly, in those who reason against it, as in those who reason for it;—that the reference to a direct external cause, however, does not accompany *every* feeling of our mind, but is confined to a certain number of that long succession of feelings, which forms the varied consciousness of our life,—and that the feelings, with respect to which this reference is made, are the class of sensations, which, when combined with this reference, have commonly been distinguished by the name of perceptions. That we have no perfect evidence of the external existence thus ascribed by us,—independently of our own irresistible belief of it, may be allowed to the sceptic; and the reasoning of Doctor Reid on the subject, as far as he proceeds beyond the assertion of this irresistible belief, and attempts, what has been commonly regarded as a confutation of the scepticism on this point,—by representing it as proceeding on a mistake, with respect to the nature of our ideas,—is *itself*, as we shall afterwards find, nugatory and fallacious. But still, notwithstanding the errors of philosophers with respect to it, the belief itself is, in the circumstances in which we now exist, so truly a part of our constitution, that to contend against it in argument would be to admit its validity, since it would be to suppose the existence of some one whom we are fairly undertaking to instruct or to confute.

In what circumstance the intuitive belief,—if, as I have said, the belief be in any case intuitive,—arises; or rather, in how large a proportion of cases, in which the reference seems primary and immediate, it is, more probably, the effect of secondary associations transferred from sense to sense, will appear better after the minute analysis on which we are to enter, of the different tribes of our sensations.

In referring to the particular class of sensations, and conse-

quently to an *external cause*, a certain number only of the affections of our mind, there can be no doubt, that we proceed *now*, in the mature state of our knowledge, with more accuracy, than we could have attained, in that early period of life, when our original feelings were more recent. We have now a clearer and more definite belief of an external world, and of objects of sensations separate from our sensations themselves; without which general belief, previously obtained, we should as little have ascribed to an external organic cause many of our feelings, which we now ascribe to one—our sensations of sound and fragrance, for example, —as we now ascribe to such an immediate external cause, our emotions of joy or sorrow. A still more important acquisition, is our knowledge of our own organic frame, by which we are enabled, in a great measure, to verify our sensations,—to produce them, as it were at pleasure, when their external objects are before us, and in this way to correct the feelings, which have risen spontaneously, by those, which we ourselves produce. Thus, when, *in reverie*, our conceptions become peculiarly vivid, and the objects of our thought seem almost to exist in our presence; if only we stretch out our hand, or fix our eyes on the forms that are permanently before us, the illusion vanishes. Our organ of touch or of sight, is not affected in the same manner, as if the object that charms us in our musing dream, were really present; and we class the feeling, therefore, as a conception,—not as a sensation,—which, but for the opportunity of this correction, we should unquestionably, in many instances, have done.

But though, in forming the class of our sensations, we derive many advantages from that full knowledge which the experience of many years has given, we purchase these by disadvantages which are perhaps as great, and which are greater, from the very circumstance, that it is absolutely out of our power to estimate their amount. What we consider as the *immediate* sensation, is not the simple mental state, as it originally followed that corporeal change, which now precedes it; but, at least in the most striking of all the tribes of our sensations, is a very different one. We have the authority of reason, *a priori*, as shewing no peculiar connexion of the points of the retina with one place of bodies more than with another; and we have the authority also of observation, in the celebrated case of the young man who was couched

by Cheselden, and in other cases of the same peculiar species of blindness, in which the eyes, by a surgical operation, have been rendered for the first time capable of distinct vision, that if we had had no organ of sense but that of sight, and no instinctive judgment had been superadded to mere vision, we should not have had the power of distinguishing the magnitude and distant place of objects;—a mere expanse of colour being all which we should have perceived, if even colour itself could in these circumstances, have been perceived by us as expanded. Yet it is sufficient now, that rays of light, precisely the same in number, and in precisely the same direction, as those which at one period of our life, exhibited to us colour, and colour alone, should fall once more on the same small expanse of nerve, to give us instantly that boundlessness of vision, which, almost as if the fetters of our mortal frame were shaken off, lifts us from our dungeon, and makes us truly citizens, not of the *earth* only, but of the *universe*. Simple as the principle may now seem, which distinguishes our secondary or acquired perceptions of vision from those which were primary and immediate, it was long before the distinction was made; and till a period which—if we consider it in relation to those long ages of philosophic inquiry, or, rather, most unphilosophic argumentation, which had gone before—may be considered almost as in our own time, longitudinal distance was conceived to be as completely an original object of sight as the varieties of mere colour and brilliancy. There may, therefore—though we have not yet been able, and may never be able, to discover it,—be a corresponding difference in our other sensations, which now seem to us simple and immediate. In the case of sound, indeed, there is a very evident analogy to these visual acquired perceptions; since a constant reference to *place* mingles with our sensations of this class, in the same manner, though not so distinctly, as in our perceptions of sight. We perceive the sound, as it were near or at a distance, in one direction rather than in another; as, in the case of longitudinal distance in vision, we perceive *colour* at one distance rather than at another. Yet there is as little reason, from the nature of the organic changes themselves, to suppose, that different affections of our auditory nerves should *originally* give us different notions of distance, as that such notions should originally be produced by different affections of the retina: and, as in sight and hear-

ing, so it is far from improbable, that, in all our senses, there may, by the reciprocal influence of these upon each other, or by the repeated lessons of individual experience in each, be a similar modification of the original simple feelings, which, in that first stage of existence that opened to us the world and its phenomena, each individual organ separately afforded. Our reasoning with respect to them, therefore, as original organs of sense, may, perhaps, be as false, as our chemical reasoning would be, were we to attempt to infer the properties of an uncombined acid, or alkali, from our observation of the very different properties of a neutral salt, into the composition of which we know that the acid or the alkali has entered.

If, indeed, it were in our power to be introduced to a society, like that of which Diderot speaks, in his Letter on the Deaf and Dumb, and to hold communication with them, all our doubts on this subject would be removed. "What a strange society," says he, "would five persons make, each of them endowed with one only of our five different senses; and no two of the party with the same sense! There can be no doubt, that, differing, as they must differ, in all their views of nature, they would treat each other as madmen, and that each would look upon the others with all due contempt. It is, indeed, only an image of what is happening every moment in the world; we have but one sense, and we judge of every thing."*—"There is, however," he justly remarks, "*one* science, though but one science, in which the whole society of the different senses might agree,—the science which has relation to the *properties of number*. They might each arrive, by their separate abstractions, at the sublimest speculations of arithmetic and algebra; they might fathom the depths of analysis, and propose and resolve problems of the most complicated equations, as if they were all so many Diophantuses. It is perhaps," he adds, "what the oyster is doing in its shell."†

From such a society,—if, indeed, we could hold any communication with these profound algebraists, except in their common science of numbers,—we might undoubtedly learn, what are the direct immediate affections of mind, to which our senses individually give rise, and consequently, how much, while feeling has

* Œuvres, tom. ii. p. 12. † P. 131.

blended with feeling, they have reciprocally operated on each other. But, in our present circumstances, unaided by intercourse with such living abstractions, it is impossible for us to remove wholly this uncertainty, as to the kind and degree of influence, which experience may have had, in modifying our primary sensations. We may wish, indeed, to be able to distinguish our *present* feelings, from those which the same objects *originally* excited; but, since no memory can go back to the period, at which we did not perceive longitudinal distance, as it were, immediately by the eye, as little, we may suppose, can any memory go back to the period, when other sensations, less interesting than those of vision, were first excited. Could we trace the series of feelings, in a single mind,—as variously modified, in the progress from infancy to maturity,—we should know more of the intellectual and moral nature of man, than is probably ever to be revealed to his inquiry, —when in ages, as remote from that in which we live, and perhaps as much more enlightened, as our own age may be said to be in relation to the period of original darkness and barbarism, he is still to be searching into his own nature, with the same avidity as now. He must, indeed be a very dull observer, who has not felt, on looking at an infant, some desire to know the little processes of thought, that are going on in his curious and active mind; and who, on reflecting on the value, as an attainment in science, which the sagest philosopher would set on the consciousness of those acquisitions which infancy has already made, is not struck with that nearness, in which, in some points, extreme knowledge and extreme ignorance may almost be said to meet. What metaphysician is there, however subtile and profound in his analytical inquiries, and however successful in the analyses which he has made, who would not give all his past discovery, and all his hopes of future discovery, for the certainty of knowing with exactness what every infant feels? The full instruction, which such a view of our progressive feelings, from their very origin, in the first sensations of life, would afford, Nature, in her wisdom, however, has not communicated to us,—more than she has communicated to us the nature of that state of being, which awaits the soul after it has finished its career of mortality. Our existence seems, in our conception of it, never to have had a beginning. As far back as we can remember any event, there is

always a period, that appears to us still farther back, the events of which we cannot distinguish; as, when we look toward the distant horizon, we see, less and less distinctly, in the long line which the sunshine of evening still illuminates, plains, and woods, and streams, and hills, more distant, half melting into air, beyond which our eye can find nothing,—though we are still certain, that other woods, and streams, and plains are there, and that it is only the imperfection of our sight, which seems to bound them as in another world. It is to man, when he thinks upon his own beginning, as if he felt himself in a world of enchantment, amid the shades and flowers of which he had been wandering, unconscious of the time at which he entered it, or of the objects that are awaiting him, when he shall have arrived at the close of that path, whose windings still lead him forward,—and knowing little more, than that he is himself happy, and that the unknown Being, who has raised this magnificent scene around him, must be the Friend of the mortal, whom he has deigned to admit into it.

"Well pleased he scans
The goodly prospect,—and, with inward smiles,
Treads the gay verdure of the painted plain,—
Beholds the azure canopy of heaven,
And living lamps, that over-arch his head,
With more than regal splendour,—bends his ear
To the full choir of water, air, and earth;
Nor heeds the pleasing error of his thought,
Nor doubts the painted green or azure arch,
Nor questions more the music's mingling sounds,
Than space, or motion, or eternal time;
So sweet he feels their influence to attract
His fixed soul, to brighten the dull glooms
Of care, and make the destined road of life
Delightful to his feet. So, fables tell,
The adventurous hero, bound on hard exploit,
Beholds with glad surprise, by secret spell
Of some kind sage, the patron of his toils,
A visionary paradise disclosed,
Amid the dubious wild;—With streams, and shades,
And airy songs, the enchanted landscape smiles,
Cheers his long labours, and renews his frame."*

* Pleasures of Imagination, Book III. v. 493—514. The fixed soul, v. 505. Exploits, v. 508; and Spells, v. 509. *Orig.*

The philosophic use of the term *sensation* does not necessarily imply, what, in its popular use, is considered almost as involved in it; and perhaps, therefore, it may not be superfluous to warn you, that it is not confined to feelings, which are pleasurable or painful, but extends to every mental affection, that is the immediate consequence of impression on our organs of sense,—of which mental states or affections, many, and, as I am inclined to think, by far the greater number, are of a kind, that cannot be termed either agreeable or disagreeable. Of the objects of sight, for example, which are of such very frequent occurrence, how *few* are there, at which we look, either with pleasure or with pain,—if we except that indirect pleasure, which, in particular cases, they may afford, as communicating to us information, that is valuable in itself, or as gratifying even our idlest curiosity. To take one of the most striking cases of this sort,—though we may derive, from the perusal of a work that interests us, the purest delight, it is a delight, resulting only from the conceptions, which the author, in consequence of the happy contrivance of symbolic characters, has been able to transfuse, as it were, from his own mind into ours; but, during all the time of the perusal, sensations, almost innumerable, have been excited in us, by the separate characters, with which the pages are covered, that have never mingled even the faintest direct pleasure, with the general emotion, which they, and they alone, have indirectly produced.

"I apprehend," says Dr Reid, "that, besides the sensations, that are either agreeable or disagreeable, there is still a greater number that are indifferent. To these we give so little attention, that they have no name, and are immediately forgot, as if they had never been; and it requires attention to the operations of our minds, to be convinced of their existence. For this end, we may observe, that, to a good ear, every human voice is distinguishable from all others. Some voices are pleasant, some disagreeable; but the far greater part can neither be said to be one or the other. The same thing may be said of other sounds, and no less of tastes, smells, and colours; and if we consider, that our senses are in continual exercise while we are awake, that some sensation attends every object they present to us, and that familiar objects seldom raise any emotion, pleasant or painful,—we shall see reason, besides the agreeable and disagreeable, to admit a third class

of sensations, that may be called indifferent. The sensations that are indifferent, are far from being useless. They serve as signs, to distinguish things that differ; and the information we have concerning things external, comes by their means. Thus, if a man had no ear to receive pleasure from the harmony or melody of sounds, he would still find the sense of hearing of great utility; though sounds gave him neither pleasure nor pain, of themselves, they would give him much useful information; and the like may be said of the sensations we have by all the other senses."*

It is as *signs*, indeed, far more than as mere pleasures in themselves, that our sensations are to us of such inestimable value. Even in the case to which I before alluded, of the symbolic or arbitrary characters of a language, when we consider all the important purposes to which these are subservient, as raising us originally from absolute barbarism, and saving us from relapsing into it, there might be an appearance of paradox, indeed, but there would be perfect truth in asserting, that the sensations which are themselves indifferent, are more precious, even in relation to happiness itself, than the sensations which are themselves accompanied with lively delight, or rather, of which it is the very essence to be delightful. Happiness, though necessarily involving present pleasure, is the direct or indirect, and often the very distant result of feelings of every kind, pleasurable, painful, and indifferent. It is like the beautiful profusion of flowers, which adorn our summer fields. In our admiration of the foliage, and the blossoms, and the pure airs and sunshine, in which they seem to live, we almost forget the darkness of the soil in which their roots are spread. Yet how much should we err, if we were to consider them as deriving their chief nutriment from the beams that shine around them, in the warmth and light of which we have wandered with joy. That delightful radiance alone would have been of little efficacy, without the showers, from which, in those very wanderings, we have often sought shelter at noon; or at least without the dews, which were unheeded by us, as they fell silently and almost insensibly on our evening walk.

With the common division of our sensations into five classes,—those of smell, taste, hearing, sight, touch, we have been familiar, almost from our childhood; and though the classification may be

* On the Intellectual powers, Essay II. c. 16.

far from perfect, in reference to our sensations themselves, considered simply as affections of the mind, it is sufficiently accurate, in reference to the mere organs of sense; for, though our sensations of *heat* and *cold*, in one very important respect, which is afterwards to be considered by us, have much less resemblance to the other sensations which we acquire by our organs of touch, or at least to sensations, which we are generally supposed to derive from that organ, than to sensations, which we receive by the medium of other organs, our sensations of smell and sound for example—still, as they arise from an affection of the same organ, they may be more conveniently referred to the same, than to any other class; since, if we quit that obvious line of distinction, which the difference of organs affords, we shall not find it easy to define them by other lines as precise.

But whatever may be the arbitrary division or arrangement which we may form either of our sensations themselves, or of the organs that are previously affected, the susceptibility of the mind, by which it is capable of being affected by the changes of state in our mere bodily organs, must be regarded as, in every sense of the word, of primary value in our mental constitution. To the individual, indeed, it may be said to be in itself all the things which are around him, however near or afar; because it is truly that, by which alone all things near or afar become known to him. It constitutes by this mutual relation, which it establishes, a power of more than magic agency, before which the great gulf, that appeared to separate forever the worlds of matter and of spirit, disappears,—which thus links together substances, that seemed, in their nature, incapable of any common bond of union,—and which, bringing the whole infinity of things, within the sphere of our own mind, communicates to it some faint semblance of the omnipresence of its Author. "What is that organ,"—says an eloquent French writer, speaking of the eye,—"what is that astonishing organ, in which all objects acquire, by turns, a successive existence,—where the spaces, the figures, and the motions, that surround me, are as it were *created*,—where the stars, that exist at the distance of a hundred millions of leagues, become a part of myself,—and where in a single half inch of diameter, is contained the universe?" This power of external sense, which first awakes us into life, continues, ever after, to watch, as it were, round the

life which it awoke, lavishing on us perpetual varieties of instruction and delight; and if, from the simple pleasures, and simple elementary knowledge which it immediately affords, we trace its influence, through all the successive feelings to which it indirectly gives rise, it may be said to exist, by a sort of intellectual and moral transmutation, in the most refined and etherial of all our thoughts and emotions. What Grey says of it,—in the commencement of his beautiful fragment De Principiis Cogitandi, addressed to his friend West, is not too high a panegyric,—that every thing delightful and amiable, friendship and fancy, and wisdom itself, have their primary source in it.

"Non illa leves primordia motus
Quanquam parva, dabunt. Lætum vel amabile quicquid
Usquam oritur, trahit hinc ortum; nec surgit ad auras,
Quin ea conspirent simul, eventusque secundent.
Hinc variæ vitai artes, ac mollior usus,
Dulce et amicitiæ vinclum: Sapientia dia
Hinc roseum accendit lumen, vultuque sereno,
Humanas aperit mentes, nova gaudia monstrans.
Illa etiam, quæ te (mirum) noctesque diesque
Assidue fovit inspirans, linguamque sequentem
Temperat in numeros, atque horas mulcet inertes,
Aurea non alia si jactat origine Musa."*

So much, indeed, of human knowledge, and of all that is valuable and delightful in human feeling, involves these elementary sensations, as it were in the very essence of the thoughts and feelings themselves, that one of the most acute of modern French metaphysicians, and, with scarcely an exception, all the philosophers of the French metaphysical school, who are his followers, have considered the whole variety of human consciousness, as mere sensation variously transformed; though, in stating the nature of this transformation, and the difference of the sensations as transformed from the primary forms of mere external feeling, they have not been so explicit, as the assertors of a system so paradoxical ought assuredly to have been. On the fallacies of this very prevalent theory of mind, however, which is afterwards to be examined by us fully, I need not at present make any remarks.

Though this excessive simplification of the phenomena of hu-

* Lib. I. v. 13—25. and 26—31.

man thought and feeling is, however, far more than the phenomena truly allow, it is not the less certain, that all the varieties of our consciousness, though not mere *transformations* of external sense, are, when traced to their source, the *results* of sensation, in its various original forms. In inquiring into the phenomena of our senses, then, we begin our inquiry, where knowledge itself begins, and though the twilight, which hangs over this first opening of intellectual life, is perhaps only a presage, or a part of that obscurity which is to attend the whole track of human investigation, it still is twilight only, not absolute darkness. We can discover *much*, though we cannot discover *all;* and where absolute *discovery* is *not* allowed, there is still left to us a probability of conjecture, of which, in such limited circumstances, even philosophy may justly avail herself, without departing from her legitimate province.

LECTURE XIX.

BRIEF NOTICE OF THE CORPOREAL PART OF THE PROCESS, IN SENSATION.

THE mental phenomena, of the class which is at present under our consideration, being those, which arise, in consequence of certain previous affections of our organs of sense, it is necessary, that we should take some notice of the corporeal part of the process; though it must always be remembered, that it is the last part of the process, *the mental affection only*, which truly belongs to our science,—and that, if this, in all its varieties, had been the result of any other species of affections of organs constituted in any other manner,—as long as there was the regular correspondence of certain mental affections with certain organic affections,—the philosophy of mind would have continued precisely the same as now. Our systems of anatomy, and of the physiology of our mere bodily frame, would indeed have been different,—but not that more intimate physiology, which relates to the functions of the animating spirit, whose presence is life, and without which our bodily frame, in all its beautiful adaptation of parts to parts, is a machine, as inert and powerless, as the separate atoms that compose it.

The great essential organ of all sensation is the *brain*, with its appendages, particularly the *nerves* that issue from it to certain organs, which are more strictly termed the organs of sense; as it is there the immediate objects, or external causes of sensation, the particles of light, for example, in vision, or of odour in smell, arrive, and come, as it were, into contact with the sensorial substance. Each organ, as you well know, has objects peculiar to itself, which it would be superfluous to enumerate; and since the

blind are still sensible of sound, the deaf of colour, and both of smell, and taste, and touch, there must evidently be some difference, either in the sensorial substance itself which is diffused over the different organs, or in the mode of its diffusion and exposure in the different organs, from which this striking diversity of their relative sensibilities proceeds. The nervous matter however, considered separately from the coats in which it is enveloped, is of the same half-fibrous, but soft and pulpy texture, as the substance of the brain itself, and is in perfect continuity with that substance, forming, therefore, with it, what may be considered as one mass, as much as the whole brain itself may be considered as one mass; which has, indeed, for its chief seat the great cavity of the head; the

> "Superas hominis sedes, arcemque cerebri;
> Namque illic posuit solium, et sua templa sacravit,
> Mens animi;—*

but which extends, by innumerable ramifications, over the whole surface, and through the internal parts of the body. The mind, in that central brain in which it is supposed to reside, communicating with all these extreme branches, has been compared, by a very obvious, but a very beautiful similitude, to the parent Ocean, receiving from innumerable distances the waters of its filial streams:

> "Ac uti longinquis descendunt montibus amnes,
> Velivolus Tamisis, flaventisque Indus arenæ,
> Euphratesque, Tagusque, et opimo flumine Ganges,
> Undas quisque suas volvens,—cursuque sonoro
> In mare prorumpunt; hos magno acclinis in antro
> Excipit Oceanus, natorumque ordine longo
> Dona recognoscit venientum, ultroque serenat
> Coeruleam faciem, et diffuso marmore ridet.
> Haud aliter species properant se inferre novellæ
> Certatim menti." †

In the brain itself, the anatomist is able to shew us, with perfect clearness, many complicated parts, which we must believe to be adapted for answering particular purposes in the economy of life; but when we have gazed with admiration on all the wonders

* Gray de Princip, Cogit. lib. i. v. 48—50.
† Gray de Princip. Cogit. lib. i. v. 54—63.

which his dissecting hand has revealed to us, and have listened to the names with which he most accurately distinguishes the little cavities or protuberances which his knife has thus laid open to our view, we are still as ignorant as before of the particular purposes to which such varieties of form are subservient; and our only consolation is,—for there is surely some comfort in being only as ignorant as the *most learned*,—that we know as much of the distinct uses of the parts as the anatomist himself, who exhibits them to us, and teaches us how to name them. A structure, in every respect different, though assuredly less fit than the present which has been chosen by infinite wisdom, might, as far as we know, have answered exactly the same end; which is as much as to say, that our ignorance on the subject is complete. The only physiological facts of importance, in reference to sensation, are. that if the nerves, which terminate in particular organs, be greatly diseased, the sensations which we ascribe to those particular organs cease; and cease, in like manner, if the continuity of the nerves be destroyed, by cutting them in any part of their course, or if, without loss of absolute continuity, their structure, in any part of their course be impaired by pressure, whether from tight ligatures drawn around them for the purpose of experiment, or from natural morbid causes. In short, if the brain and nerves be in a sound state, and certain substances be applied to certain parts of the nervous system,—as, for instance, sapid bodies to the extremities of the nerves of taste, or light to that expansion of the optic nerve, which forms what is termed the retina,—there is then instant sensation; and when the brain itself is not in a sound state to a certain extent, or when the nerve which is diffused on a particular organ is, either at this extremity of it, or in any part of its course, to a certain degree impaired, then there is no sensation, though the same external causes be applied. This very slight general knowledge of the circumstances in which sensation takes place, and of the circumstances in which it does NOT take place, is all the knowledge which physiology affords us of the corporeal part of the process;—and it is likely to continue so forever,—at least in all the more important respects of our ignorance,—since any changes which occur in the corpuscular motion, and consequent new arrangement of the particles of the substance of the brain and nerves, corresponding with the diversities of feeling during those

particular states,—if such corpuscular motions or changes do really take place,—are probably far too minute to be observable by our organs; even though we could lay open all the internal parts of the brain to complete observation, without destroying, or at all affecting, the usual phenomena of life:—

> In "following life through creatures we dissect,
> We loose it, in the moment we detect."

Indeed, we are not able to do even so much as this; for life has already vanished, long before we have come upon the verge of its secret precincts. It is like a Magician, that operates at a distance on every side, but still keeps himself apart, within a narrow circle. If we remain *without* the circle, we may gaze with never-ceasing admiration, on the wonders that play in rapid succession before our eyes. But, if we rush within, to force an avowal of the secret energy that produces them, the enchanter and the enchantments alike are fled.

The brain, then, and the various nerves of sense in continuity with it, may, when taken together, be considered as forming *one* great organ, which I would term briefly the *sensorial* organ, essential to life, and to the immediate production of those mental phenomena which constitute our sensations, and, perhaps, too, modifying in some measure, directly or indirectly, all the other phenomena of the mind.

> "Dum mens alma caput cerebrique palatia celsa
> Occupat, et famulos sublimis dirigit artus,
> Et facili imperio nervorum flectit habenas,
> Illius ad nutum sensus extranea rerum
> Explorant signa, et studio exemplaria fido
> Ad dominam adducunt; vel qui statione locantur
> Vicina, capitisque tuentur limina, ocelli,
> Naresque, auriculæque, et vis arguta palati;
> Vel qui per totam currit sparso agmine molem
> Tactus, ad extremas speculator corporis aras.
> His sensim auxiliis instructa fidelibus, olim
> Mens humilis nulloque jacens ingloria cultu
> Carceris in tenebris mox sese attolit in auras
> Dives opum variarum, et sidera scandit Olympi."

Of the nature of the connexion of this great sensorial organ with the sentient mind, we never shall be able to understand more

than is involved in the simple fact, that a certain affection of the nervous system precedes immediately a certain affection of the mind. But, though we are accustomed to regard this species of mutual succession of bodily and mental changes, as peculiarly inexplicable, from the very different nature of the substances which are reciprocally affected, it is truly not more so than any other case of succession of events, where the phenomena occur in substances that are not different in their properties, but analogous, or even absolutely similar; since, in no one instance of this kind, can we perceive more than the uniform order of the succession itself; and of changes, the successions of which are all absolutely inexplicable, or, in other words, absolutely simple, and unsusceptible, therefore, of further analysis, none can be justly said to be more or less so than another. That a peculiar state of the mere particles of the brain, should be followed by a change of state of the sentient mind, is truly wonderful; but if we consider it strictly, we shall find it to be by no means more wonderful, than that the arrival of the moon, at a certain point of the heavens, should render the state of a body on the surface of our earth, different from what it otherwise would naturally be or that the state of every particle of our globe, in its relative tendencies of gravitation, should be instantly changed, as it unquestionably would be, by the destruction of the most distant satellite of the most distant planet of our system, or probably too, by the destruction even of one of those remotest of stars, which are illuminating their own system of planets, so far in the depth of infinity, that their light,—to borrow a well-known illustration of sidereal distance,—may never yet have reached our earth, since the moment at which they darted forth their first beams, in the creation of the universe. We believe, indeed, with as much confidence, that one event will uniformly have for its consequent another event, which we have observed to follow it, as we believe the simple fact that it *has* preceded it, in the particular case observed. But the knowledge of the present sequence, as a mere fact, to be remembered, and the expectation of future similar sequences, as the result of an original law of our belief, are precisely of the same kind, whether the sequence of changes be in mind, or in matter singly, or reciprocally in both.

What the nature of the change is, that is produced at the ex-

tremity of the nerve, it is beyond our power to state, or even to guess; and we are equally ignorant of the manner in which this affection of the nerve is communicated, or is supposed to be communicated, to the brain. But that some affection is gradually propagated, from the one to the other, so as to render the change in the state of the brain subsequent, by a certain interval, to the change in the state of the nerve, is universally believed. In applying to this change the term *impression*, a term indeed which had been in common use before, Dr Reid is careful to point out the reason for which this term appears to him preferable to others; and though I confess that the word seems to me to convey too much the notion of a peculiar well known species of action; that which consists in producing a certain configuration of the object impressed, corresponding with the figure of the impressing object, the very notion that has had so pernicious an effect in the theory of perception; and though I conceive the simple term *change* or *affection* to be all which is safely admissible, as long as the nature of the particular change is absolutely unknown; still it must be confessed that *impression* is a term a little more general than the other names of action, to which Dr Reid alludes, and therefore preferable to them, in the present case.

"There is sufficient reason," he says, "to conclude, that, in perception, the object produces some change in the organ; that the organ produces some change upon the nerve; and that the nerve produces some change in the brain. And we give the name of an *impression* to those changes, because we have not a name more proper to express, in a general manner, any change produced in a body, by an external cause, without specifying the nature of that change. Whether it be pressure, or attraction, or repulsion, or vibration, or something unknown, for which we have no name, still it may be called an impression. But with regard to the particular kind of this change or impression, philosophers have never been able to discover any thing at all."*

That the word *impression* is not so free, as Dr Reid supposes, from that hypothetical meaning which he wished to avoid, I have already remarked. But the reason assigned by him for his preference of it, is unquestionably a just one; since a phrase which

* On the Intellectual Powers, Essay II. chap. ii.

expresses the least possible knowledge, must be allowed to be the best suited to human ignorance,—that ignorance, which, not in the philosophy of intellect only, but in whatever track of science we may proceed, and whatever truths we may proudly discover in our way, still meets us at the end of every path, as if to mock at once our weakness and our pride,—and which seems to us to be every where, because it is, wherever we are ourselves. The splendour of nature, as it exists in itself, is, if I may speak figuratively, like sunshine on a boundless plain, on the flowers and herbage of which, though there be innumerable varieties of colour, there is brilliancy in all. But the misfortune is, that, as soon as we have approached near enough to distinguish the diversity of tints, their brilliancy is so obscured by our very approach to them, that their nice diversities are no longer distinguishable; as if man could not move along, without throwing his own shadow on every thing before him.

When I say, that we are ignorant of the nature of that change, which is propagated along the nerve to the brain, I speak in reference to an opinion that is universal. But, though it may be *improbable*, it is certainly far from *impossible*, that there is really no such progressive communication, as this which is supposed. The brain and nerves, though, from the difference of names, you might be led, perhaps, to consider them as distinct, I have already said, are not separate organs, but are in continuity with each other, at least as much as various parts of the brain itself, which are comprehended under that single term, can be said to be continuous. When taken together, they form what is truly one complicated sensorial organ,—the organ of all our sensations, according to the different states in which the organ exists, or the different parts of it which are chiefly affected. In *hearing*, for example, a certain state of that part of the sensorial organ, which constitutes the auditory nerves,—in vision, a certain state of that part of it, which constitutes the optic nerves, is necessary to sensation,—and, in both cases, according to the universal supposition on the subject, all or part of the brain likewise must exist in a certain state, of which we know nothing more, than that it is followed, in the one case, by the sensation of sound, in the other case by that of sight. The connexion of the mind with the bodily frame,—which must be equally inexplicable on every supposition that can be formed,

—is not supposed, by any philosopher, to depend on the state of a single physical point of the brain alone; and, if it extend to more than *one* such point, there is nothing,—in the nature of the connexion itself, independently of experience,—which necessarily limits it to one portion of the complex sensorial organ, more than to *another*,—to the particles of the central mass of the brain, for example, more than to those of the nerve itself. It is experience, then, to which we are referred; and experience, though it shows that certain nerves are not essential to *life*, since life continues equally, after they may have been impaired, or even destroyed, is far from showing that an affection of them is not essential to *sensation*, at the very moment of the particular sensation; nor does it afford even the slightest evidence, to justify the belief, that the *only* use of the nerve is to communicate a certain affection to the brain, which affection of the mere central part of the sensorial organ, would, of itself, immediately induce sensation, though the nerves were annihilated in the preceding instant. The sensation may be the immediate effect, not of the state of the brain only, but of the state of the brain, and of any particular nerve, considered as existing together at the moment; in the same manner, as, by those who ascribe the immediate origin of sensation to the mere brain, exclusive of its nervous appendages, it is supposed to depend on the state, not of *one* physical point of the central brain, but on the state of many such co-existing points. We know not, to what extent, in the great sensorial organ, this change is necessary; but we believe, that, to *some extent*, it is necessary; and the question is, whether, in the whole portion so affected, the affection be produced by a succession of changes, propagated from part to part? This may, perhaps, be the more probable supposition:—but, whatever may be the comparative probability or improbability, it certainly has not been demonstrated by observation or experiment; nor can there be said to be, *a priori*, any absurdity in the opposite supposition, that the sensorial affection, to whatever extent it may be necessary, is not progressive, but immediate,—that, as long as the sensorial organ, (under which term I comprehend, as I have already frequently repeated, not the brain merely, but also its nervous appendages, that exist in apparent continuity with the brain,) is unimpaired, by accident or disease, the presence of the immediate object of sense, at the ex-

ternal organ, which on every supposition, must be followed by some sensorial change of state, is instantly followed by that general change of state of the internal organ, whatever it may be, which is necessary to sensation, in the particular case; in the same manner, as the presence of a celestial body, at a certain point in the heavens, is immediately followed by a change of state, in the whole gravitating particles of our globe; the change in any long line of these gravitating particles being not communicated from each to each, but depending only on the presence of the distant sun or planet; and beginning in the most remote particles of the line, at the very same instant, as in that which is nearest, on the surface of the earth. An instant change, in the long line of sensorial particles,—if the affection of a long line of these particles be necessary,—on the presence of a particular object, is not more improbable in itself, than this instant and universal influence of gravitation, that varies with all the varying positions of a distant object.

But is it, indeed, certain, that, in sensation, there is an affection of the central brain, whether immediate or progressive? Is it not possible, at least, or more than possible, that the state of the mind, when we perceive colours and sounds, may be the immediate consequent of the altered state of that part of the sensorial organ, which forms the expansion of the nerve in the eye or ear? The sensations must be supposed, in every theory, to be the consequents of states induced in some sensorial particles, and there is nothing but the mere names of brain and nerve, invented by ourselves, and the notions which we have chosen, without evidence, to attach to these mere names, which would mark the sensorial particles in the nervous expanse itself, as less fitted to be the immediate antecedents of sight and hearing, than the similar sensorial particles in any portion of the central mass of the brain. There is no reason, in short *a priori*, for supposing that a state of the sensorial particles of the nerves cannot be the cause of sensation, and that the sensation must be the effect of a state equally unknown, of apparently similar particles, in that other part of the general sensorial organ, which we have denominated the brain. Sensation, indeed, is prevented by decay, or general disease of the brain, or by separation of the nerve, or pressure on it, in any part of its course. But it is far from improbable, that these causes, which

must evidently be injurious to the organ, may act, merely by preventing that sound state of the nerve, which is necessary for sensation, and which, in an organ so very delicate, may be affected by the slightest influences,—by influences far slighter, than may naturally be expected to result from such an injury of such a part. The nerves and brain, together, form one great organ; and a sound state of the whole organ, even from the analogy of other grosser organs, may well be supposed to be necessary for the healthy state and perfect function of each separate part.

If, indeed, the appearance of the brain and nerves were such, as marked them to be peculiarly fitted for the communication of motion of any sort, there might be some presumption, from this very circumstance, in favour of the opinion, that sensation takes place, only after a progressive series of affections of some sort, propagated along the nerve to the interior brain. But it must be remembered, that the nature, both of the substance of the nerves themselves, and of the soft and lax substance, in which they are loosely embedded, renders them very ill adapted for the communication of nice varieties of motion, and gives some additional likelihood, therefore, to the supposition, that affections of the sensorial organ, so distinct as our sensations are from each other, and so exactly corresponding with the slightest changes of external objects, do *not* depend on the progressive communication of faint and imperceptible motion, in circumstances so unfavourable to the uninterrupted progress even of that more powerful motion, which can be measured by the eye. In a case so doubtful as this, however, in which the intervening changes supposed by philosophers, —if such a progressive series of motions do really take place,— are confessed to be beyond our observation, it is impossible for any one, who has a just sense of the limits, which nature has opposed to our search, to pronounce with certainty, or even perhaps with that faint species of belief, which we give to mere probability. My conjectures on the subject, therefore, I state simply as conjectures, and nothing more.

If, indeed, what is but a mere conjecture could be shown to be well founded, it would add another case to the innumerable instances, in which philosophers have laboured, for ages, to explain what did not exist,—contenting themselves, after their long toil, with the skill and industry which they have exhibited, in removing

difficulties, which they had before, with great skill and industry, placed in their own way. "I am not so much convinced of our radical ignorance," says an ingenious writer, "by the things that *are*, of which the nature is hid from us, as by the things that *are* not, of which notwithstanding we contrive to give a very tolerable account; for this shews that we are not merely without the principles which lead to truth, but that there are other principles in our nature, which can accommodate themselves very well, and form a close connexion, with what is positively false."

But whatever reason there may be for removing this supposed link of the corporeal part of the process of sensation, there is another prior link, which it appears to me of great importance to separate from the chain. I allude to the distinction, which is commonly made, of the objects of sense, as acting themselves on our organs, or as acting through what is termed a *medium*.

"A second law of our nature," says Dr Reid, "regarding perception is, that we perceive no object, unless some impression is made upon the organ of sense, either by the immediate application of the object, or by some medium which passes between the object and the organ. In two of our senses, to wit, *touch* and *taste*, there must be an immediate application of the object to the organ. In the other three, the object is perceived at a distance, but still by means of a medium, by which some impression is made upon the organ. The effluvia of bodies drawn into the nostrils, with the breath, are the medium of smell; the undulations of the air, are the medium of hearing; and the rays of light passing from visible objects to the eye, are the medium of sight. We see no object, unless rays of light come from it to the eye. We hear not the sound of any body, unless the vibrations of some elastic medium, occasioned by the tremulous motion of the sounding body, reach our ear. We perceive no smell, unless the effluvia of the smelling body enter into the nostrils. We perceive no taste, unless the sapid body be applied to the tongue, or some part of the organ of taste. Nor do we perceive any tangible quality of a body, unless it touch the hands, or some part of our body."*

It is evident, that, in these cases of a supposed medium, which Dr Reid considers as forming so important a distinction of our sensations, the real object of *sense* is not the *distant* object, but that

* On the Intellectual Powers, Essay II. chap. ii.

which acts immediately upon the organs,—the *light* itself, not the *sun* which beams it on us,—the odorous particles, which the wind has wafted to us from the rose, not the rose itself upon its stem,—the vibrations of the air, within our ear, not the cannon that is fired at the distance of miles. The light, the odour, the vibrating air, by which alone our senses are affected, act on our nerves of sight, of smell, and hearing, with an influence as direct, and as little limited in the kind of action, as that with which the fruit, which we eat or handle, acts on our nerves of taste or touch. This influence of the objects immediately external is all, in which our organs of sense, and consequently the mind as the principle of mere sensation, is concerned. The reference to the distant sun, or rose, or cannon, which alone leads us to speak of a medium in any of these cases, is the effect of *another* principle of our intellectual nature,—the principle of association, or suggestion,—that is afterwards to be considered by us, without which, indeed, our mere transient sensations would be comparatively of little value; but which, as a quality or susceptibility of the mind, is not to be confounded with that, by which the mind becomes, instantly sentient, in consequence of a certain change produced in the state of its sensorial organ.

Since, however, precisely the same series of changes must take place in nature, whether we class the sun, the flower, the cannon, as the objects of sense, or merely the light, the odorous particles, and the vibrating air, it may perhaps be thought, that the distinction now made is only a *verbal* one, of no real importance. But it will not appear such to those who are conversant with the different theories of perception which we are afterwards to review; many of which, that have had the greatest sway, and a sway the most fatal to the progress of intellectual philosophy, appear, to me, to have arisen entirely, or at least chiefly, from this very misconception as to the real external object of sense. It is sufficient at present to allude to the effect, which the mere *distance* of the supposed object must have had, in giving room to all the follies of imagination to fill up the interval.

It may be necessary, however, to remark by the way, that though I do not conceive the bodies which act through a medium, as it is said to be the real objects of the particular sense;—the immense orb of the sun, for example, in all its magnitude,

to be the object of that small organ by which we are sensible of light; or the cannon, which exists we know not where, to he the object of that organ by which we are sensible of sound;—I am still far from objecting to the popular and very convenient phraseology, by which we speak of seeing the sun, and hearing the cannon—a phraseology that expresses briefly a reference, which could not otherwise be expressed but by a very awkward circumlocution, and to make any innovation in which would be as absurd, as to reject the popular phrases of the sun's rising and setting merely because they are inconsistent with our astronomical belief. The most rigid philosophy can require no more, than that, when we talk of the sun's actual setting, we should mean by it, only a certain position relative to that great luminary at which the earth arrives in its diurnal revolution,—and that, when we talk of seeing it descend, we should mean nothing more, than that we see light of a certain brilliancy, from which we infer the existence and relative position of the orb that has projected it.

I have been led into these observations, on the various parts of the corporeal process which precedes sensation, by the desire of removing, as much as possible, any obscurity in which your notions on the subject might be involved,—as I know well the influence which even a slight confusion in our notion of any *part* of a complicated process has, in spreading, as it were, its own darkness and perplexity over parts of the process, which otherwise we should have found no difficulty in comprehending. You might think, that you knew less distinctly the mental sensation itself, because you knew only obscurely the series of bodily changes that precede sensation; but still it must be remembered, that it is only the *last* link of the corporeal chain,—the ultimate affection of the sensorial organ, in whatever manner and to whatever extent it may be affected,—immediately antecedent to the affection of the mind, which is to be considered as that with which nature has united the corresponding change in our mental frame. This mysterious influence of our *bodily* on our *mental* part has been poetically compared to that which the sun was supposed to exercise on a lyre, that formed part of a celebrated Egyptian statue of Memnon, which was said to become musical when struck with its beams; and though the poet has extended the similitude, beyond our mere elementary sensations, to the complex perception of

beauty, it is still a very happy illustration—as far as a mere poetic image can be an illustration—of the power which matter exercises over the harmonies of mind:—

"For as old Memnon's image, long renown
By fabling Nilus, to the quivering touch
Of Titan's ray with each repulsive string
Consenting, sounded through the warbling air
Unbidden strains,—even so did Nature's hand,
To certain species of external things
Attune the finer organs of the mind.
So the glad impulse of congenial powers,
Or of sweet sound, or fair proportion'd form,
The grace of motion, or the bloom of light,
Thrills through Imagination's tender frame,
From nerve to nerve. All naked and alive,
They catch the spreading rays; till now the soul
At length discloses every tuneful spring,
To that harmonious movement from without
Responsive. Then the charm, by Fate prepar'd
Diffuses its enchantment.* Fancy dreams
Of sacred fountains, and Elysian groves,
And vales of bliss! the Intellectual Power
Bends from his awful throne a wondering ear,
And smiles; the Passions, gently soothed away,
Sink to divine repose; and Love and Joy
Alone are waking."†

When we consider the variety of our feelings thus wonderfully produced,—the *pleasures*, and, still more, the inexhaustible *knowledge*, which arise, by this mysterious harmony, from the imperceptible affection of a few particles of nervous matter, it is impossible for us not to be impressed with more than admiration of that Power, which even our ignorance, that is scarcely capable of seeing any thing, is yet, by the greatest of all the bounties of heaven, able to perceive and admire. In the creation of this internal world of thought, the Divine Author of our being has

* "Then the charm," &c. to "enchantment," from the second form of the Poem. The corresponding clause, in the first form, from which all the rest of the quotation is taken, is this,

"Then the inexpressive strain
Diffuses its enchantment."

† Pleasures of Imagination, Book I. v. 109—131.

known how to combine *infinity itself* with that which may almost be considered as the most finite of things; and has repeated, as it were, in every mind, by the almost creative sensibilities with which He has endowed it, that simple but majestic act of omnipotence, by which, originally, He called from the rude elements of chaos, or rather from nothing, all the splendid glories of the universe.

LECTURE XX.

PARTICULAR CONSIDERATION OF OUR SENSATIONS.—NAMELESS TRIBES OF SENSATIONS—SENSATIONS OF SMELL—OF TASTE —OF HEARING.

A CONSIDERABLE portion of my last Lecture, Gentlemen, was employed in illustrating the *corporeal* part of the process of perception, which, though less immediately connected with our Science than the *mental* part of the process, is still, from its intimate connexion with this mental part, not to be altogether neglected by the intellectual inquirer. The importance of clear notions of the mere *organic changes* is, indeed, most strikingly exemplified in the very false theories of perception which have prevailed, and in some measure still prevail; and which evidently, in part at least, owe their origin to those confused notions, to which I alluded in my last Lecture, of the objects of perception, as supposed to operate at a distance through a medium, and of complicated series of changes supposed to take place in the nerves and brain.

In considering the Phenomena of our Mind, as they exist when we are capable of making them subjects of reflection, I mentioned to you, in a former Lecture, that although we have to encounter many additional difficulties, in consequence of early associations, that modify forever after our original elementary feelings, with an influence that is inappreciable by us, because it is truly unperceived, there are yet some advantages, which though they do not fully compensate this evil, at least enable us to make some deduction from its amount. The benefit to which I allude, is found chiefly in the class of phenomena which we are now considering, —a class, indeed, which otherwise we should not have regarded as half so comprehensive as it truly is, since, but for our previous

belief of the existence of a permanent and independent system of external things acquired from other sources, we should have classed by far the greater number of the feelings, which we now refer to *sense*, among those which arise spontaneously in the mind, without any cause external to the mind itself.

Though the sensations, which arise from affections of the same organ—as those of warmth and extension for example, or at least the feeling of warmth and a tactual feeling, that is commonly supposed to involve extension, from affections of the same nerves of touch,—are not, in every case, more analogous to each other, than the sensations which arise from affections of different organs,—and though, if we were to consider the sensations alone, therefore, without reference to their organs, we might not form precisely the same classification as at present,—the division, according to the organs affected, in most cases corresponds, so exactly, with that which we should make, in considering the mere sensations as affections of the mind, and affords in itself a principle of classification, so obvious and definite, that we cannot hesitate, in preferring it to any other which we might attempt to form. In the arrangements of every science, it is of essential consequence, that the lines of difference, which distinguish one class from another, should he well marked; and this advantage is peculiarly important in the science of mind, the objects of which do not, as in the other great department of nature outlast inquiry, but are, in every case, so very shadowy and fugitive, as to flit from us, in the very glance, that endeavours to catch their almost imperceptible outline.

In examining, then, according to their organs, our classes of sensation; and considering what feelings the organic affections excite *at present*, and what we may suppose them to have excited *originally*,—I shall begin with those which are most simple, taking them in the order of smell, taste, hearing,—not so much, from any hope, that the information, which these afford will throw any great light on the more complex phenomena of sight and touch, as because the consideration of them is easier, and may prepare you gradually for this difficult analysis, which awaits us afterwards, in the examination of those more perplexing phenomena.

I begin, then, with the consideration of that very simple order of our sensations which we ascribe to our organ of

SMELL.

The organ of smell, as you well know, is principally in the nostrils,—and partly also in some continuous cavities on which a portion of the olfactory nerves is diffused.

> Naribus interea consedit odora hominum vis
> Docta leves captare auras, Panchaia quales
> Vere novo exhalat, Floræve quod oscula fragrant
> Roscida, cum Zephyri furtim sub vesperis hora
> Respondet votis, mollemque aspirat amorem.*

When the particles of odour affect our nerves of smell, a certain state of mind is produced, varying with the nature of the odoriferous body. The mere existence of this state, is all the information which we could originally have received from it, if it had been excited previously to our sensations of a different class. But, with our present knowledge, it seems immediately to communicate to us much more important information. We are not merely sensible of the particular feeling, but we refer it, in the instant,—almost in the same manner, as if the reference itself were involved in the sensation,—to a rose, hemlock, honeysuckle, or any other substance, agreeable or disagreeable; the immediate presence, or vicinity of which we have formerly found to be attended with this particular sensation. The power of making the reference, however, is unquestionably derived from a source different from that, from which the mere sensation is immediately derived. We must previously have seen, or handled, the rose, the hemlock, the honeysuckle; or if, without making this particular reference, we merely consider our sensation of smell as caused by some unknown object external to our mind, we must at least have previously seen or handled some other bodies, which excited, at the same time, sensations analogous to the present. If we had been endowed with the sense of smell, and with no other sense whatever, the sensations of this class would have been simple feelings of pleasure or pain, which we should as little have ascribed to an external cause, as any of our spontaneous feelings of joy or sorrow, that are equally lasting or equally transient. Even

* Gray de Principiis Cogitandi, Lib. I. v. 130—134.

at present, after the connexion of our sensations of a fragrance with the bodies which we term fragrant, has been, in a great measure, fixed in our mind, by innumerable reflections, we still, if we attend to the process of the reference itself, are conscious of a suggestion of remembrance, and can separate the sensation, as a mere feeling of the mind, from the knowledge of the object or external cause of the sensation, which seems to us a subsequent state of the mind, however close the succession may be. Indeed, what is there which we can discover, in the mere sensation of fragrance, that is itself significant of solidity, extension, or what ever we may regard as essential to the existence of things without? As a mere change in the form of our being, it may suggest to us the necessity of some cause or antecedent of the change. But it is far from implying the necessity of a corporeal cause;—any more than such a direct corporeal cause is implied in any other modification of our being, intellectual or moral,—in our belief, for example, of the most abstract truth, at which we may have arrived by a slow developement of proposition after proposition, in a process of internal reflective analysis,—or in the most refined and sublime of our emotions, when, without thinking of any one of the objects around, we have been meditating on the Divinity who formed them—himself the purest of spiritual existences. Our belief of a system of external things, then, does not, as far as we can judge from the nature of the feelings, arise from our sensations of smell, more than from any of our internal pleasures or pains; but we class our sensations of smell as sensations, because we have previously believed in a system of external things, and have found, by uniform experience, that the introduction of some new external body, either felt or seen by us, was the antecedent, of those states of mind which we denominate sensations of smell, and not of those internal pains or pleasures, which we therefore distinguish from them, as the spontaneous affections of our own independent mind.

ON TASTE.

With the organ of *taste* you are all sufficiently acquainted. In considering the phenomena, which it presents, in the peculiar sensations that directly flow from it, it is necessary to make some lit-

tle abstraction from the sensation of *touch*, which accompanies them, in consequence of the immediate application of the tangible sapid body to the organ; but the sensations, thus co-existing, are so very different in themselves, as to be easily distinguishable. When the organ of taste is in a sound state, the application of certain substances produces, immediately, that change or affection of the sensorial organs, which is attended with a corresponding change or affection of the sentient mind. In our present state of knowledge, we immediately refer this simple sensation, to something, which is bitter, or sweet, or acrid, or of some other denomination of sapid quality; and we have no hesitation, in classing the sensations *as sensations*,—effects of laws of action that belong jointly to matter and mind,—not as feelings that arise in the mind, from its own independent constitution. But, if we attend sufficiently to the feeling that arises in the case of taste, we shall find, however immediate the reference to a sapid body may seem to be, that it is truly successive to the simple sensation, and is the mere suggestion of former experience, when a body previously recognized by us as an external substance, was applied to our organ of taste;—in the same manner, as, when we see ashes and dying embers, we immediately infer some previous combustion, which we could not have inferred, if combustion itself had been a phenomenon altogether unknown to us. In the simple sensation which precedes the reference,—the mere pleasure of sweetness or the mere pain of bitterness—there is nothing which seems to mark more distinctly the presence of honey or wormwood, or any similar external substance, than in any of our joys or sorrows, to which we have not given a name; and there can be no doubt, that, if the particular feeling which we now term *joy*, and the particular feeling which we now term *sorrow*, had been excited, whenever we knew, from other sources, that certain bodies were applied to the tongue, we should have considered these internal feelings as sensations, in the strict sense of the word, precisely in the same manner, as we now regard, as sensations, the feeling which we term sweetness, and the feeling which we term bitterness, because, like these sensations, they could not have failed to suggest to us, by the common influence of association, the presence and direct coincidence of the object without. In the case of *taste*, therefore, as in the case of smell, we could not, from the

simple sensations,—if these alone had been given to us,—have derived any knowledge of an external world, of substances extended and resisting; but we consider them as sensations, in the strict philosophic meaning of the term, because we have previously acquired our belief of an external world.

It may be remarked of these two classes of sensations, now considered, that they have a greater mutual resemblance, than our sensations of any other kind. It is only a *blind* man who thinks, that what is called *scarlet* is like the sound of a trumpet; but there are *tastes* which we consider as like *smells*, in the same manner as we consider them to be like other tastes; and, if we had not acquired a distinct knowledge of the seats of our different organs, and had yet known that smells and tastes arose from external causes acting upon some one or other of these, we should probably have been greatly puzzled, in many cases, in our attempt to refer the particular sensation to its particular organ.

In considering the advantages which we derive from our organs of *smell* and *taste*, the mere pleasures which they directly afford, as a part of the general happiness of life, are to be regarded, from their frequent occurrence, as of no considerable amount. The fragrance of the fields enters largely into that obscure but delightful group of images, which rise in our minds on the mere names of *spring*, *summer*, the *country*, and seems to represent the very form of ethereal purity, as if it were the breath of heaven itself.

If we imagine all the innumerable flowers which nature pours out, like a tribute of incense to the God who is adorning her, again to be stripped, in a single moment, of their odour, though they were to retain all their bright diversities of colouring, it would seem as if they were deprived of a spirit which animates them,—how cold and dead would they instantly become,—and how much should we lose of that vernal joy, which renders the season of blossoms almost a new life to ourselves.

"In vain the golden Morn aloft
Waves her dew-bespangled wing;
With vermeil cheek and whisper soft
She woos the tardy Spring;
Till April starts, and calls around
The sleeping fragrance from the ground."*

*Gray on the Pleasure arising from Vicissitude, Stanza I.—In v. i. the original has, instead of "in vain," "now."

It is by this delightful quality that the tribes of vegetable life seem to hold a sort of social and spiritual communion with us. It is, as it were, the voice with which they address us, and a voice which speaks only of happiness. To him who walks among the flowers which he has tended,

> "Each odoriferous leaf,
> Each opening blossom, freely breathes abroad
> Its gratitude, and thanks him with its sweets."

The pleasures of the sense of *taste*, in the moderate enjoyment of which there is nothing reprehensible, are, in a peculiar manner, associated with family happiness. To have met frequently at the same board, is no small part of many of the delightful remembrances of friendship; and to meet *again* at the same board, after years of absence, is a pleasure that almost makes atonement for the long and dreary interval between. In some half-civilized countries, in which the influence of simple feelings of this kind is at once more forcible in itself, and less obscured in the confusion of ever varying frivolities and passions, this hospitable bond forms, as you well know, one of the strongest ties of mutual obligation, sufficient often to check the impetuosity of vindictive passions which no other remembrance could, in the moment of fury, restrain. Had there been no *pleasure* attached to a repast, independent of the mere relief from the pain of hunger, the coarse and equal food would probably have been taken by each individual *apart*, and might even, like our other animal necessities, have been associated with feelings which would have rendered solitude a duty of external decorum. It would not be easy, even for those who have been accustomed to trace a simple cause through all its remotest operations, to say, how much of happiness, and how much even of the warm tenderness of virtue, would be destroyed, by the change of manners, which should simply put an end to the *social meal;* that meal which now calls all the members of a family to suspend their cares for a while, and to enjoy that cheerfulness, which is best reflected from others, and which can be permanent only when it is so reflected, from *soul* to *soul*, and from *eye* to *eye*.

One very important advantage, more directly obvious than this, and of a kind which every one may be disposed more readily to admit, is afforded by our senses of smell and taste, in guiding

our *selection* of the substances which we take as alimentary. To the other animals, whose senses of this order are so much quicker, and whose instincts, in accommodation to their want of general language, and consequent difficulty of acquiring knowledge by mutual communication, are providentially allotted to them, in a degree, and of a kind, far surpassing the instincts of the slow but noble reflector *man*, these senses seem to furnish *immediate* instruction as to the substances proper for nourishment, to the exclusion of those which would be noxious. To *man*, however, who is under the guardianship of affections more beneficial to him than any instinct of his own could be, there is no reason to believe, that they do this *primarily*, and of themselves, though, in the state in which he is brought up, instructed with respect to every thing noxious or salutary, by those who watch constantly over him in the early period of his life, and having, therefore, no necessity to appeal to the mere discrimination of his own independent organs, and, still more, as in the artificial state of things, in which he lives, his senses are at once perplexed and palled, by the variety and confusion of luxurious preparation, it is not easy to say, how far his primary instincts,—if it had not been the high and inevitable dignity of his nature to rise above these,—might, of themselves, have operated as directors. But, whatever their *primary* influence may be, the *secondary* influence of his organs of taste and smell is not the less important. When we have once completely learned what substances are noxious, and what are salutary, we then, however similar they may be in their other sensible qualities, discriminate these as often as they are again presented to us, by that *taste* or *smell*, which they affect with different sensations; and our acquired knowledge has thus ultimately, in guiding our choice, the force and the vivacity of an original instinct.

HEARING.

In considering the phenomena of the sense of hearing, to which I now proceed, I may apply to them the same remark, which has been already applied to the phenomena of the senses before considered. They are classed by us, as sensations, merely in consequence of our previous belief in the existence of those external

bodies, the motion of which we have known to be followed by similar feelings. Our mind begins suddenly to exist in a certain state; and we call this state joy or sorrow, without supposing that it depends on the immediate presence of any external object. It begins again to exist, in a different state, and we say, that we *hear a flute*, referring the feeling immediately to an external cause. But there can be no doubt, that, in making this reference, in the one case, and not in the other, we are influenced by experience, and by experience alone. If we suppose ourselves endowed with the single sense of hearing, and incapable therefore of having previously seen or felt the flute, which is breathed before us, or any other extended and resisting object whatever, we may imagine the mere sound to recur, innumerable times, without discovering any mode by which it can give us *more* knowledge, than we should receive from a similar recurrence of any internal joy or sorrow. That we should be able to refer it to a body, such as we now mean, when we speak of a flute, is manifestly impossible; since this implies knowledge of *solidity*, and *form*, and *colour*, which could not be acquired without touch and sight. But there seems even no reason to think, that we should refer it to any external cause whatever, unless, indeed, such a reference necessarily accompanied every feeling, which we know is far from being the case, since we have many internal pleasures, not more like to each other, than they are to the sound of a flute, which we do not refer to any thing, separate or separable, from the constitution of our own mind. In *hearing*, therefore, as in taste and smell, we do not derive from its sensations our knowledge of things external, but, in consequence of our knowledge of things external, we regard these feelings, as sensations, in the common philosophic meaning of that term.

Simple as our sense of hearing may seem, it affords a striking specimen of that almost infinite variety, which is not inconsistent with the closest resemblance; and the notion which we may form of the innumerable varieties of sound, is perhaps not more vast, when we attempt to wander over its boundless discrepancies, than when we limit ourselves to its greatest similarities, in a single word of a language, or, in that which we might be inclined at first to regard as simplicity itself, a single *musical tone*.

"A flute, a violin, a hautboy, and a French horn," it has been truly remarked, "may all sound the same tone, and be easily dis-

tinguishable. Nay, if twenty *human voices* sound the same note, and with equal strength, there will still be some difference. The *same* voice, while it retains its proper distinctions, may be varied many ways, by sickness or health, youth or age, leanness or fatness, good or bad humour. The *same words*, spoken by foreigners and natives, nay, by different provinces of the same nation, may be very easily distinguished."*

When we speak of the value of this sense as a part of our mental constitution, it is enough to say, that it is to it we are indirectly indebted for the use of verbal language,—that power so peculiarly *distinctive of man*, that, in the poetical phraseology of one celebrated country, it gave him his name as a *divider of the voice*, or, in other words, an utterer of articulate sounds. If we consider speech simply as a medium of the reciprocal expression of present feelings to the little society of citizens and friends of which we are a part, even in this limited view, of what inestimable value does it appear! To communicate to every one around us, in a single moment, the happiness which we feel ourselves,—to express the want, which we have full confidence, will be relieved as soon as it is known,—or to have the still greater privilege of being ourselves the ministers of comfort to wants, which otherwise could not have been relieved by us, because they could not have been discovered,—when the heart which we love is weighed down with imaginary grief, to have it in our power, by a few simple sounds, to convert anguish itself into rapture,—these are surely no slight advantages; and yet compared with the benefit which it affords to man as an *intellectual* being, even these are inconsiderable. To be without language, spoken or written, is almost to be without thought; and if, not an individual only, living among his fellows whose light may be reflected upon him, but our whole race had been so constituted, it is scarcely possible to conceive that beings, whose instincts are so much less various and powerful than those of the other animals, could have held over them that dominion, which they now so easily exercise. Wherever two human beings, therefore, are to be found, there language is. We must not think, in a speculative comparison of this sort, of mere savage life; for the rudest savages would be as much supe-

* Reid's Inquiry into the Human Mind, c. iv. sect. 1.

rior to a race of beings without speech, as the most civilized nations at this moment are, compared with the half-brutal wanderers of forests and desarts, whose ferocious ignorance seems to know little more than how to destroy and be destroyed. Even these are still associated in tribes, that concert together verbally their schemes of havoc and defence; and employ, in deliberating on the massacre of beings as little human as themselves, or the plunder of a few huts, that seem to contain nothing but misery and the miserable, the same glorious instrument with which Socrates brought wisdom down from heaven to earth, and Newton made the heavens themselves, and all the wonders which they contain, descend, as it were to be grasped and measured by the feeble arm of man.

Such are the benefits of language, even in its fugitive state; but the noblest of all the benefits which it confers, is in that permanent transmission of thought, which gives to each individual the powers and the wisdom of his species; or, rather,—for the united powers and wisdom of his species, as they exist in myriads, at the same moment with himself, upon the globe, would be comparatively a trifling endowment,—it gives him the rich inheritance of the accumulated acquisitions of all the multitudes, who, like himself, in every preceding age, have inquired, and meditated, and patiently discovered, or by the happy inspiration of genius, have found truths which they scarcely sought, and penetrated, with the rapidity of a single glance, those depths of nature, which the weak steps and dim torch-light of generations after generations had vainly laboured to explore. By that happy invention, which we owe indirectly to the ear, the boundaries of time seem to be at once removed. Nothing is *past;* for every thing lives, as it were, before us. The thoughts of beings who had trod the most distant soil, in the most distant period, arise again in our mind, with the same warmth and freshness as when they first awoke to life in the bosom of their author. That system of perpetual transmigration, which was but a fable, as believed by Pythagoras,—becomes reality when it is applied, not to the *soul* itself, but to its feelings. There is then a *true metempsychosis*, by which the poet and the sage, in spreading their conceptions and emotions from breast to breast, may be said to extend their existence through an ever-changing immortality. Who does not feel the justness of what Lu-

can says, when he speaks of the events of Pharsalia, and predicts the lively feelings with which they are afterwards to be regarded, not as past, and therefore indifferent, but as present, and almost future:

> "Hæc et apud seras gentes, populosque nepotum,
> Sive sua tantum venient in secula fama,—
> Sive aliquid magnis nostri quoque cura laboris
> Nominibus prodesse potest,—cum bella legentur,
> Spesque metusque simul, perituraque vota movebunt;
> Attonitique omnes, veluti *venientia* fata
> Non *transmissa* legent, et *adhuc* tibi magni favebunt."*

"There is without all doubt," as has been justly observed, "a chain of the thoughts of human kind, from the origin of the world down to the moment at which we exist,—a chain not less universal than that of the generation of every being that lives. Ages have exerted their influence on ages; nations on nations; truths on errors; errors on truths." In conformity with this idea of the generation of thought, I may remark, that we are in possession of opinions,—which, perhaps, regulate our life in its most important moral concerns, or in all its intellectual pursuits,—with respect to which, we are as ignorant of the original authors, by whom they have been silently and imperceptibly transmitted to us from mind to mind, as we are ignorant of those ancestors, on whose existence in the thousands of years which preceded our entrance into the world, our life itself has depended, and without whom, therefore, *we* should not have been.

The unlimited transmission of thought, which the invention of language allows, brings the universe of *mind* into that point of view, in which an eloquent living French author has considered the *physical* universe,—as exhibiting, at once, all its splendid varieties of events, and uniting, as it were, in a single moment the wonders of eternity. "Combine," says he, "by your imagination, all the fairest appearances of things. Suppose that you see, at once, all the hours of the day, and all the seasons of the year,—a morning of spring and of autumn,—a night brilliant with stars, and a night obscure with clouds,—meadows, enamelled with flowers,—fields, waving with harvest,—woods, heavy with the frosts of winter,—you will then have a just notion of the spectacle of the

* Pharsalia, lib. vii. v. 207—213.

universe. Is it not wondrous, that while *you* are admiring the sun, who is plunging beneath the vault of the west, *another* observer is beholding him as he quits the regions of the east,—in the same instant reposing, weary, from the dust of the evening, and awaking, fresh and youthful, in the dews of morn! there is not a moment of the day, in which the same sun is not rising, shining in his zenith, and setting on the world! or, rather, our senses abuse us, and there is no rising, nor setting, nor zenith, nor east, nor west; but all is one fixed point, at which every species of light is beaming at once from the unalterable orb of day."

In like manner,—If I may venture to consider the phenomena of the mind in the same fanciful point of view,—every moment may be said to be exhibiting the birth, and progress, and decay of thought. Infancy, maturity, old age, death, are mingled, as it were, in one universal scene. The opinions which are perishing in one mind, are rising in another; and often, perhaps, at the last fading ray of the flame of genius, that may have almost dazzled the world with excess of brilliancy, some star may be kindling, which is to shine upon the intellectual universe with equal light and glory:—

> "Flowers of the sky! ye, too, to age must yield,
> Frail, as your silken sisters of the field!
> Star after star from Heaven's high arch shall rush;
> Suns sink on suns, and systems systems crush;
> Headlong, extinct, to one dark centre fall,
> And Death, and Night, and Chaos, mingle all!
> ——Till, o'er the wreck, emerging from the storm,
> Immortal Nature lifts her changeful form;
> Mounts from her funeral pyre on wings of flame,
> And soars, and shines,—another, and the same."

Such are the benefits resulting from that happiest of all inventions, which we may be said to owe to our sense of Hearing,—if, indeed, it be an *invention* of man, and not rather, as many have thought, a *coeval power*, bestowed on him by his provident Creator at the very moment which gave him life. But still, whether original or invented, the ear must equally have been its primary recipient. We have seen, in the view which we have taken of it, that of our more social intercourse it constitutes the chief delight,

* Darwin's Botanic Garden, Canto IV. v. 371—380.

—giving happiness to hours, the wearying heaviness of which must otherwise have rendered existence an insupportable burthen; and that, in its more important character, as fixed, in the imperishable records which are transmitted, in uninterrupted progression, from the generation which passes away to the generation that succeeds, it gives to the individual *man*, the product of all the creative energies of *mankind;* extending, even to the humblest intellect, which can still mix itself with the illustrious dead, that privilege, which has been poetically allotted to the immortality of genius, of being "the citizen of every country, and the contemporary of every age."

LECTURE XXI.

ON HEARING—CONTINUED.

GENTLEMEN, after considering, in a former Lecture, some states of mind, which arise immediately from affections of our nerves, and which, therefore, I can see no reason for classing apart from our other sensations, I proceeded, in my last Lecture, to consider the feelings, which are more commonly termed sensations, beginning with the most simple of these, in the order of *smell*, *taste*, and *hearing*.

In the elucidation of these, my great object was to show, that there is nothing, in the mere states of mind, that constitutes the sensations of fragrance, sweetness, sound, which could have led us to ascribe them to corporeal objects as their causes,—more than in any of our internal joys or sorrows,—if we had had no other means of acquiring knowledge of those causes, than are afforded by the sensations themselves,—that, in short, we consider them as sensations, or external affections of the mind, because we have previously believed in an external world,—not that we believe in an external world, merely because we have had those particular sensations.

The various advantages, which these three senses afford, I endeavoured to point out to you; and, in particular occupied a great part of my Lecture, in illustrating the advantages for which we are indebted to our organ of *hearing*, as the medium of *language*, and by it, more or less directly, not of the high acquisitions of science and civilization only, but of the rudest forms of social communication, and almost of social existence.

After the remarks on this advantage received from *language*, which is unquestionably, and beyond all comparison, the most inestimable benefit which the sense of hearing affords,—it would be

improper to omit wholly the mention of the pleasure, which we receive from it, as a source of *musical* delight,—of that expression of feeling, which itself, almost like verbal discourse, may be said to be a language, since it is the utterance of thought and emotion from heart to heart,—but which has a voice, as independent of the mere arbitrary *forms of speech*, as the tears of gratitude, or the smiles of love, that may indeed, give eloquence to *words*, but require no *words* to render *them* eloquent. Though, when very strictly considered, even the pure, and almost spiritual delight of music, may perhaps be counted only a pleasure of sense, it yet approaches, by so many striking analogies, to the nature of our intellectual enjoyments, that it may almost be said to belong to that class; and though,—relatively to minds that are capable of enjoyments more truly intellectual,—it is to be considered as a mere pastime or relaxation, it assumes a far higher character, in its relation to the general pleasures of common minds, and may be said, at least, to be the *intellectual luxury* of those, who are incapable of any other luxury, that deserves so honourable a name. And it is well, that there should be some intermediate pleasure of this sort, to withdraw for a while the dull and the sensual, from the grosser existence in which they may be sunk, and to give them some glimpses, at least, of a state of purer enjoyment, than that which is to be derived from the sordid gains, and sordid luxuries, of common life.

Of the influence,—whether salutary or injurious,—which music has upon the general character,—when cultivated, to great refinement, and so universally as almost to become a part of the habit of daily social life,—it is not, at present, the place to speak. But of its *temporary* influence, as a source of tranquillizing delight, there can be no doubt,—nor, perhaps too, of its occasional efficacy, in exciting emotions of a stronger kind, when peculiar circumstances may have predisposed to them in a very high degree. But there can be as little doubt, that by far the greater number of anecdotes of this kind, which have been handed down in ancient history, are as fabulous, as the existence of that *god of music*, to whose miraculous influence alone, they could, with any decent appearance of epic or dramatic truth, have been ascribed.

> Hear, how Timotheus' varied lays surprise,
> And bid alternate passions fall and rise;

While at each change, the son of Lybian Jove
Now burns with glory, and then melts with love,—
Now his fierce eyes with sparkling fury glow,
Now, sighs steal out, and tears begin to flow;
Persians and Greeks like turns of nature found,
And the world's victor stood subdued—by sound!"*

On these lines, which allude to the celebrated ode of Dryden,—who adapted, with most happy application, to the burning of the Persian palace, an anecdote recorded of the power of Timotheus over the same great warrior, on another occasion,—I may remark, by the way, what influence the accidental composition of this ode has had, in giving almost a sort of dignity to the very madness of the act which it records. It is impossible for us,—even though we knew well how fictitious is the circumstance attached to it,—not to look upon the action, in a different light, from that in which we should have viewed it, if we had read only the historical account of it, as originating in a drunken debauch, at the instigation of a drunken prostitute.

Such is the influence of genius. Its power extends not over the present and the future merely, but, in some measure, also over the past, which might have seemed fixed forever. In spite of our conviction, we look upon an action of Alexander differently, because an individual existed, many centuries after him, and in a country which would then have been justly counted barbarous, by the very barbarians whom he overcame.

Ebrio scorto de tanta re ferente sententiam, unus et alter, et ipsi mero onerati, assentiunt: Rex quoque fuit avidior quam patientior. "Quin igitur ulcisimur Græciam, et urbi faces subdimus?" Omnes incaluerant mero; itaque surgunt temulenti ad incendendam urbem, cui armati, pepercerant."†

Of the wonders, which were said, in ancient times, to have been performed, on the mind and body, by a judicious adaptation of musical sounds, to the nature of the particular case, intellectual, moral, or corporeal, I might read many histories to you, from the original authors, which would perhaps not be less truly ludicrous in the serious gravity of their narration, than in the affected so-

* Pope's Essay on Criticism, v. 374—381.

† Quintus Curtius, lib. v. cap. 7.

lemnity of the fictitious personage whose speech I am about to quote. The experiment with which the quotation closes is, it must be allowed, a very powerful one, and certainly could not have been more successful, in the hands of Timotheus himself.

"The bare mention of *music* threw Cornelius into a passion. 'How can you dignify,' quoth he, 'this modern fiddling with the name of music? Will any of your best hautboys encounter a wolf now-a-days with no other arms but their instruments, as did that ancient piper Pythocaris? Have ever wild boars, elephants, deer, dolphins, whales, or turbots, shewed the least emotion at the most elaborate strains of your modern scrapers, all which have been, as it were tamed and humanized by ancient musicians? Whence proceeds the degenerancy of our morals? Is it not from the loss of ancient music, by which (says Aristotle) they taught all the virtues? Else might we turn Newgate into a college of Dorian musicians, who should teach moral virtues to those people. Whence comes it that our present diseases are so stubborn? whence is it that I daily deplore my sciatical pains? Alas! because we have lost their true cure, by the melody of the pipe. All this was well known to the ancients, as Theophrastus assures us, (whence Cælius calls it *loca dolentia decantare*) only indeed some small remains of this skill are preserved in the cure of the Tarantula. Did not Pythagoras stop a company of drunken bullies from storming a civil house, by changing the strain of the pipe to the sober spondæus? and yet your modern musicians want art to defend their windows from common nickers. It is well known that when the Lacedæmonian mob were up, they commonly sent for a Lesbian musician to appease them, and they immediately grew calm as soon as they heard Terpander sing: Yet I don't believe that the Pope's whole band of music, though the best of this age, could keep his holiness's image from being burnt on a fifth of November.' 'Nor would Terpander himself,' replied Albertus, 'at Billingsgate, nor Timotheus at Hockley in the Hole, have any manner of effect, nor both of them together bring Horneck to common civility.' 'That's a gross mistake,' said Cornelius, very warmly, 'and to prove it so, I have here a small lyra of my own, framed, strung, and tuned after the ancient manner. I can play some fragments of Lesbian tunes, and I wish I were to try them upon the most passionate creatures alive.'—'You never had a

better opportunity,' says Albertus, 'for yonder are two apple-women scolding, and just ready to uncoif one another.' With that Cornelius, undressed as he was, jumps out into his balcony, his lyra in hand, in his slippers,—with a stocking upon his head, and waistcoat of murrey-coloured satin upon his body: He touched his lyra with a very unusual sort of an harpegiatura, nor were his hopes frustrated. The odd equipage, the uncouth instrument, the strangeness of the man and of the music, drew the ears and eyes of the whole mob that were got about the two female champions, and at last of the combatants themselves. They all approached the balcony, in as close attention as Orpheus's first audience of cattle, or that of an Italian opera, when some favourite air is just awakened. This sudden effect of his music encouraged him mightily, and it was observed he never touched his lyre in such a truly chromatic and enharmonic manner as upon that occasion. The mob laughed, sung, jumped, danced, and used many odd gestures, all which he judged to be caused by the various strains and modulations. 'Mark,' quoth he, 'in this, the power of the Ionian, in that, you see the effect of the Æolian.' But in a little time they began to grow riotous, and threw stones; Cornelius then withdrew. 'Brother,' said he, 'do you observe I have mixed unawares too much of the Phrygian? I might change it to the Lydian, and soften their riotous tempers: But it is enough: learn from this sample to speak with veneration of ancient music. If this lyre in my unskilful hands can perform such wonders, what must it not have done in those of a Timotheus or a Terpander?' Having said this he retired with the utmost exultation in himself, and contempt of his brother; and, it is said, behaved that night with such unusual haughtiness to his family, that they all had reason to wish for some ancient Tibicen to calm his temper."*

That, in enlightened countries, so many wonders should have been related and credited,—if no phenomena that could justify them were truly observed,—may perhaps on first reflection, appear so unaccountable, as almost to induce belief of the wonders themselves, as less inexplicable than the very credit which was given to them. But it must be remembered, that, in all ages, and even in countries of philosophers, there is a very large fund

* Mart. Scrib. Book I. c. 7. with some exclusions.

of credulity in man,—which yields, very readily, to every thing that is not absolutely impossible, and which is even not very nice, in estimating what is impossible,—leaning always, whenever there is the slightest doubt on this point, with a very favourable inclination to the side of the *possibility* ;—and, in the second place, that the phenomena of music are precisely of a kind, which gives this credulity the widest scope. They are pleasing in themselves, and of a kind therefore, on which it is gratifying to the imagination to dwell—their influence on the mind is felt in a very high and wonderful degree, even without any fabulous addition;—they are produced by instruments, which seem, in their sensible appearance, so little adequate to the production of them, that the result is almost like the effect of supernatural agency, to which we know not how to give any limits;—and, when a little mystery is once admitted, the imagination, which has fairly got over the difficulty of this first admission, is not very scrupulous afterwards as to degrees, but is sufficiently ready of itself to admit a great deal more, without pausing to consider its exact amount.

The phenomena of music, in addition to their general interest, are truly worthy, in another respect, of our astonishment, from that striking diversity of organic power in the perception of *melody* and still more of *harmony* which they exhibit in different individuals, in whom all other circumstances are apparently the same, —a diversity which has often attracted the attention of philosophers, and has led even those who have no great tendency to speculation of any kind, to wonder at least, which is the first step of all philosophizing. In the present instance, however, unfortunately, this first step is the only step which philosophers have been able to take. They have been obliged to desist, after all their efforts to proceed further, and to submit to share, and even to acknowledge that they share, the ignorance of the vulgar. If, indeed, the want of musical ear had involved either a general defect of hearing, or a general slowness of discrimination in other cases of nice diversity, the wonder would not have been great. But those, who are without ear for music, perceive as readily as others, the faintest whisper;—they distinguish like them, the faintest shades of difference in the mere articulations of sound which constitute the varieties of language, nor the articulations only, but the differences also of the mere tones of affection or displeasure, grief

or gaiety, which are so strikingly analogous to the varied expression of musical feeling;—and their power of discrimination in every other case, in which the judgment can be exercised, is not less perfect. Nay,—to increase still more the difficulty,—they are often as sensible, as others, of the beauty of series of tones of a different kind; and some of our best poets and declaimers,—who of course must have had a quick discernment of metrical rhythm, and of the melody of elocution,—have yet been incapable of distinguishing the *musical* relations of sounds, as reciprocally high or low,—the melody that results from them in certain successions, and the harmony or the discord of their union. That it depends, chiefly, or perhaps entirely, on the structure or state of the mere corporeal organ of hearing,—which is of a kind, it must be remembered, peculiarly complicated, and therefore susceptible of great original diversity in the parts, and relations of the parts that form it, is very probable; though the difference of the separate parts themselves, or of their relations to each other, may, to the mere eye, be so minute, as never to be discovered by dissection, —thus leaving, to every future race of inquirers, the same difficulty which has perplexed ourselves, and the same impossibility of overcoming it. In the sense of vision, I may remark, there is a species of defect, very analogous to the want of musical ear,—a defect, which consists in the difficulty, or rather the incapacity, of distinguishing some colours from each other—and colours which, to general observers, seem of a very opposite kind. As the want of musical ear implies no general defect of mere quickness of hearing, this visual defect, in like manner, is to be found in persons, who are yet capable of distinguishing, with perfect accuracy, the form, and the greater or less brilliancy of the coloured object;—and I may remark too, in confirmation of the opinion, that the want of musical ear depends on causes not *mental* but *organic*; that, in this analogous case, some attempts, not absolutely unsuccessful, have been made, to explain the apparent confusion of colours, by certain peculiarities of the external organ of sight. Though the one case, however, were to throw no light upon the other, it is still gratifying to philosophers, to have a case at all analogous, to which, when they are weary of considering what has baffled all their endeavours to explain it, they may have the comfort of turning away their attention, without the mortification of seeming ab-

solutely to fly from the subject. Such is the strange constitution of our nature, that merely to have another difficulty presented to us, though it may yet be absolutely unsurmountable in itself,—if only it have some slight resemblance to a former difficulty,—seems to us almost as if we had succeeded in explaining the first;—and each difficulty, by a very convenient transposition, which our pride knows well how to make, supplies, according as we may have been considering the one rather than the other, the place of explanation to that which is afterwards to explain it, no less clearly, in its turn.

In considering sound relatively to its external cause, we give the name of vibration to the successive pulses, or alternate approaches and recessions of the particles of the elastic sounding body; and the word is a very convenient one for expressing this series. But still it may be necessary to warn you, that the word, though single, is not the less expressive of a plurality of states, which have no other unity, than as they are comprehended in this single word,—a word, like many other single words, by which we express the combination of various objects, or invented by us, merely to aid our weakness, that is incapable, without such helps, of conceiving or remembering even a small part of that wide series of physical changes, which we are able to discover in the universe, if each event of the series were to be distinguished by a peculiar name. This mere aid of our weakness, however, we are apt, by a very absurd, but a very general fallacy, to consider as something, much more dignified in its nature than a mere arbitrary verbal abbreviation,—as truly an explanation of the very phenomena, or series of phenomena, which it simply designates. You must not flatter yourselves, however, that you have advanced the slightest step, in explaining the connexion of sound with the pulses of air, when you have merely invented a brief term for those successive pulses, and ascribed the sound to vibration; you have, indeed, given a name to a series of corpuscular phenomena, but you have not discovered any thing additional to the phenomena themselves, which can be considered as explanatory to the changes produced.

What, then, is truly meant, when it is said, that, for producing the mental affection, which constitutes hearing, some previous vibration is necessary? It certainly cannot mean, as I have already

remarked, that the vibration is any thing in itself different from the series of physical events which it expresses, however few or numerous these may be, since it is only the name which we give to them, when we consider them together; nor can it mean that the direct cause of the sensation is any thing different from the one organic state immediately preceding the sensation,—a state which may, indeed, have resulted from a long sequence of prior organic states, produced during the continued vibratory motion of the air, but which is itself, in its relation to the phenomenon which succeeds it,—that affection of the sentient mind which constitutes *hearing*,—to be considered independently of these prior states, that have no other relation to the mind, than as gradually inducing that ultimate organic state, which is the state that is followed by sensation. There is a part, less or greater, of the sensorial organ, which must be affected, in a certain manner, before the sensation of hearing can take place; and, in *vibration*, there is nothing but a repeated approach and secession of the vibrating particles. If *vibration*, then, or a series of pulses, be necessary, it is evident that a corresponding series of changes in the organ is necessary; that is to say, there is no one instant, at which the vibrating particles are in such a state relatively to the sensorial organ, that if no previous change had been excited in the organ itself, they could have produced in it immediately, the precise state, which is instantly followed by the mental affection of hearing. There must, therefore, be a *series* of changes, in the sensorial organ itself, the last of which only is followed by sensation. The particles of the air, or any other elastic medium, for example, must, in their *first* appulse, produce a certain state of the sensorial organ; in their *second* appulse, a different state, by acting on an organ, already affected in a certain manner; in their *third* appulse, a still different state; and thus successively, till, *at last*, they produce that particular definite state of the sensorial organ, in consequence of which, the *mind* becomes instantly *sentient*,—a state which could not have been produced by any single impulse of the particles on the unaffected organ, because then vibration, or a series of pulses, would not have been necessary.

To this successive modification of states of an organ, terminating in a particular result, different from each of the prior states, there are abundant analogies in the history of the mind, and many

in the phenomena of sensation itself. One of the most remarkable of these is the production of the sensation of *whiteness*, by the rapid revolution of a cylinder, on which the separate prismatic colours, and the separate colours only, are painted, in certain proportions; *each colour*, in this case, acting on the organ already affected by a former colour, till a sensation altogether different from the result of each of them when separate, is their joint ultimate result, the sensation of *whiteness*, without any external object that is white.

In this way only, by a series of progressive organic affections, and not by any single affection, can the vibration of an elastic medium, as different from one simple unrepeated impulse, terminate in the production of sound. It is, in short, a name for this series of changes, and nothing more.

If, in a case so very obscure as that of *musical ear*, in which all that is truly evident, is, that in different individuals, there is a diversity of some kind or other—I could permit myself to indulge any conjecture with respect to this diversity,—I might perhaps, be inclined to look to the view now given of the real nature of *vibration*, and its progressive effects on the auditory part of our nervous system, as furnishing some slight ground, not, indeed, for any theory, which is far too presumptuous a word, but for the preference of one mere possibility, to other mere possibilities, which is all that can be hoped in any conjecture, on so very dim and impalpable a subject.

We have seen that the series of pulses of the vibrating air,—if vibration, or a series of pulses be necessary to sound,—must produce a series of changes in the sensorial organ, which produce no corresponding affection of the mind, till, at last, a state of the organ is produced, which *is* attended with sensation. This, and this only, can be meant, when we speak of vibration as the antecedent of sound,—a series of organic changes, and, after this series, an affection of the mind. In such circumstances, it is certainly more probable, that the organ thus affected with a series of progressive changes, does not pass instantly from the greatest change to the state in which it was originally, before the first pulse, but that it retains this state, for a time, however, short, or, at least, passes through some series of states, in its gradual return, so that, if a *new* vibration be excited by the pulse of any sounding body, before the or-

gan of hearing have returned to its original state, the effect may be supposed to be different from that which it would have been, if the same vibration had been primarily communicated to the organ, in its state of rest, or in that state, which, from our want of a better word, may be termed its state of rest.

The phenomena most analogous to these vibratory affections of the ear, as depending on successive impulses, are unquestionably the phenomena of *titillation*, or rather, to express what is so familiar and simple, by a more homely and appropriate word, the phenomena of *tickling*. In this, the great circumstance distinguishing musical feeling, is to be found, that the feeling arises not from the separate impressions, but from their successions or co-existence. When the palm of the hand is gently tickled, as the finger passes rapidly and repeatedly over the palm, the parts first affected are again affected with various degrees of pressure, as the ear, in melody, is successively affected by repeated varieties of vibration; and various parts of the organ of touch exist, at the same moment, in various states, forming one joint result of sensation, as, in harmony, various vibrations of the organ of hearing *co-exist*, and blend together in one mingled delight. To produce tickling, a certain rapidity of succession is necessary; for, if the parts, first affected, have returned to their original state, before other parts begin to be affected, or themselves to be affected again, the slow motion, it is evident, may be continued, for any length of time, without any effect, different from that of simple pressure. The quicker, then, the return of the parts may be to their original state, the less will be the titillation; and, it is very probably, a difference in this quickness of return, which constitutes the difference of ticklishness, so remarkable in different individuals, who feel, equally, the light pressure of each separate touch. That there is a difference of ticklishness, in different persons, you all know; some being easily excited even to convulsive laughter, by slight motions, that scarcely produce any effect in others, beyond that of the simple primary sensation of touch. A person who is ticklish, and a person who is not ticklish, agree in receiving this first tactual sensation; but they differ afterwards, in this respect, that when the same slight impulse is rapidly repeated, on the same surface, it produces a livelier effect than before, in the *one*, but not in the *other*. The organ of the one who is not ticklish is in the same

state, or nearly in the same state, when it receives the second, third, and fourth impression, as when it received the first, and no peculiar excitement, therefore, is produced. The organ of the other, more susceptible, or more tenacious of the affection produced, has not returned to its original state, when the rapid impression is repeated, and is, therefore, at every new impression, affected in a different manner.

Proceeding on the analogy of these phenomena,—of mere *tickling*, with which I may suppose you to be all acquainted,—an analogy which, striking as it is in many circumstances, I readily own, does not justify more than conjecture in the case to which I would apply it,—I conceive it to be, at least, not absolutely impossible, since a diversity of some kind, there must be, that in those who receive no pleasure from music, as in those who are not ticklish, there is a rapid return of the nervous organ, after each separate affection, to its original state; that each separate touch or pressure in the one case, and each separate tone in the other case, produces its particular effect,—that effect which it would have produced in all, if unaccompanied by any other tone in music, or slight pressure in tickling,—but that a succession of these produces no effect different from that which each would have produced singly. A certain interval is necessary for distinct hearing in every case; and, before this interval has passed, the auditory nerves, in this case, may be imagined to be again quiescent, or nearly quiescent.

I need not add, that, in an inquiry of this sort, all which is necessary, is to account for the mere original defect of pleasure; since, if the relations of notes, as reciprocally high or low, never gave any delight, the ear, having no object of interest in these successions, would soon habitually neglect them, and at length cease altogether to distinguish them, attending only to the verbal meaning of sounds, and not to their tone; in the same manner, as we pay little attention to another relative difference of voices as more or less loud, unless when the difference is very considerable, and not in those common differences of intensity which distinguish every voice in conversation from every other voice,—or as, after living long in a province, the dialect of which is distinguished by any accentual peculiarities, we at last become unconscious of these, and hear the words, as it were, stripped of their

peculiarity of tone. In what is termed the cultivation of a musical ear, however, we have not an analogy merely, but a direct proof of this influence of habit. That the ear may be improved by cultivation, or, in other words, by nice attention to the differences of musical sound, every one knows; and if this attention can enable us, even in mature life, to distinguish sounds as different in themselves, which, but for the habitual attention, we should have regarded as the same, it may well be supposed, that continued inattention, from earliest infancy, may render us insensible of musical relations still more obvious and precise, than those which we have thus only learned to distinguish; or, which is the same thing, that continued attention from infancy to slight musical differences of sound,—an attention which may be regarded as the natural effect of pleasure received,—may render us capable of distinguishing tones as very dissimilar, the differences of which, however obvious at present, we should scarcely, but for such original attentive discrimination, have been able to detect. What, in comparison, the refined musical ear of a performer,—almost every hour, and every moment, of whose life has been spent amid sounds,

> "Untwisting all the chains, that tie
> The hidden soul of harmony,"—

is to a common musical ear, that common musical ear may be to those in whom this discriminating skill seems to be wholly or nearly defective. The refined musician,—who, but for the long practice of his art, would have shared that incapacity which now excites his wonder,—is astonished, that persons of common ear do not distinguish the nice differences which appear to him almost as remarkable as those differences which they are capable of perceiving; and the person of common musical ear only does the same thing, when he is astonished that the less refined differences, remarked by himself, are not obviously distinguishable by all mankind, or, at least, by all who have no deafness to incapacitate them from hearing the separate sounds. The discrimination in both has depended on previous attention, which has necessarily been greater in one case than in the other; and what attention can we suppose to have been originally given, if from the cause which I have ventured to state as a possible one in persons without musical ear, no pleasure had originally been felt by them in

any sequence of notes as successive, and the whole value of sound been to them the meaning of which it was symbolically representative, which, accordingly, they have learned to discriminate in every case, as accurately as others.

I might follow out this speculation at much greater length; but I have already dwelt too long on what is at best a conjecture, and what, perhaps, even as a mere conjecture, is founded only on a slight analogy.

After the examination of the phenomena of *Smell*, *Taste*, and *Hearing*, which are peculiarly simple, I proceed to the consideration of Senses, which afford phenomena that are more complicated, or, at least, which seem more complicated, as considered in the mature state of the mind; when the sensations that arise from one set of organs, by frequent co-existence with sensations that arise from affections of other sets of organs, are, as it were, blended with them in one compound perception, and so permanently modified forever after, that it is difficult in all cases, and in many cases perhaps impossible, to form any accurate notion of the sensations as they existed in their original elementary state.

Since, of the two senses of *Sight* and *Touch*, that of *Sight*,—as far, at least, as we are able, by intellectual analysis at present to discover its original sensations,—is more simple, and more analogous to the senses before considered, I should be inclined, on these accounts, to proceed to the consideration of it, previously to any inquiry into the sense of Touch. But this order, though unquestionably the more regular, if we had to consider only the original sensations of each organ, would be attended with great inconvenience in considering their subsequent modified sensations; since those of Vision depend, in a very great degree, on the *prior* affections of *Touch*, with the nature of which, therefore, it is necessary for you to be acquainted in the first place. I am aware, indeed, that, in considering even *Touch*, I may sometimes find it necessary to refer, for illustration to the phenomena of *Vision*, though these have not been considered by us, and must, therefore, for the time, be taken upon trust. But when phenomena are at all complicated, such occasional anticipations are absolutely unavoidable. Sensation, indeed, says Aristotle, is a *straight line*, while intellect is a *circle*,—Αἴσθησις γραμμὴ, νοῦς κύκλος,—or to use the paraphrastic translation of Cudworth, in his treatise on Immutable Morality,

"Sense is of that which is without. Sense wholly gazes and gads abroad; and, therefore, doth not know and comprehend its object, because it is different from it. Sense is a line, the mind is a circle. Sense is like a line, which is the flux of a point running out from itself; but intellect like a circle, that keeps within itself."* That sense is not a circle is, indeed, true, since it terminates in a point; but far from being a *straight* line, it is one of the most perplexing of *curves*, and is crossed and cut by so many other curves,—into many of which it flows, and unites with them completely,—that when we arrive at the extremity of the line, it is almost impossible for us to determine with accuracy what *curve* it is, which, in the strange confusion of our diagram, we have been attempting to trace from its initial point.

I proceed, then, to the consideration of the phenomena of the sense of

TOUCH.

If priority of sensation alone were to be regarded, the sense of *touch* might deserve to be considered in the first place; as it must have been exercised long before birth, and is probably the very feeling with which sentient life commences. The act of *birth*, in relation to the mind of the little stranger, who is thus painfully ushered into the wide scene of the world, is a series of feelings, of this class; and the first feeling which awaits him, on his entrance,—in the change of temperature to which he is exposed,—is still to be referred to the same organ. It is at this most important moment of existence, when one dark and solitary life of *months*, of which no vestige is afterwards to remain in the memory, is finished, and a new life of *many years*,—a life of sunshine and society,—is just beginning, that, in the figurative language of the author, whom I am about to quote to you, *Pain*, the companion of human life, receives him on the first step of his journey, and embraces him in his iron arms.

> "Primas tactus agit partes, primusque minutæ
> Laxat iter cæcum turbæ, recipitque ruentem.
> Non idem huic modus est qui fratribus; amplius ille
> Imperium affectat senior, penitusque medullis,

* Page 98, 99.

Viceribusque habitat totis, pellisque recentem
Funditur in telam, et late per stamina vivit.
Necdum etiam matris puer eluctatus ab alvo
Multiplices solvit tunicas, et vincula rupit;
Sopitus molli somno, tepidoque liquore
Circumfusus adhuc; tactus tamen aura lacessit
Jamdudum levior sensus, animamque reclusit.
Idque magis, simul ac solitum blandamque calorem
Frigore mutavit cœli, quod verberat acri
Impete inassuetos artus; tum sævior adstat,
Humanæque comes vitæ Dolor excipit; ille
Cunctantem frustra et tremulo multa ore querentem
Corripit invadens, ferreisque amplectitur ulnis."*

It is at this moment, so painful to himself, that he is affording to *another* bosom, perhaps the purest delight of which our nature is capable, and has already kindled, in a heart, of the existence of which he is as ignorant, as of the love which he excites in it, that warmth of affection, which is never, but in the grave, to be cold to *him*, and to which, in the many miseries that may await him,—in sorrow, in sickness, in poverty,—and perhaps too in the penitence of guilt itself,—when there is no other eye, to whose kindness he can venture to look, he is still to turn with the confidence, that he has yet, even on earth, *one friend*, who will not abandon him,—and who will still think of that innocent being, whose eye, before it was conscious of light, seemed to look to her for the love and protection, which were ready to receive him.

* Gray de Princip. Cogit. lib. i. v. 64—80.

LECTURE XXII.

ON THE FEELINGS ASCRIBED TO THE SENSE OF TOUCH, —AND ANALYSIS OF THESE FEELINGS.

In my Last Lecture, Gentlemen, I finished the remarks which I had to offer, on our sense of *hearing;* and in the conclusion of it, had begun the consideration of a very important order of our feelings, those which belong to the sense of *touch.*

Of these, I may mention, in the first place, the sensations of *heat* and *cold,*—sensations that arise from affections of our nerves of touch, or at least from affections of nerves, which, as equally diffused and intermingled with them, it is impossible to distinguish from those which constitute our organ of touch, the same wide surface rendering us sensible, as it were, at every point of warmth as of pressure.

I have also remarked to you, how little analogy there is of our sensations of warmth, to the other sensations commonly ascribed to this organ; and the great difference of the feelings, has led some physiologists to believe, that the organs of sensations so different, must themselves be different. But even though the sensations were as dissimilar as is supposed, there is no reason *a priori* to believe,—and to experience, it is evident, that, in this case, we cannot appeal, so as to derive from it any ground for believing,—that sensations, which are very different, must arise from affections of different organs. As far, indeed, as we can safely appeal to experience, in this very case, there are sensations which we never hesitate in referring to our tactual nerves, as different from the more common sensations ascribed to touch, as the sensation of warmth itself. I allude to the pain of puncture or laceration of the skin. Indeed, if the brain be ultimately the great or-

gan of all our sensations, it is evident that we must refer to affections of *one* sensorial organ, not the various feelings of touch only, but, with them the still greater variety of feelings, that constitute our sensations of smell, taste, sound, and colour.

But are we indeed sure, that there truly is that great dissimilarity supposed, or may not our belief of it arise from our reference to touch of sensations that truly do not belong to it? Such, at least, is the opinion, to which, I think, a nicer analysis will lead us. The primary original feelings, which we owe to our mere organ of touch, I consider as of a kind, all of which are far more analogous to the sensations of warmth, or of pain on puncture, than to the perceptions of form and hardness, which are generally regarded as tangible. Before entering on the analysis, however, it will be necessary to consider, what are the sensations which we are supposed to owe to this organ.

The sensations of *heat* and *cold*,—as received from our organ of touch,—we may almost lay out of account in our analytical inquiry. It is unnecessary to dwell on them, or even to repeat, in application to them, the argument, which has been already applied more than once to the sensations before considered. It is quite evident, that, in classing our warmth or chillness, as a sensation, —and not as a feeling that has arisen spontaneously in the mind,— we are influenced by that experience, which has previously given us the belief of objects external,—at least, of our own corporeal frame,—and that, if we had been unsusceptible of any other sensations, than those of heat and cold, we should as little have believed these to arise directly from a corporeal cause, as any of our feelings of joy or sorrow. The same remark may be applied to the painful sensations of puncture and laceration.

It is only to the other more important information ascribed to the sense of touch, therefore, that our attention is to be directed.

By *touch*, we are commonly said to be made acquainted with extension, magnitude, divisibility, figure, motion, solidity, liquidity, viscidity, hardness, softness, roughness, smoothness. These terms, I readily allow, are very convenient for expressing notions of certain forms or states of bodies, that are easily distinguishable. But, though specifically distinguishable, they admit generically of very considerable reduction and simplification. Hardness and softness, for example, are expressive only of greater or less resistance,—

roughness is irregularity of resistance, when there are intervals between the points that resist, or when some of these points project beyond others,—smoothness is complete uniformity of resistance,—liquidity, viscidity, are expressive of certain degrees of yieldingness to our effort, which solidity excludes, unless when the effort employed is violent. All, in short, I repeat, are only different species or degrees of that which we term *resistance*, whatever it may be, which impedes our continued effort, and impedes it variously as the substances without are themselves various. Such is one order, then, of the feelings commonly ascribed to the sense which we are at present considering.

To proceed to the other supposed tangible qualities, before included in our enumeration,—*figure* is the boundary of extension, as *magnitude* is that which it comprehends; and *divisibility*, if we consider the apparent continuity of the parts which we divide, is only extension under another name. If we except motion, therefore, which is not permanent, but accidental,—and the knowledge of which is evidently secondary to the knowledge which we acquire of our organs of sense, before which the objects are said to move, and secondary in a much more important sense, as resulting not from any direct immediate organic state of one particular moment, but from a comparison of sensations past and present,—all the information, which we are supposed to receive primarily and directly from touch, relates to modifications of *resistance* and *extension*.

Though it is to the sense of *touch*, however, that the origin of the knowledge of these is generally ascribed, I am inclined to think, in opposition to this opinion, that in both cases, the reference is wrongly made,—that if we had the sense of touch only, we should not be sensible of resistance, nor, I conceive, even of extension,—and that we seem to perceive the varieties of extension and resistance immediately by touch only, because the simple original tactual feeling has become representative of these, in the same manner, and for the same reason, as we seem to perceive the varieties of distance immediately by the eye. The sense of touch has unquestionably, like all our other senses, its own peculiar feelings, though, for the simple original feelings, attached to the affections of this most extensive of organs, we have unfortunately no name, but that which is applied in popular, and even in philosophic language, to all the affections of the mind.

Our joy or grief, hope or fear, love or hate, I before remarked, we term *feelings*, as readily and frequently, as we use this term to express our sensations of *touch ;* and that, which, however restricted in its original meaning, is now the common name of our mental affections of every class, has, by this extension, unfortunately, become a very unfit one, for distinguishing a limited order of those affections.

Whatever be the term, which we may use, however, there *is*, and *must* be, a sensation peculiar to touch, without regard to the extent or quantity of the surface impressed,—as there is, in colour, a sensation peculiar to vision, without regard to the extent of the portion of the *retina* on which the light may have fallen. Every physical point of our organ of touch, when existing in a certain state, is capable of inducing in the mind a peculiar feeling, though no other physical point of the organ were affected,—as every physical point of the *retina*, though but a single ray of light were admitted to the eye, is capable of inducing in the mind a peculiar affection of vision ; and when many such physical points are affected together, by some impressing surface, the form of which we think that we discover immediately by touch, it is from experience only that we can learn the vicinity of the physical points of our own tactual surface thus impressed, and consequently the continued extension of the object which impresses them. Before we have so much knowledge of external things, as to know even that we have any bodily organs whatever,—and it is of this state of absolute ignorance alone that we must think, as often as we speculate on the information which our senses separately afford,—when we know as little of our bodily frame, as of that material universe, of which we know nothing, we cannot, by the very terms of this supposition, know that different points of our organ of touch are affected in a certain manner,—that these points are contiguous to each other—and that the mass affecting these contiguous points must consequently itself be composed of points, that are, in like manner, contiguous. We know nothing of our organs—we know nothing of any external masses—but a certain feeling is excited in our mind ; and it is this simple feeling alone, whatever it may be, which constitutes the direct elementary sensation of touch, though this simple elementary sensation, like many other sensations, may afterwards be so blended

with other feelings, as to become significant of them, and even to seem to involve them, as if originally and necessarily coexisting.

It is impossible for us at present, indeed, to have a body impressed on us, without the immediate notion of something external and extended,—as it is impossible for one, whose sight is perfect, to open his eyes, in the light of day, without perceiving, as it were immediately, the long line of variegated landscape, in the scenery before him:—the one impossibility is exactly equal to the other; yet we know, in the case of vision, that all which we immediately perceive, at the very moment, when our eyes seem to comprehend the worlds of half infinity, in the hemisphere on which we gaze, is a small expanse of light,—if even, which I greatly doubt, there truly be, in our original perceptions of this sense, so much of extension, as is implied in the smallest possible expanse. In *touch*, in like manner, I conceive, that the immediate sensation, though, like colour, it may now seem inseparable from *extension* and *outness*,—if, on the authority of Berkeley, I may venture to use that barbarous but expressive term,—was, like colour, originally distinct from them,—that, by the mere original sensations of this organ, in short, we could as little know the existence of an impressing body, as, by the mere original sensations of vision, we could learn that such a body existed at the extremity of the room in which we sit.

In defining sensation, when we began our inquiry into its nature, I stated it to be that affection of the mind, which is immediately subsequent to the affection of certain organs, induced by the action of external bodies; and I admitted, that, in this definition two assumptions were made,—the existence of foreign changeable external bodies, as separate from the mind,—and the existence of organs, also separate from the mind, and in relation to it truly external, like other bodies, but forming a permanent part of our corporeal frame, and capable of being affected, in a certain manner, by the other bodies, of which the existence was assumed. As far as our analytical inquiry has yet proceeded, these assumptions are assumptions still. We have not been able to detect, in the sensations considered by us, more than in any of our internal pleasures or pains, any circumstances that seem to be indicative of a material world without.

Our analytical inquiry itself, however, even in attempting to

trace the circumstances, in which the belief originates, must proceed on that very belief. Accordingly, in examining our senses of smell, taste, and hearing, I uniformly took for granted the existence of odoriferous, sapid, and vibrating bodies, and considered merely, whether the sensations, excited by these, were, of themselves, capable of communicating to us any knowledge of the external and independent existence of the bodies which excited them.

In the present stage of our inquiry, I must, in like manner, take for granted the existence of bodies, which act, by their contiguity or pressure, on our organ of *touch*, as the odoriferous or sapid particles, act on our nerves of smell and taste—not that I assume this belief, as existing in the mind whose intellectual acquisitions are the subject of inquiry,—for, in that case, the inquiry itself would be superfluous. I assume it, merely as existing in the mind of us the inquirers,—and only, because it is impossible, without such an assumption to make the suppositions that are necessary for the inquiry. All our language is at present adapted to a system of external things. There is no direct vocabulary of scepticism; and even the most cautious and philosophic inquirer, therefore, must often be obliged to express his doubt, or his dissent, in language that implies affirmation. In the present case, when we attempt to analyse our sensations, it is impossible to speak of the circumstances in which the infant is placed, or, I may say even, to speak of the infant himself, without that assumption which we have been obliged to make. The real existence of an external universe, and the belief of that existence, are, however, in themselves, perfectly separate and distinct; and it is not the existence of an external world, which we are now endeavouring to establish as an object of belief. We are only endeavouring, in our analysis of the sensations afforded by our different organs, to ascertain in what circumstance the belief arises. There might be a world of suns and planets, though there were no human being, whose mind could be affected with belief of it; and even the most zealous defenders of the reality of external nature must admit, that, though no created thing but ourselves were in existence, our mind might still have been so constituted, as to have the very series of feelings, which form at present its successive phenomena, and which are ascribed in no small number to the action of external things.

Are the *primary* sensations derived from the organ of touch,

then, of such a kind as to afford us that knowledge, which they are supposed to give of things without?

Let us imagine a being, endowed with the sense of *touch*, and with every other sense and faculty of our mind, but *not* with any previous knowledge of his own corporeal frame, or of other things external,—and let us suppose a small body, of any shape, to be pressed, for the first time, on his open hand. Whatever feelings mere touch can give, directly of itself, would of course be the same in this case, as *now*, when our knowledge is increased, and complicated, from many other sources.

Let the body, thus impressed, be supposed to be a small *cube*, of the same temperature with the hand itself, that all consideration of heat or cold may be excluded, and the feeling produced be as simple as possible.

What, then, may we suppose the consequent feeling to be?

It will, I conceive, be a simple feeling of the kind of which I have already spoken, as capable of arising from the affection of a single point of our organ of touch,—a feeling that varies indeed with the quantity of pressure, as the sensation of fragrance varies with the number of the odorous particles, but involves as little the notion of extension, as that notion is involved in the mere fragrance of a violet or a rose. The connection of this original tactual feeling, however, with that of extension, is, *now*, so indissoluble, as, indeed, it could not fail to become, in the circumstance in which it has uniformly arisen, that it is almost impossible to conceive it as separate. We may perhaps, however, make a near approach to the conception of it, by using the gentle gradual pressure of a small pointed body, which, in the various slight feelings excited by it,—before it penetrate the cuticle, or cause any considerable pain,—may represent, in some measure, the simple and immediate effect, which pressure in any case produces,—exclusively of the associate feelings which it indirectly suggests.

Such of you, as have the curiosity to try the experiment, with any small bodies, not absolutely pointed,—such as the head of a pin, or any body of similar dimensions,—will be astonished to feel, how very slightly, if at all, the notion of *extension* or *figure* is involved in the feeling, even after all the intimate associations of our experience;—certainly far less than the notion of longitudinal distance seems to us to be involved in the immediate affections of

our sense of sight. It is an experiment, therefore, which I must request you not to neglect to make.

But the pressure of such a large body, as the cube, which we have supposed to be pressed against our organ of touch, *now* awakens very different feelings. We perceive, as it were immediately, *form* and *hardness*. May not, then, the knowledge of resistance and extension, and consequently the belief of the essential qualities of matter,—be originally communicated by the affections of this organ?

The feeling of *resistance*,—to begin with this,—is, I conceive, to be ascribed, not to our organ of touch, but to our muscular frame, to which I have already more than once directed your attention, as forming a distinct organ of sense; the affections of which, particularly as existing in combination with other feelings, and modifying our judgments concerning these, (as in the case of distant vision, for example,) are not less important than those of our other sensitive organs. The sensations of this class, are, indeed, in common circumstances, so obscure, as to be scarcely heeded or remembered by us; but there is probably no contraction, even of a single muscle, which is not attended with some faint degree of sensation, that distinguishes it from the contractions of other muscles, or from other degrees of contraction of the same muscle. I must not be understood, however, as meaning that we are able, in this manner, by a sort of instinctive anatomy, to perceive and number our own muscles, and when many of them are acting together, as they usually do, to distinguish *each* from *each*; for, till we study the internal structure of our frame, we scarcely know more, than that we have limbs which move at our will, and we are altogether ignorant of the complicated machinery which is subservient to the volition. But each motion of the visible limb, whether produced by one or more of the invisible muscles, is accompanied with a certain feeling, that may be *complex*, indeed, as arising from various muscles, but which is considered by the mind as *one*; and it is this particular feeling, accompanying the particular visible motion,—whether the feeling and the invisible parts contracted be truly simple or compound,—which we distinguish from every other feeling accompanying every other quantity of contraction. It is as if a man, born blind, were to walk, for the first time, in a flower garden. He would distinguish the fragrance of one parterre from the

fragrance of another, though he might be altogether ignorant of the separate odours united in each; and might even consider as one simple perfume, what was, in truth, the mingled product of a thousand.

Obscure as our muscular sensations are in common circumstances, there are other circumstances,—which I pointed out to you in treating before of this subject,—in which they make themselves abundantly manifest. I need not refer to the diseased state of the muscles, in which they become painfully sensible; and I will admit, that the reference to such a morbid state, in which the structure may be supposed to be altered by the disease, would perhaps scarcely be a fair one. It is sufficient to refer to phenomena of which every one must have been conscious innumerable times, and which imply no disease nor lasting difference of state. What is the feeling of fatigue, for example, but a muscular feeling? that is to say, a feeling of which our muscles are as truly the organ, as our eye or ear is the organ of sight or hearing. When a limb has been long exercised, without sufficient intervals of rest, the repetition of the contraction of its muscles is accompanied, not with a slight and obscure sensation, but with one which amounts, if it be gradually increased, to severe pain, and which before it arrives at this, has passed progressively through various stages of uneasiness. Even when there has been no previous fatigue, we cannot make a single powerful effort at any time, without being sensible of the muscular feeling connected with this effort. Of the pleasure which attends more moderate exercise, every one must have been conscious in himself, even in his years of maturity, when he seldom has recourse to it for the pleasure alone; and must remember, still more the happiness which it afforded him in other years, when happiness was of less costly and laborious production than at present. By that admirable provision, with which nature accommodates the blessings which she gives, to the wants that stand in need of them, she has, in that early period,—when the pleasure of mental freedom, and the ambitions of busy life, are necessarily excluded,—made ample amends to the little slave of affection, in that disposition to spontaneous pleasure, which renders it almost an effort to be sad, as if existence itself were delight; giving him a fund of independent happiness in the very air which she has poured around him, and the ready limbs

which move through it, almost without his bidding. In that beautiful passage, in which Goldsmith describes the sounds that come in one mingled murmur from the village, who does not feel the force of the happiness which is comprised in the single line, that speaks of

"The playful children, just let loose from school?"*

It is not the mere freedom from the intellectual task of which we think; it is much more, that burst of animal pleasure, which is felt in every limb, when the long constraint that has repressed it is removed, and the whole frame is given once more to all the freedom of nature. It is by the pleasure of exertion, and the pain of inexertion, that we are roused from that indolence, into which, with great injury to society, that requires our contribution of active aid, we otherwise might sink;—as we are roused, in like manner, by the pleasure of food, and the pain of hunger, to take the aliment that is necessary for our individual sustenance; and though the mere aliment is, indeed, more important for life, it is not more important for happiness than that pleasure of activity which calls and forces us from our slothful repose.

"Thee, too, My Paridel,—I saw thee there,
Stretch'd on the rack of a too easy chair."

With the same happy provision with which she has considered the young of our own species, Nature has, in the other animals, whose sources of general pleasure are still more limited than in the child, converted their muscular frame into an organ of delight. It is not in search of richer pasture that the horse gallops over his field, or the goat leaps from rock to rock; it is for the luxury of the exercise itself. "If the shell-fish on the shore," says Dr Ferguson, "perform no visible action but that of opening and closing his shell, to receive the brine that accommodates, or to exclude the foul matter that annoys him, there are other animals that, in the opposite extreme, are *active;* and for whom Nature seems to administer the means of supply, merely as a restorative of that strength which they are so freely to waste in the seemingly sportive or violent exercises to which they are disposed."†

* Deserted Village, v. 120.

† Principles of Moral and Political Science, Part I. c. i. sect. i.

"The bounding fawn, that darts across the glade,
When none pursues, through mere delight of heart,
And spirits buoyant, with excess of glee;
The horse as wanton, and almost as fleet,
That skims the spacious meadow at full speed,
Then stops, and snorts, and, throwing high his heels,
Starts to the voluntary race again;
The very kine, that gambol at high noon,—
The total herd,—receiving first from one,
That leads the dance, a summons to be gay;
Though wild their strange vagaries, and uncouth
Their efforts, yet resolved, with one consent,
To give such act and utterance as they may
To ecstacy, too big to be suppress'd."*

It is this appearance of *happy life* which spreads a charm over every little group, with which Nature animates her scenery; and he who can look without interest on the young lamb, as it frolics around the bush, may gaze, indeed, on the magnificent landscape as it opens before him,—but it will be with an eye which looks languidly, and in vain, for pleasure which it cannot find.

These observations, on our muscular pains and pleasures, in conformity with that view of them which I endeavoured to give you, in a former lecture, are not digressive now, nor uselessly repeated. It is of great importance for the applications which we have to make, that you should be fully aware that our muscular frame, is not merely a part of the living machinery of motion, but is also truly an organ of sense. When I move my arm, without resistance, I am conscious of a certain feeling; when the motion is impeded, by the presence of an external body, I am conscious of a different feeling, arising partly, indeed, from the mere sense of touch, in the moving limb compressed, but not consisting merely in this compression, since, when the same pressure is made by a foreign force, without any muscular effort on my part, my general feeling is very different. It is the feeling of this resistance to our progressive effort, (combined, perhaps, with the mere tactual feeling) which forms what we term, our feeling of solidity or hardness; and, without it, the tactual feeling would be nothing more, than a sensation indifferent or agreeable, or disagreeable or severely painful, according to the force of the pressure, in the

* Cowper's Task, Book IV.

particular case; in the same way, as the matter of heat, acting, in different degrees, on this very organ of touch, and on different portions of its surface, at different times, produces all the intermediate sensations, agreeable, disagreeable, or indifferent, from the pain of excessive cold, to the pain of burning; and produces them in like manner, without suggesting the presence of any solid body, external to ourselves.

Were the *cube*, therefore, in the case supposed, pressed, for the first time, on the hand, it would excite a certain sensation, indeed, but not that of resistance, which always implies a muscular effort that is resisted, and consequeutly not that of hardness, which is a mode of resistance. It would be very different, however, if we fairly made the attempt to press against it; for, then, our effort would be impeded, and the consequent feeling of resistance would arise; which, as co-existing in this case, and in every case of effort, with the particular sensation of touch, might afterwards be suggested by it, on the simple recurrence of the same sensation of touch, so as to excite the notion of hardness, in the body touched, without the renewal of any muscular effort on our part, in the same manner as the angular surfaces of the cube, if we chance to turn our eye on it, are suggested by the mere *plane* of *colour*, which it presents to our immediate vision, and which is all that our immediate vision would, of itself, have made known to us. The feeling of resistance, then, I trust, it will be admitted, and consequently of hardness, and all the other modes of resistance, is a muscular, not a tactual feeling.

But though the resistance or hardness of the cube, as implying some counter effort, may not be immediately sensible to our superficial organ of touch, are not its dimensions so perceived? Its cubical form, it will be allowed, cannot be felt, as only one of its surfaces is supposed to be pressed upon the hand; but, is not at least this square surface perceived immediately? In short, does not touch, originally and immediately, convey to us the knowledge of extension?

With our present complete belief of external things, indeed, and especially of our organs of sense, the most important of these, the origin of our knowledge of extension, seems to us a matter of very easy explanation. The square surface presses on our organ of touch,—it affects not a single physical point merely, but a por-

tion of the organ, corresponding exactly, in surface with itself; and the perception of the similar square, it will be said, thus immediately arises. But, in all this easy explanation, it is very strangely forgotten, that the *feeling*, whatever it may be, which the impression of the square surface produces, is not itself the square configuration of our tactual organ, corresponding with that surface, but the state of a very different substance, which is as little square, as it is round or elliptical,—which is, indeed, from its own absolute simplicity, incapable of resemblance in shape to any thing; and the resemblance of which, therefore, to the shape of the mere organ, is as little to be expected in the sensations of touch,—as that other state of mind, which constitutes the sensation of the fragrance of a rose, can be expected to resemble the shape of the odorous particles themselves, or of the organ of smell, which is affected by them. The very knowledge which touch is supposed to give, is, in this case, most inconsistently, assumed, as existing in the mind, before the very touch which is supposed to give it. If, indeed, the mind could know, that a part of its external corporeal organ is compressed into the form of a square, or that another square surface is compressing that organ, the difficulty would be at an end; for it would, then, most undoubtedly, have that very knowledge of extension, the origin of which we seek. But it is not explained, *how* the mind, which alone can have sensation or knowledge, and which certainly is not square itself, is to be made acquainted with the squareness of its own corporeal organ, or of the foreign body; nor, indeed, how the squareness of the mere external organ should produce this particular affection of the mind, more than if the organ were compressed into the shape of a polygon of one thousand sides.

Let it be supposed, that, when a small cube is pressed on the hand, one hundred physical points of the organ of touch are affected in a certain manner. We have, it is said, an immediate perception of a square surface. Let it next be supposed, that, instead of one hundred of these continuous points of the organ, an equal number of points, at various distances in the surface of the body, are affected in the same manner. On this supposition it will scarcely be said, that the perception of a square would arise, when there is no square, more than any other imaginable form, in the space comprehended in the pressure. Yet what difference is there, in

these two cases, to a mind that is, by supposition, absolutely ignorant of every bodily organ, and consequently alike ignorant of the nearness or distance of the points of the organ of touch? In both cases, one hundred points, equally sensible, are affected, and are affected precisely in the same manner;—and there is truly no difference, unless we tacitly suppose the mind to be conscious of the bodily frame, and, therefore, of the continuity of certain points of the organ of touch, with the other points that are proximate to them,—a sort of knowledge, for which it would not be easy to account, and which it is impossible to conceive, without conceding the very point in question. A little attentive reflection on the circumstances of these two cases, will, perhaps, aid you in freeing your minds from the illusive belief, of which it may not be easy for you at first to divest yourselves,—that the continuity and similarity of shape, which are known to *us* the inquirers, are known also to that little sentient being, whose first elements of knowledge we are endeavouring to trace.

We are too apt to forget, in inquiries of this sort, that it is not in our organ of touch merely, that a certain extent of the nervous extremity of our sensorial organ is affected. This occurs, equally, in every other organ. In the superficial expansion of the nerves of hearing, smell, taste, for example, it is not a point merely that is affected, but a number of continuous points, precisely, as in the superficial organ of touch; and if, therefore, the notion of extension in general, or of figure, which is limited extension, arose whenever a part of the nervous expansion was affected in any way, we should derive these notions as much from a taste, or a smell, or a sound, as from any of the configurations or affections of our organ of touch.

It is not, therefore, merely because a certain limited part of the sensorial organ is affected, that we have the notion of the square surface, in the case supposed by us: for, if this alone were necessary, we should have square inches, and half inches, and various other forms, rectilinear or curvilinear, of *fragrance* and *sound*.

But, it may perhaps be urged, though all our organs must, indeed, exist equally with our organ of touch of a certain shape when affected,—and though the sensorial figure of our other organs, is not accompanied with any of those mental affections, which

constitute the perception of angular or curvilinear figure, there is something, in the nature of that part of the sensorial organ, which terminates on the general surface of the body, that impresses the mind, immediately, with a sensation, corresponding with the exact figure, in which the organ may itself exist. When the *square*, therefore, in the case imagined by us, is impressed upon the organ, the mental affection which constitutes our notion of a square may immediately arise, though it would not arise from the similar squareness of our organs of smell or hearing.

In answer to this mere supposition, I may remark, that the sensorial organ of touch exists, at every moment, of a certain shape, and that we yet have no perception of this shape, so as to be able to delineate the whole extent of our *tactual* organ, in the same manner as we could delineate the impressing square, in the case supposed: or, if it be said, that the configuration of the organ does not excite this mental affection, in the quiescent state of the part, but only when it is itself affected, I may remark, that we are as little able to delineate its figure, when we are exposed to the action of heat, which yet acts most powerfully upon this very organ, inducing sensations, at least as vivid as those of hardness or figure.

It may still, however, be contended, for in a question of this sort I wish fairly to imagine every possible argument—it may still be contended, that, though the organ of touch has no effect, in this way merely as configured, and might, in any other configuration operate, precisely in the same manner, on the sentient mind, —still the harmony of the bodily and mental changes is so arranged by nature, that the organic state in touch, whatever it may be, is immediately followed by the knowledge of the extension of the impressing body,—in the same manner as a certain state of the organ of *smell*, whatever that state may be, is immediately followed by that affection of the mind, which constitutes our sensation of the fragrance of a rose. Though this argument, in truth, rather begs the question, than attempts to meet it, let us give to it all the force which it may claim. The accurate determination of the point may, indeed, seem, at first almost impossible; since in whatever manner the seeming perception may arise, it must be admitted, that we now seem to perceive extension, as it were immediately, by touch; though not more immediately than in vision

we seem to perceive the positions of objects in different distances before our eyes.—But there is, fortunately, at least one test, which the point in question still admits. If the apparent perception of extension by touch, be truly and originally immediate, and not acquired, like the apparent perception of distance in vision, so as to involve a sort of intellectual measurement or suggestion of some sort, after the primary sensation,—the perception must be constant and universal, not confined to a few simple and familiar forms, which, if we can distinguish these alone, we may be supposed to have learned from experience, but extending to forms of every kind; for it would certainly be a very strange abuse of the license of supposition, to imagine that we perceive a square immediately, but not a circle, or a circle but not a square, or indeed any other figure. Even at present, then—though the circumstances of the trial,—when the experience of many years must have exhausted so many varieties of form, associating the notion of these with the particular tactual feeling whatever that may be—are surely very unfavourable to the opinion which I maintain,—even at present, I may safely trust to experiment, the determination of the question. When a body which we do not see, is pressed on any part of our tactual organ, do we immediately discover its form,—as immediately, as we are sensible of fragrance, when our organ of smell is in a healthy state, and an odoriferous body is presented to it, or of sound, when a cannon is fired beside us? This we certainly should do, if figure were as direct an object of the sense of touch, as fragrance and sound are of the senses of smell and hearing. Even though it be a form of the simplest kind, square, round, triangular, that is thus pressed upon our palm, we scarcely distinguish the precise species of figure for a moment, and are long before we can convince ourselves, that we have perceived its exact magnitude, in the determination of which, after all, we shall very probably be mistaken, if we confine ourselves to the mere intellectual measurement; though we should even add to the immediate sensation of touch, all the discriminating skill of our judgment and reflection. But, if the body be irregular in form,—however slight the irregularity may be, and of a species that would not perplex in the slightest degree our sense of sight, and which certainly, therefore, should perplex as little our sense of touch, which is supposed to be still more immediately perceptive of form,—we

are incapable for some time, and I may even say are incapable altogether, of fixing, with precision, its magnitude and figure—that very magnitude and figure which are yet said to be the direct objects of touch. Of this a single trial may convince any one; it is a trial which as it seems to me decisive, I must request you to make. Are we then entitled to say, in the case of the square surface of the cube pressed upon our hand, that though we cannot discover other forms and magnitudes, we yet discover its extension, and consequently its figure, by the immediate sense of touch?—or may we not rather conclude with confidence, that what is true of other forms is true of this also, that it is only in consequence of more frequent experience we have learned as it were to distinguish, with some degree of certainty, the simpler forms, which, as mere forms, are not more direct objects of the sense of touch than forms the most irregular, and that without such experience, therefore, our mere sense of touch is incapable of informing us of the figure of bodies, immediately and originally.

If then the knowledge of extension be not derived from our immediate sense of touch, it must be derived from some other source, which allows it to be associated with the feelings of touch, and afterwards suggested by these, in the same manner as distant extent, in the case of vision, is suggested by a few slight varieties of colour. Let us endeavour, then, since some such source there must be, to discover what the source is.

LECTURE XXIII.

ANALYSIS OF THE FEELINGS USUALLY ASCRIBED TO THE SENSE OF TOUCH, CONTINUED.

My last Lecture, Gentlemen, was employed in considering the information which we receive from the sense of *touch*, or rather the information which we are commonly supposed to receive from that sense,—but which, in a great part at least, I am inclined to ascribe to another source.

The qualities of bodies, supposed to be made known to us by touch, I reduced to *two*, of which all—whatever be the variety of names that express them,—are mere varieties, RESISTANCE and EXTENSION:—solidity, liquidity, viscidity, hardness, softness, roughness, smoothness, being modes of RESISTANCE, and nothing more;—figure, magnitude, divisibility, as evidently nothing more than modes of EXTENSION: and I stated reasons, which induce me to believe, that neither our feeling of resistance nor that of extension, has its direct origin in the sense of touch; though the original simple feeling, which this organ affords, is *now*, from constant association, almost indiscriminately combined with both, in some one or other of their varieties.

The first of these classes,—that which includes the various modifications of *resistance*,—I examined at great length, and showed, I trust, that it is not to our organ of touch we are indebted for these, but that they are feelings of another sense, of which our muscular frame is the organ,—the feelings, in short, of which every one must have been conscious, who has attempted to grasp any body, or to press against it, when the full contraction of the muscles must, of course, have been impeded. According as the body is hard or soft, rough or smooth,—that is to say, according as it

resists, in various degrees, the progress of our effort of contraction,—the muscular feeling, which arises from the variously impeded effort, will vary in proportion; and we call hard, soft, rough, smooth, that which produces one or other of the varieties of these muscular feelings of resistance,—as we term sweet or bitter, blue or yellow, that which produces either of these sensations of taste or vision. With the feeling of resistance, there is, indeed, in every case, combined, a certain tactual feeling, because we must touch whatever we attempt to grasp; but it is not of this mere tactual feeling we think, when we term bodies hard or soft,—it is of the greater or less resistance which they afford to our muscular contraction.

I next proceeded to consider the other class of supposed tangible qualities, which includes the various modifications of *extension*, and urged many arguments to show, in like manner, that,—however indissolubly these may seem at present to be connected with the simple feelings of our organ of touch,—it is not to our simple original feelings of this sense, that we owe our knowledge of them, as qualities of things without.

Though the notion of *extension*, however, may arise in the manner which I have supposed, this, it may be said, is not the notion of external existence. To what, then, are we to ascribe the belief of external reality, which now accompanies our sensations of touch? It appears to me to depend on the feeling of resistance, —the organ of which, as a muscular feeling, I before explained to you, which breaking in, without any known cause of difference, on an accustomed series, and combining with the notion of extension, and consequently of divisibility, previously acquired, furnishes the elements of that compound notion, which we term the notion of *matter*. *Extension, resistance*;—to combine these simple notions in something which is not ourselves, and to have the notion of matter, are precisely the same thing; as it is the same thing to have combined the head and neck of a man with the body and legs of a horse, and to have the notion of that fabulous being, which the ancients denominated a *centaur*. It certainly, at least, would not be easy for any one to define matter more simply, than as that which has parts, and that which resists our effort to grasp it; and, in our analysis of the feelings of infancy, we have been able to discover how both these notions may have arisen in the mind, and arisen

too, in circumstances, which must lead to the combination of them in one complex notion.

The infant stretches out his arm for the first time, by that volition without a known object, which is either a mere instinct, or very near akin to one,—this motion is accompanied with a certain feeling,—he repeats the volition which moves his arm fifty or one thousand times, and the same progress of feeling takes place during the muscular action. In this repeated progress, he feels the truth of that intuitive proposition, which, in the whole course of the life that awaits him, is to be the source of all his expectations, and the guide of all his actions,—the simple proposition, that *what has been* as an antecedent, will be followed by what has been as a consequent. At length he stretches out his arm again, and instead of the accustomed progression, there arises, in the resistance of some object opposed to him, a feeling of a very different kind which, if he persevere in his voluntary effort, increases gradually to severe pain, before he has half completed the usual progress. There is a difference, therefore, which we may, without any absurdity, suppose to astonish the little reasoner; for the expectation of similar consequents, from similar antecedents, is observable even in his earliest actions, and is probably the result of an original law of mind, as universal, as that which renders certain sensations of sight and sound the immediate result of certain affections of our eye or ear. To any being, who is thus impressed with belief of similarities of sequence, a different consequent necessarily implies a difference of the antecedent. In the case at present supposed, however, the infant, who as yet knows nothing but himself, is conscious of no previous difference; and the feeling of resistance seems to him, therefore, something unknown, which has its cause in something that is not himself.

I am aware, that the application to an infant, of a process of reasoning expressed in terms of such grave and formal philosophic nomenclature, has some chance of appearing ridiculous. But the *reasoning* itself is very different from the *terms* employed to express it, and is truly as simple and natural, as the terms, which our language obliges us to employ in expressing it, are abstract and artificial. The infant, however, in his feeling of similarity of antecedents and consequents, and of the necessity, therefore, of a new antecedent, where the consequent is difficult, has the *reasoning*,

but not the *terms*. He does not form the proposition as universal, and applicable to cases that have not yet existed; but he *feels* it in every particular case, as it occurs. That he does truly reason, with at least as much subtility, as is involved in the process now supposed, cannot be doubted by those who attend to the manifest results of his little inductions, in those acquisitions of knowledge, which show themselves in the actions, and, I may say, almost in the very looks of the little reasoner,—at a period long before that to which his own remembrance is afterwards to extend, when, in the maturer progress of his intellectual powers, the darkness of eternity will meet his eye alike, whether he attempt to gaze on the past, or on the future; and the wish to know the events, with which he is afterwards to be occupied and interested, will not be more unavailing, than the wish to retrace events, that were the occupation and interest of the most important years of his existence.

Then,

> "So—when the mother, bending o'er his charms,
> Clasps her fair nurseling in delighted arms;—
> With sparkling eye the blameless plunderer owns
> Her soft embraces and endearing tones,
> Seeks the salubrious fount with opening lips,
> Spreads his inquiring hands, and smiles and sips."*

Even then, many a process of ratiocination is going on, which might have served as an example of *strict logic* to Aristotle himself, and which affords results, far more valuable to the individual reasoner, than all the contents of all the folios of the crowd of that great logician's scholastic commentators.

That the notions of extension and external resistance, which are thus supposed to be acquired from the progressive contraction of muscles, and the difficulty opposed to their accustomed contraction, which introduces suddenly a new feeling, when all the antecedent feelings had been the same, should be directly combined, only with the sensations of touch, cannot appear wonderful, when we reflect, that it is only in the case of touch, there is that frequent *coexistence* or immediate succession, which is necessary to the subsequent union. In the case of the acquired perceptions of vision, it might, in like manner, be asked, why is it that we do not

* Darwin's Botanic Garden, Canto III. v. 353—4, and 357—360.

smell the exact distance of a rose, as we see its exact distance, as soon as we have turned our eye on the bush on which the rose is growing? And the only answer which can be given, is that there has not been in smell that exact and frequent coexistence of feelings which has occurred in vision. It surely is not more wonderful, therefore, that the same argument should hold in the acquired perceptions of touch, in which the coexistence is still more frequent and exact. When we listen to a flute, our muscles may be contracted as before, or quiescent as before; when the odour of a rose is wafted to us, not a single muscle may be more or less affected. But, without the action of muscles, we cannot grasp a ball, nor press against a resisting body, nor move our hand along its surface. Whatever feelings, therefore, are involved in muscular contraction, may be, or rather I may say, if the common laws of association operate, must be associated with the simple feelings thus constantly coexisting, whatever they may be, which the organ of touch originally affords. To suppose, that, in a case of such frequent coexistence or succession, no association takes place, and that our feelings of touch, are, at this moment, as simple as they were originally, would surely be to suppose the universal influence of the associating principle to be suspended in this particular case.

I have already explained the manner, in which, I suppose, the infant, to obtain the notion of something external and separate from himself, by the interruption of the usual train of antecedents and consequents, when the painful feeling of resistance has arisen, without any change of circumstances, of which the mind is conscious in itself; and the process by which he acquires this notion, is only another form of the very process, which, during the whole course of his life, is involved in all his reasonings, and regulates, therefore, all his conclusions, with respect to every physical truth. In the view which I take of the subject, accordingly, I do not conceive that it is by any peculiar intuition, we are led to believe in the existence of things without. I consider this belief as the effect of that more general intuition, by which we consider a new consequent, in any series of accustomed events, as the sign of a new antecedent, and of that equally general principle of association, by which feelings that have frequently coexisted, flow together, and constitute afterwards one complex whole. There is

something which is not ourself, something which is representative of length—something which excites the feeling of resistance to our effort; and these elements combined, are *matter*. But, whether the notion arise in the manner I have supposed, or differently, there can be no doubt that it has arisen, long before the period to which our memory reaches; and the belief of an external world, therefore, whether founded directly on an intuitive principle of belief, or, as I rather think, on associations as powerful as intuition in the period which alone we know, may be said to be an essential part of our mental constitution, at least as far back as that constitution can be made the subject of philosophic inquiry. Whatever it may have been originally, it is now as impossible for us to disbelieve the reality of some external cause of our sensations, as it is impossible for us to disbelieve the existence of the sensations themselves. On this subject, scepticism may be ingenious in vain; and equally vain, I may say, would be the attempted confutation of scepticism; since it cannot affect the serious internal belief of the sceptic, which is the same before as after argument; unshaken by the ingenuity of his own reasonings, or rather, as I have before remarked, tacitly assumed and affirmed in that very combat of argument, which professes to deny it.

It is in vain, that Berkeley asserts his system, with a zeal and acuteness, which might, perhaps, have succeeded in convincing others, if they could only have previously succeeded in convincing himself, not as a speculative philosopher merely, but as a human being, conversant with his kind, acting, and suffering, and remembering, and hoping, and fearing. This, however, was more than mere ingenuity of argument could perform. Even in publishing his work with the sincere desire of instructing and converting others, the great and primary convert was yet to be made, in the converter himself.

In the Life of Berkeley, prefixed to the edition of his collected works, an account is given of a visit which he paid, at Paris, to Malebranche, the celebrated author of a system, in many respects similar to his own. He found him in a weak state of health, but abundantly eager to enter into disputation, on a science which he loved, and especially on his own doctrines, which he loved still more; but the discussion was at last carried on with more vehemence than the feeble bodily frame of Malebranche

could bear; and his death was said to be occasioned, or at least hastened, by this unfortunate intellectual combat. When we consider this interview of two illustrious men, each of whom, in accordance with his own system, must have been incapable of any direct knowledge of the existence of the other, the violent reciprocal action of these mutual nonentities, might seem ludicrous, if there were not, in the death of any one, and especially of a philosopher so estimable in every respect as the author of The Search of Truth, something too serious to be consistent with any feeling of levity. It is more suitable, both to the occasion itself, and to our own intellectual weakness, to regard this accidental interview of two philosophers, contending so strenously against each other, for the truth of doctrines, which rendered the real existence of each, at best, very problematical, as only a striking instance of the readiness with which all the pride of human reason yields itself, as it were, spontaneously and humbly, to the sway of those more powerful principles, which He, who has arranged our mutual constitution, has so graciously accommodated to the circumstances in which He has placed us. The gift of reason itself, that most inestimable of our intellectual gifts, would have been truly, if nothing more had been added to it, a perilous acquisition, to beings not absolutely incapable of error; since these are points on which a single mistake, if there had been no opportunity of repairing it, might have been fatal, not to our happiness merely, but to our very existence. On these points, however, Nature has not left us to a power so fallible, and to indolence, which might forget to exercise even this feeble power. She has given us principles which do not err, and which operate without the necessity of any effort on our part. In the wildest speculative errors, into which we may be led, there is a voice within, which speaks, indeed, only in a whisper, but in a whisper of omnipotence, at which the loud voice that led us astray, is still,—thus operating on our *mind*, as the secret irresistible influence of gravitation operates on our *body*, preserving it, amid all the disorder and irregularity of its spontaneous motions, still attached to that earthly home which has been prepared with every bountiful provision for our temporary residence.

If there were, indeed, any sceptic as to the existence of an external world, who could seriously profess that his practical conduct was in accordance with his speculative disbelief, we might

very justly exercise, with respect to his own profession, that philosophic doubt or disbelief, which he recommends. Pyrrho, the great founder of this philosophy, is, indeed, said to have acted so truly on his principles, that if a cart ran against him, or a dog attacked him, or if he came upon a precipice he would not stir a foot to avoid the danger. "But his attendants," says Dr Reid, "who happily for him, were not so great sceptics, took care to keep him out of harm's way, so that he lived till he was ninety years of age."* In all these cases, we may safely take for granted, that this venerable sceptic, when he exhibited himself with his domestics knew, at least as well as the spectator, the nature of the comedy which he was acting, for their entertainment, and his own imagined glory;—that he could discriminate, with perfect accuracy, the times when it would be *safe*, and the times when it would be *unsafe*, for him to be consistent;—and that he would never feel, in so strong and lively a manner, the force of his own principles, as when he was either absolutely alone, or with attendants within a very few inches of the ground on which he was philosophizing. We are told, accordingly, that when his passions were too strongly roused, to allow him to remember the part which he was actin, he entered with sufficient readiness into his native character of a mere human being. Of this, one ludicrous instance is recorded, in which his anger against his cook so completely got the better, both of his moral and physical philosophy, that, with the spit in his hand, and the meat on it, which had been roasting, he pursued him to the very market-place. Many stories of this sort, however, we may well suppose, would be invented against philosophers, of a class, that at once challenged the opposition of the whole mob of mankind, and afforded subjects of that obvious and easy ridicule, which the mob of mankind, even without the provocation of such a challenge, are always sufficiently ready to seize.

Into a detail of the sceptical system of Berkeley, it is unnecessary to enter at any length; since, notwithstanding the general acuteness which its truly illustrious author has displayed in this, and in all his works, I cannot but consider his *ideal system*, as presenting a very imperfect and inaccurate view, not merely of the real phenomena of the mind, but even of the sceptical argument against the existence of matter. It was not as a sceptic, however,

* Reid's Inquiry into the Human Mind, chap. i. sect. 5.

that this most devout and amiable of philosophers, to whom Pope scarcely paid a higher compliment than was strictly due, in ascribing to him "every virtue under heaven,"*—it was not as a sceptic that he was desirous of being ranked. On the contrary, I have no doubt that his system seemed to him valuable, chiefly for being, as he conceived, an antidote to scepticism, and that he was far less anxious to display acuteness, than to expose the sophistry of materialism, and to present as he thought, an additional argument for the existence of a divine omnipresent mind, which unquestionably it would have afforded, and an argument too, it must be owned, completely irresistible, if our mere ideas were what he conceived them to be. These, he evidently considered, not as *states* of the individual mind, but as *separate things* existing in it, and capable of existing in other minds, but in them alone; and it is in consequence of these assumptions, that his system, if it were to be considered as a system of scepticism, is chiefly defective. But having, as he supposed, these ideas, and conceiving that they did not perish, when they ceased to exist in his mind, since the same ideas recurred at intervals, he deduced from the necessity which there seemed for some *omnipresent mind*, in which they might exist during the intervals of recurrence, the necessary existence of the Deity; and if, indeed, as he supposed, ideas be something different from the mind itself, recurring only at intervals to created minds, and incapable of existing but in mind, the demonstration of some infinite omnipresent mind, in which they exist during these intervals of recurrence to finite minds, must be allowed to be perfect. The precise nature of the argument, and its demonstrative force, if the hypothetical circumstances which Berkeley himself was far from considering as hypothetical, be admitted, have not been sufficiently regarded by philosophers, when they express their astonishment, that a system, which, if not scepticism, is at least so much akin to it, or so favourable, at least, to the general sceptical spirit, should yet have been brought forward, as its truly pious author informs us, for the express purpose of combating scepticism. He is not, indeed, always a very perspicuous unfolder of his own opinions, but in a passage of his third Dialogue, the series of propositions which I have now stated

* Epilogue to the Satires, Dial. II. v. 73.

as constituting his demonstration, are delivered by himself, with great distinctness and brevity. "When I deny," says Philonous to Hylas, "when I deny sensible things, an existence out of the mind, I do not mean *my* mind in particular, but all minds. Now, it is plain, they have an existence exterior to *my* mind, since I find them, by experience, to be independent of it. There is, therefore, some other mind wherein they exist during the intervals between the times of my perceiving them, as likewise they did before my birth, and would do after my supposed annihilation. And as the same is true with regard to all other finite created spirits, it necessarily follows, there is an *Omnipresent Eternal Mind*, which knows and comprehends all things, and exhibits them to our view, in such a manner, and according to such rules, as he himself hath ordained, and are by us all termed the laws of Nature."*

The existence of ideas as separate from the mind, and the permanent existence of these, when they have ceased to exist in the individual mind, are evidently assumptions as gratuitous as the assumption of the external existence of matter itself could have been; or rather, the permanent and independent ideas, are truly *matter*, under another name; and to believe that these foreign independent substances, which pass from mind to mind, exist *in* the mind, is not to *intellectualize* matter, but to *materialize* intellect. A mind containing, or capable of containing something foreign within itself, and not merely one foreign substance, but a multitude of foreign substances, at the same moment, is no longer that simple indivisible existence, which we termed spirit. Any of the elementary atoms of matter is, indeed, more truly spiritual; the very notion of *recipiency* of any kind, being as little consistent with our notion of mind, as the notion of hardness or squareness.

The whole force of the pious demonstration, therefore, which Berkeley flattered himself with having urged irresistibly, is completely obviated, by the simple denial, that ideas are any thing more than the mind itself affected in a certain manner; since, in this case, our ideas exist no longer than our mind is affected, in that particular manner, which constitutes each particular idea; and, to say that our ideas exist in the divine mind, would thus be to say, only, that our mind itself exists in the divine mind. There is not the sensation of colour, in *addition* to the mind, nor the sensation of fra-

* Three Dialogues, &c. p. 109—110.

grance in *addition* to the mind; but, according to that juster view of the mental phenomena, which I have repeatedly endeavoured to impress on you, the sensation of colour is the *mind* existing in a *certain state*, and the sensation of fragrance, is the mind existing in a different state.

The most philosophic scepticism, as to the existence of external things, is unquestionably *that*, which is founded on this very view of the phenomena of the mind. All the terms, which we use to express our knowledge, sensations, perceptions, ideas, notions, propositions, judgments, intuitions, conclusions,—or whatever other terms we may employ to express particular varieties of thought, are significant, it may be said, and truly said, of *states* or affections of the mind, and of nothing more. What I term my perception of the colour, or softness, or shape, or fragrance, or taste of a peach, is a certain state of my own mind, for my mind surely can be conscious only of its own feelings; or rather, as the consciousness of present feelings is a redundancy of language, my mind, affected in a certain manner, whether it be with what is termed sensation or knowledge, or belief, can still be nothing more than my mind itself affected in a certain manner,—my mind, itself existing in a certain state. Against this argument, I confess that I know no mere argument which can be adduced in opposition,—any more, than I know any mere argument which can be adduced, against the strange conclusions that are most legitimately drawn from the doctrine of the infinite divisibility of matter, and various other physical and mathematical applications of the notion of infinity. In no one of these cases, however, do we feel our belief shaken;—because it is founded either on associations so early, and strong, and indissoluble, as those which we have been endeavouring to trace, or is not in those, or in principles of direct intuition, in that species of internal revolution which gives to reason itself, in the primary truths on which every argument proceeds, its divine authority; and we only smile at conclusions, in which it is impossible for us to find a single logical error, but which from the constitution of our nature, it is physically impossible for us to admit, or to admit at least, without an instant dissent, which renders our momentary logical admission as nugatory, as if the direct existence of an external world had been established by the clearest logical demonstration.

In one of the Anniversary Orations of Sir William Jones, of

which the subject is the philosophy of the Asiatics, he informs us that a system of idolism, very similar to that of Berkeley, is to be found in the metaphysics of Hindostan. The fundamental tenet of one great school of the philosophers of that ancient land of philosophy, is the disbelief of the existence of matter—the phenomena of the seeming material universe, being conceived by them to be only an illusive representation which the Deity presents to the mind, (and which they distinguish by the name of Maja:) —while the opposite species of scepticism is to be found in another sect of the philosophers, who disbelieve the existence of mind, and reduce all the phenomena of thought to material organization. The same subtilty and refinement of scepticism, which have led to the systems of materialism and idolism in our Western World, are to be found, we are told, in the corresponding systems of the East.*

Why is it that we are struck with no common emotion on finding, in the metaphysics of that distant country, systems of opinions so similar to our own? Is it that the notion of the immense space, which separates us, unites with our conception, and impresses us, as it were, with the omnipresence of our own intellectual nature,—when we recognize on scenes so remote and in circumstances of society so different, the same thoughts, and doubts, and errors, which have perplexed, and occupied, and delighted ourselves? This recognition, in whatever circumstances it may occur, gives to us a feeling of more than kindred,—a sort of identity with the universal nature of man, in all its times and places. The belief which others share with us seems to be our own belief which has passed from each to each, or is present to all, like those permanent ideas of which Berkeley speaks, that quit one intellect to exist in another. We cannot separate the thought which we remember from the notion of the mind which we remember to have conceived it;—and it seems to us, therefore, not as if *similar* doubts and errors, but almost as if the *very* doubts and errors of our own mind, and its ardour of inquiry, and frequent disappointments, and occasional, but rare felicities of discovery, had spread and renewed themselves in a remote existence. It is this

* The substance of this reference occurs in the Eleventh Anniversary Discourse,—*Works*, v. i. p. 165—6. 4to. *Edit.*

recognition of our common nature, which gives the chief interest to scenes that have been occupied with the passions of beings like ourselves. The mountains, which the Titans were fabled to have heaped up in their war against Jupiter, must have excited even in the most devout believers of Grecian mythology, emotions far less ardent and immediate, than the sight of the humbler cliffs, at which the small Spartan host, and their gallant leader, devoted themselves in the defensive war against the Persian invader. The races of men may perish, but the remembrance of them still lives imperishable, and seems to claim kindred with us, as often as we tread the same soil, or merely think of those who have trod it.

> "Turn thy sight eastward, o'er the time-hush'd plains,
> Now graves of vanish'd empire, once gleam'd o'er
> From flames on hallow'd altars, hail'd by hymns
> Of seers, awakeners of the worshipp'd Sun!
> Ask silent Tigris—Bid Euphrates tell
> Where is the grove-crown'd Baal, to whose stern frown
> Bow'd haughty Babylon?—Chaldea, famed
> For star-taught sages,—hard Phenicia's sons.
> Fierce fear-surmounting curbers of the deep,
> Who stretch'd a floating sceptre o'er the seas,
> And made mankind one empire?—Where is now
> Egypt's wide-homag'd *Isis?*—where the *Thors*,
> That shook the shakers of the Roman world?"

The very gods of all these countries have perished, but the mortals who bent the knee before them still survive in the immortality of our common nature,—in that universal interest which gives to us a sort of intellectual existence in scenes and times the most remote, and makes the thoughts and emotions of others as it were a part of our own being,—uniting the past, the present, and the future, and blending man with man wherever he is to be found.

LECTURE XXIV

THE SAME SUBJECT, CONTINUED.

GENTLEMEN, having stated, in a former Lecture, the reasons which seem to show, that the origin of our notion of extension, and of the notions, which it involves, of figure, magnitude, divisibility, is not to be found in our sense of *touch*, I endeavoured, in my last Lecture, to trace these to their real source,—cautioning you at the same time, with respect to the great difficulty of the inquiry, and the very humble reliance, therefore, which we can have any title to put, on the results of our investigation of a subject so very obscure.

In our present circumstances, when we attempt such an investigation, it is impossible for us to derive even the slightest aid, from remembrance of our original feelings; since *memory*,—which afterwards can look back through so many long and busy years, and comprehend all of life, but the very commencement of it,—sees yet, in this dawn of being, a darkness which it cannot penetrate. We have already formed,—spontaneously, and without the aid of any one,—our little system of physical science, and have, in truth, enriched ourselves with acquisitions, far more important than any which we are afterwards to form, with all the mature vigour of our faculties, and all the splendid aids of traditionary philosophy,—at a time, when we seem scarcely capable of more than of breathing and moving, and taking our aliment, and when the faculties, that leave us so much invaluable knowledge, are to leave us no knowledge of the means, by which we have acquired it.

To the period of our first sensations, therefore, we cannot look back; and, hence, all which remains for us, in an inquiry of this kind, is to consider the circumstances in which the infant is placed, and to guess, as nearly as general analogy will allow us,

the nature and the order of the feelings, which, in such circumstances, would arise, in a being possessing the powers and susceptibilities of man, but destitute of all the knowledge which man possesses.

In these first circumstances of life, the infant, of course, cannot know that he has a bodily frame, or a single organ of that frame, more than he can know, that there are other bodies in nature, that act upon his own; and we are not entitled to suppose, —however difficult it may be for us to accommodate our supposition to the true circumstances of the case,—that because *we*, the inquirers, know, that external bodies are pressing on his organ of touch, the little sensitive being is to have any knowledge, but of the mental affections, which these external bodies excite. How the knowledge of any thing more than his own mind is acquired, is, in truth, the very difficulty, which it is our labour to solve.

In conformity with this view, then,—when we look on the infant,—one of the most remarkable circumstances, which strike us, is its tendency to use its muscles, with almost incessant exercise, particularly the muscles of those parts, which are afterwards its principal organs of measurement. Its little fingers are continually closing and opening, and its little arms extending and contracting. The feelings, therefore,—whatever these may be,—which attend the progressive contraction of those parts,—and some feeling unquestionably attends the contraction in all its stages,—must be continually arising in its mind, beginning and finishing, in regular series, and varying exactly, with the quantity of the contraction.

A *succession* of feelings, however, when remembered by the mind, which looks back upon them, we found to involve, necessarily, the notion of divisibility into separate parts, and, therefore, of length, which is only another name for continued divisibility. Time, in short, is to our conception, a series in constant onward progress, and cannot be conceived by us, but as a progressive series, of which our separate feelings are parts; the remembrance of the events of our life, whenever we take any distant retrospect of them, being like the remembrance of the space, which we have traversed in a journey,—an indistinct continuity of length, as truly divisible, in our conception, into the separate events which we remember, as the space, which we remember to have traversed, into its separate variety of scenes.

Time, then, or remembered succession, we found to involve, not metaphorically, as is commonly said, but truly and strictly, in its very essence, the notions of length and divisibility,—the great elements of extension; and whatever other feelings may be habitually and uniformly associated with these, will involve, of course, these elementary notions.

The series of muscular feelings, of which the infant is conscious, —in incessantly closing and opening his little hand,—must, on these principles, be accompanied with the notion,—not, indeed, of the existence of his hand, or of any thing external,—but of a certain length of succession; and each stage of the contraction, by frequent renewal, gradually becomes significant of a particular length, corresponding with the portion of the series. When any hard body, therefore, is placed in the infant's hand,—though he cannot, indeed, have any knowledge of the object, or of the hand, —he yet feels, that he can no longer perform the accustomed contraction,—or, to speak more accurately,—since he is unacquainted with any parts that are contracted, he feels, that he can no longer produce his accustomed series of feelings; and he knows the quantity of contraction, which remained to be performed, or rather the length of the series, which remained to be felt. The place of this remaining length is now supplied by a new feeling, partly muscular, and partly the result of the affection of the compressed organ of touch,—and is supplied by the same feeling, at the same point of the series, as often, as he attempts to renew the contraction, while the body remains within his hand. The *tactual feeling*, therefore,—whatever it may be,—becomes, by this frequent repetition, associated with the notion of that particular progressive series, or length, of which it thus uniformly supplies the place; and at last becomes representative of this particular length, precisely in the same manner, as, in the acquired perceptions of vision, certain shades of colour become representative of distance, to which they have, of themselves, no resemblance or analogy, whatever; and we thus learn to feel length, as we learn to see length, —not directly by the mere affections of our tactual or visual organs, but by the associated notions which they suggest.

If *time*,—as perceived by us in the continued series of our feelings,—do involve conceptual length and divisibility, it seems, indeed, scarcely possible, that, in the circumstances supposed, the

notions supposed should not arise,—that the infant should be conscious of a regular series of feelings, in the contraction of its fingers and arms, and yet that portions of this series should not become significant of various proportional lengths;—and, if the notion of certain proportional lengths do truly accompany certain degrees of progressive contraction, it seems equally impossible, according to the general principles of our mental constitution, that the compound tactual and muscular feeling, which must arise in every case, in which any one of these degrees of contraction is impeded, should not become associated with the notion of that particular length, of which it supplies the place, so as at last to become truly representative of it.

In this manner, I endeavoured to explain to you, how our knowledge of the mere length of bodies may have been acquired, from varieties of length that are recognized as coexisting and proximate, and are felt to unite, as it were, and terminate in our sensation of resistance, which interrupts them equally, and interrupts always a greater number of the coexisting truths, in proportion to the size of the body compressed; and, in a similar manner, our notions of the other dimensions of bodies, which are only these varieties of length in different directions. I cannot conclude this summary, however, without recalling to your attention, a very simple experiment, which I requested you to make for yourselves, —an experiment, that, even in the unfavourable circumstances in which it must now be tried, is yet, I conceive, demonstrative of the influence of mere time, as an element of that complex notion, which we have been examining, when the more rapid measurements of vision,—which are confessedly not original but acquired, —are excluded. If, in passing our finger, with different degrees of slowness or rapidity, along the same surface, with our eyes shut, —even though we should previously know the exact boundaries of the extent of surface,—we feel it almost impossible not to believe,—and but for the contrary evidence of vision, could not have hesitated a single moment in believing,—that this extent is greater or less, according as the time employed in performing exactly the same quantity of motion, with exactly the same force of pressure, on the same quantity of our organ of touch, may have been greater or less,—it must surely be admitted, that the notion of the length, which thus uniformly varies with the time, when all other

circumstances are the same, is not absolutely independent of the time,—or it must, in like manner, be believed, that our notion of visual distance, which varies with the distribution of a few rays of light on the small expanse of the optic nerve, is yet independent of those faint shades of colouring, according to the mere varieties of which, it seems at one time to lay open to our view a landscape of many miles, and at another time to present to us, as it were before our very eyes, an object of scarcely an inch in diameter. The greater dimness, and diminished size of a few objects in the back ground of a picture, which is in itself one coloured plane of light, does not more truly seem to increase the line of distance of those objects, than, in the other case, the increased slowness of the motion of our hand along any surface, seems to lengthen the line which separates one of its boundaries from the other.

That we now seem to perceive extension, immediately by *touch*, cannot be denied; and, in a case so obscure as this,—with our very limited knowledge, and our very limited power of adding to this knowledge,—it may seem the most prudent, and perhaps even the most suitable,—as it is, without all question, by far the easiest part,—to acquiesce in the opinion, that the perception, which now seems immediate, was so originally,—that the belief of the presence of an external figured body, is, by the very constitution of our nature, attached to a certain affection of the mere organ of touch. But, since there are circumstances,—as we have seen,—which show this opinion, when very nicely examined, to be inadmissible, we may, at least, attempt to proceed a little farther, if we do this with a sufficient sense of the very great difficulty of the attempt, in relation to our power and knowledge, and consequently with a very humble assurance, as to the certainty of any opinion which we may be led to form. To know the mind *well*, is to know its *weaknesses* as well as its *powers*; and it is precisely in a case of this sort, that he, whose knowledge is least imperfect, will be the best judge of its imperfection, and, therefore, the least disposed to put complete reliance on it in his own speculations,—or to assert it dogmatically, when he offers it, as all opinions, on so very obscure a subject, should be offered, to the inquiry, rather than to the undoubting assent.

The analysis, I own, is one which must require a considerable effort of attention on your part, because it is truly one of the most

subtile on which I could call you to enter. But you must be aware, that this subtlety is in the nature of the very inquiry itself; since it is an inquiry into the elements and progressive growth of feelings, which seem to us, at present, simple and immediate, and that the alternatives, therefore, are not those of greater or less subtlety and refinement of analysis, but of attempting the analysis, or abandoning it altogether.

Before proceeding farther, in our inquiry with respect to the origin of the notion of extension, it may, however, be of advantage, to take a short retrospect of the progress which we have already made; for, if we have found nothing more, we have, at least, as I conceive, found reason to reject a considerable part of our former belief on the subject, which, though a negative acquisition, is yet a very important one. Though we should not be able to discover the true source of the notion which we seek, it is something, at least, to know, that we have little reason to expect to find it, where we have uniformly been accustomed to seek it.

In the first place, then, we have seen the fallacy of the supposition, that our knowledge of extension may be easily accounted for, by the similarity in figure of the compressed part of the organ of touch to the compressing body, since the notion of extension is not a state of the material organ, compressed and figured, which, as mere matter, however exquisitely organized, is as little capable of this notion, as of smell, or taste, love or aversion, but, a state of the *mind itself*, which is susceptible of shape or pressure, being as little square, when it perceives a square, as when it perceives a circle; and any affection of which, therefore, may be supposed as much to follow any one shape, as any other shape of the mere external organ. If, indeed, as this explanation most strangely seems to assume, we could be supposed to have any previous knowledge of the shape of our organ of touch, nothing more would be necessary, for we should then have a perfect knowledge of extension, though no other extended body but our own organ of touch were in existence. To refer us to the organ is, however, only to bring the very same difficulty one step nearer, since previously to the application of an external body, the mind has as little knowledge of the shape of its organ of touch, as it has of the body compressing it; and it is manifestly most absurd, to as-

cribe the origin of our knowledge of extension, to our knowledge of the resemblance in figure of an external body to our organ; since this very knowledge of the resemblance must imply the previous knowledge of the figure of both, and consequently of *that very extension*, which, according to this supposition, must be known to us BEFORE it is known.

In the second place, we have seen, that, if the configuration of the sensorial organ were the only circumstance necessary, to induce, immediately, in mind, the notion of figure, this notion should accompany every sensation of every kind; the smell of a rose, for example, as much as the pressure of a cube or a sphere: for the nervous expansion, in the organ of smell, and in every other organ, is of a certain figure, *before* sensation, *during* sensation, and *after* sensation, as much as the nervous expansion of the organ of touch. And, though we were to confine ourselves wholly to this organ, the nervous matter in it is, at all times, of a certain shape, as much when there is no pressure on it, as when it is exposed to such pressure; yet the mere figure of the organ of touch, is not then accompanied with the mental notion of its figure; nor is this the case, merely when the sense is quiescent, but, in many cases, in which it is affected in the most lively manner; as, for example, when we are exposed to great cold or heat, in which cases, the shape of this very tactual organ, thus strongly affected, is as much unperceived by us, as when there is no affection of it whatever.

Lastly, which is a point of much more importance, because it has relation to the only philosophic view of touch, as the immediate organ of extension; the view, in which the mere configuration of the compressed organ, as similar to that of the compressing body, is laid out of account, and the immediate belief of extension is supposed to depend on the original constitution of the mind, by which its affections have been arranged, so as to correspond with certain affections of the bodily organs; the mental state which constitutes the perception of a *square*, arising immediately when the organ of touch is affected, in a certain manner, as that mental state which constitutes the sensation of the fragrance of a *rose*, arises immediately, when the organ of smell is affected, in a certain manner; this opinion too, philosophic as it is, compared with those which we before considered, though, in truth, it only assumes the point in question, without attempting to solve any

difficulty, supposed to be connected with it, we have yet found to be as little tenable, as the opinions that suppose the mental notion of figure to depend on the peculiar figure of the compressed material organ. The consideration which, as I stated in my last Lecture, seems to me decisive on this point, is, that, if touch inform us of extension immediately, as smell informs us of fragrance, sight of colour, and hearing of sound; it must do this in every instance, without relation to particular figure, as smell, sight, and hearing, extend to all odours, hues, and sounds; for it would certainly be, as I said, a very strange abuse of the license of supposition, to imagine that we perceive a square immediately by touch, but not a circle; or a circle, but not a square; or any one figure, but not any other figure. In short, if figure be the direct primary object of touch, as sight is of vision, we should feel immediately every form impressed, as we see immediately every colour. It is only when the figures are very simple and regular, however, such as we might be supposed to have easily learned, in the same manner as we learn, visually, to judge of distances, that we are able to discover them, as it were, immediately, by touch; and, even when we are able, in this manner, to determine the *species of figure*, that is to say, the mere outline of a body, we are rarely able to determine the exact magnitude which that outline comprehends; yet, as our organ must be affected by each part of the compressing surface, by the central parts, as much as by the exterior parts which form its outline, and by these, as much as by the central parts; and as every feeling which the organ directly affords, must be immediate, when there is no change of the position, or other circumstances of the object, that might vary the sensation, we should, if mere touch communicated to us the knowledge supposed, be able to determine, exactly and instantly, the magnitude and figure; or, it is evident, that the determination of magnitude and figure must depend wholly, or in part, on something that is different from touch. The magnitude we are far from being able to discover exactly, even of simple figures; and when the form is very irregular, and we know nothing more, than that a certain body is pressed against our hand,—the magnitude and figure are alike difficult to be discovered; so difficult, that I may safely say, that no one, who makes the experiment, will find, on opening his eyes, that his tactual or intellectual meas-

urement has, in any one case, been exact, or his notion of the figure half so distinct as it now is, after a single glance. Can we then think that it is by mere touch we discover figure, as exactly as by the glance of our mature vision,—that we discover it, in all its varieties, originally by touch, and as accurately at first, as after innumerable trials,—when we discover it, only in a few cases, that are previously familiar to us, and even in these very imperfectly? The *determination* of the form impressed, in which we are almost conscious of a sort of intellectual measurement, has surely a much greater resemblance to the perceptions, which we term *acquired*, than to those which are *immediate*. In vision, for example, when the original power of that sense has been strengthened and enriched, by the acquisitions which it is capable of receiving from other sources, we see a long line of distance before us; and the *small* distances with which we are familiar, we distinguish with sufficient accuracy; but, in our visual measurement of *greater* distances, we are almost certain to err, taking often the less for the greater, and the greater for the less. It is precisely the same in touch. When a small body, which we have never seen, is pressed upon our hand, we are able, if its surface be square, or circular, or of any other form, with which we are well acquainted, to determine its figure, without much hesitation; because we have learned, tactually, to distinguish these regular figures. But, in endeavouring to determine, in this manner, by touch alone, the figure of any irregular body, less familiar to us, though, as a direct object of sense, if touch be the sense of figure, it should be equally and as immediately tangible as the most regular form, we feel a hesitation of the same sort, as when we attempt to ascertain by our eye, the exact distance of a remote object. To know extension or figure, is to know, not one point merely in the surface of a body, but many continuous points; and if, when the surface, is circular, we know these continuous points, and their relation to each other, immediately on pressure, we must know, as immediately, the same points and their relations, though the surface comprehending them, instead of being circular, should be of an outline more irregular. We certainly cannot know this irregular surface to have any extension at all, unless we know some parts of it; and, when the pressure is uniform from every point, and the organ of touch uniform, on which the pressure is made, it would

be absurd to suppose, that we know fifty, or eighty, of the hundred points which form the impressing surface, but cannot determine its figure, because we are ignorant of the twenty of fifty remaining points; when these remaining points are acting on our organ of touch, in exactly the same manner as the fifty or eighty which we know, and when, if the surface containing merely the same number of points, had been circular, or of any other single form, as familiar to us, the whole hundred points would have been known to us equally and at once.

When our perceptions of form, then, are so various and irregular, and are more or less quick and precise, exactly as the shape which we endeavour to determine, has more or less resemblance to shapes that are familiar to us, it does not seem too bold an inference to conclude, that the knowledge of figure, which, as all extension that is capable of being perceived by us, must have some boundary, is nothing more than the knowledge of extension, is not the state of mind originally and immediately subsequent to affections of our organs of touch, any more than the perception of distance is the state of mind originally and immediately subsequent to affections of our organ of sight; and the very striking analogy of these two cases, it will be of great importance for you to have constantly in view; as it will render it less difficult for you to admit many circumstances, with respect to touch, which you might otherwise have been slower to conceive. That we should seem to perceive *extension* immediately by touch, though touch originally, and of itself, could not have afforded this perception, will not then appear more wonderful, than the apparently immediate perception of *distance* by the eye, which, of itself, originally afforded us no perception of that sort; nor the impossibility of feeling a body, without the notion of it, as extended, be more wonderful than the similar impossibility of separating colour from extension, in the case of distant vision. Above all, the analogy is valuable, as shewing the closeness and indissolubleness of the union, which may be formed of feelings that have in themselves no resemblance. What common properties, could we have conceived in vision, and that absolute blindness, which has never had a single sensation from light! and, yet, it is worthy of remark, that the perceptions of the blind, in consequence of this singular power of association, form truly the most important part of those very

perceptions of vision, of which, as a whole, they are unfortunately deprived. We do not merely see with our eyes, what we may have felt with our hands; but our eyes, in the act of vision, have borrowed, as it were, those very sensations.

The proof, that our perception of extension by touch, is not an original and immediate perception of that sense, is altogether independent of the success of any endeavour which may be made, to discover the elements of the compound perception. It would not be less true, that touch does not afford it, though we should be incapable of pointing out any other source, from which it can be supposed to be derived. Of the difficulty of the attempt, and the caution with which we should venture to form any conclusion on the subject, I have already spoken. But the analysis, difficult as it is, is too interesting not to be attempted, even at the risk, or perhaps I should rather say, with the very great probability, of failure.

In such an analysis, however, though we are to proceed with the greatest caution, it may be necessary to warn you, that it is a part of this very caution, not to be easily terrified, by the appearance of paradox, which the result of our analysis may present. This appearance we may be certain, that any analysis which is at all accurate must present, because the very object of the analysis is to shew, that sensations, which appear simple and direct, are not simple,—that our senses, in short, are not fitted, of themselves, to convey that information, which they now appear, and through the whole course of our memory have appeared to us instantly to convey. It is very far, indeed from following, as a necessary consequence, that every analysis of our sensations which affords a paradoxical result, is, therefore, a just one—for error may be extravagant in *appearance* as well as in *reality*. But it may truly be regarded as a necessary consequence, that every accurate and original analysis of our sensations must afford a result, that, as first stated, will appear paradoxical.

To those who are wholly unacquainted with the theory of vision, nothing certainly can seem, as first stated, more absurd than the assertion, that we see, not with our eyes merely, but chiefly by the medium of another organ, which the blind possess in as great perfection as ourselves, and which, at the moment of vision, may perhaps be absolutely at rest. It must not surprise you,

therefore, though the element which seems to me to form the most important constituent of our notion of extension should in like manner, as first stated to you, seem a very unlikely one.

This element is our feeling of *succession*, or time—a feeling, which necessarily, involves the notion of divisibility or series of parts, that is so essential a constituent of our more complex notion of matter,—and to which notion of continuous divisibility, if the notion of resistance be added, it is scarcely possible for us to imagine, that we should not have acquired, by this union, the very notion of physical extension,—that which has parts, and that which resists our effort to grasp it.

That *memory* is a part of our mental constitution, and that we are thus capable of thinking of a series of feelings, as successive to each other, the experience of every moment teaches us sufficiently. This succession frequently repeated, suggests immediately, or implies the notion of length, not metaphorically, as is commonly said, but as absolutely as extension itself: and, the greater the number of the successive feelings may have been, the greater does this length appear. It is not possible for us to look back on the years of our life, since they form truly a progressive series, without regarding them as a sort of length, which is more distinct indeed, the nearer the succession of feelings may be to the moment at which we consider them, but which, however remote, is still felt by us as *one continued length*, in the same manner, as when, after a journey of many hundred miles, we look back, in our memory, on the distance over which we have passed, we see, as it were, a long track of which some parts, particularly the nearer parts, are sufficiently distinct, but of which the rest seems lost in a sort of distant obscurity. The line of our long journeying—or, in other words, that almost immeasurable line of plains, hills, declivities, marshes, bridges, woods,—to endeavour to comprehend which in our thought, seems an effort as fatiguing as the very journey itself—we know well, can be divided into those various parts: —and, in like manner, the progressive line of time—or, in other words, the continued succession, of which the joy, the hope, the fragrance, the regret, the melody, the fear, and innumerable other affections of the mind, were parts, we feel that we can mentally divide into those separate portions of the train. Continuous length and divisibility, those great elementary notions of space,

and of all that space contains, are thus found in every succession of our feelings. There is no language in which time is not described as long or short,—not from any metaphor—for no mere arbitrary metaphor can be thus universal, and inevitable, as a form of human thought—but because it is truly impossible for us to consider succession, without this notion of progressive divisibility attached to it: and it appears to us as absurd to suppose, that by adding, to our retrospect of a week, the events of the month preceding, we do not truly lengthen the succession, as it would be to suppose, that we do not lengthen the line of actual distance, by adding, to the few last stages of a long journey, the many stages that preceded it.

It is this spreading out of life into a long expanse, which allows man to create, as it were, his own world. He cannot change, indeed, the scene of external things. But this may be said, in one sense, to be the residence only of his corporeal part. It is the moral scene in which the spirit truly dwells; and this adapts itself, with harmonious loveliness, or with horror as suitable, to the character of its pure or guilty inhabitant. If but a single moment of life,—a physical *point*, as it were, of the long line—could be reviewed at once, conscience would have little power of retribution. But he who has lived, as man should live, is permitted to enjoy that best happiness which man can enjoy,—to behold, in one continued series, those years of benevolent wishes or of heroic suffering, which are at once his merit and his reward. He is surrounded by his own pure thoughts and actions, which, from the most remote distance, seem to shine upon him wherever his glance can reach; as in some climate of perpetual summer, in which the inhabitant sees nothing but fruits and blossoms, and inhales only fragrance, and sunshine, and delight. It is in a moral climate as serene and cloudless, that the destined inhabitant of a still nobler world moves on, in that glorious track, which has heaven before, and virtue and tranquillity behind;—and in which it is scarcely possible to distinguish, in the immortal career, when the earthly part has ceased, and the heavenly begins.

Is it in *metaphor* only, that a youth and maturity, and old age of guilt, seem to stretch themselves out in almost endless extent, to that eye which, with all its shuddering reluctance, is still condemned to gaze on them,—when, after the long retrospect seems

finished, some fraud, or excess, or oppression, still rises and adds to the dreadful line—and when eternity itself, in all the horrors which it presents, seems only a still longer line of the same dreadful species, that admits of no other measure, than the continued sufferings, and remembrance, and terrors that compose it!

It is a just and beautiful observation of an ancient Stoic, that *time* which is *past* is like something consecrated to the gods, over which fortune and mortality have no longer any power, and that, dreadful as it must be to the wicked, to whom their own memory is an object of terror, it still, to the virtuous, offers itself as a consolation or joy—not in single moments like the present hour, but in all that long series of years which rises before us, and remains with us at our bidding. "Ille qui multa ambitiosè cupiit, superbè contempsit, insidiosè decepit, avarè rapuit, prodigè effudit,—necesse est memoriam suam timeat. Atqui hæc est pars temporis nostri sacra ac dedicata, omnes humanos casus supergressa, extra regnum fortunæ subducta; quam non inopia, non metus, non morborum incursus exagitat. Hæc nec turbari nec eripi potest; perpetua ejus et intrepida possessio est. Singuli tantùm dies, et hi per momenta, præsentis sunt: at præteriti temporis omnes, cum jusseris aderunt, ad arbitrium tuum se inspici ac detineri patientur."

By those, who can look back on years that are long past, and yet say, that the continued progress, or the length and the shortness of time, are only *metaphorical* expressions, it might be said with equal justness, that the roundness of a sphere, is a metaphor, or the angularity of a cube. We do not more truly consider the one as angular and the other as round, than we consider the time to be continuously progressive, in which we considered, first the one figure, and then the other, and inquired into the properties of each. That which is progressive must have *parts*. Time, or succession, then involves the very notions of longitudinal extension and divisibility, and involves these, without the notion of any thing external to the mind itself;—for though the mind of man had been susceptible only of joy, grief, fear, hope, and the other varieties of internal feeling, *without* the possibility of being affected by external things, he would still have been capable of considering these feelings, as successive to each other, in a long continued progression, divisible into separate parts. The notions of length,

then, and of divisibility, are not confined to external things, but are involved, in that very memory, by which we consider the series of the past,—not in the memory of distant events only, but in those first successions of feeling, by which the mind originally became conscious of its own permanence and identity. The notion of time, then, is precisely coeval with that of the mind itself; since it is implied in the knowledge of succession, by which alone, in the manner formerly explained to you, the mind acquires the knowledge of its own reality, as something more than the mere sensation of the present moment.

Conceiving the notion of time, therefore, that is to say of feelings past and present, to be thus one of the earliest notions which the infant mind can form, so as to precede its notions of external things, and to involve the notions of length and divisibility, I am inclined to reverse exactly the process commonly supposed; and, instead of deriving the measure of time from extension, to derive the knowledge and original measure of extension from time. That one notion or feeling of the mind may be united indissolubly with other feelings, with which it has frequently coexisted, and to which, but for this coexistence, it would seem to have no common relation, is sufficiently shown by those phenomena of vision to which I have already so frequently alluded.

In what manner, however, is the notion of time peculiarly associated with the simple sensation of touch, so as to form, with it, the perception of extension? We are able, in the theory of vision, to point out the coexistence of sensations which produce the subsequent union; that renders the perception of distance apparently immediate. If a similar coexistence of the original sensations of touch, with the notion of continued and divisible succession, cannot be pointed out in the present case, the opinion which asserts it, must be considered merely as a wild and extravagant conjecture.

The source of such a coexistence is not merely to be found, but is at least as obvious, as that which is universally admitted in the case of vision.

Before I proceed, however, to state to you, in what way I conceive the notion to be acquired, I must again warn you of the necessity of banishing, as much as possible, from your view of the mind of the infant in this early process, all those notions of exter-

nal things, which we are so apt to regard as almost original in the mind, because we do not remember the time, when they arose in our own. As we know well, that there are external things, of a certain form, acting on our organs, which are also of a certain form, it seems so very simple a process, to perceive extension—that is to say, to know that there exist without us those external forms, which really exist—that to endeavour to discover the mode, in which extension, that now appears so obvious a quality of external things, is perceived by us, seems to be a needless search, at a distance, for what is already before our very eyes. And it will be allowed, that all this would, indeed, be very easy to a mind like ours, after the acquisitions of knowledge which it has made; but the difficulty of the very question is, how the mind of the infant makes these acquisitions, so as to become like ours. You must not think of a mind, that has any knowledge of things external, even of its own bodily organs, but of a mind simply affected with certain feelings, and having nothing but these feelings to lead it to the knowledge of things without.

To proceed, then,—The hand is the great organ of touch. It is composed of various articulations, that are easily moveable, so as to adapt it readily to changes of shape, in accommodation to the shape of the bodies which it grasps. If we shut our hand gradually, or open it gradually, we find a certain series of feelings, varying with each degree of the opening or closing, and giving the notion of succession of a certain length. In like manner, if we gradually extend our arms, in various directions, or bring them nearer to us again, we find that each degree of the motion is accompanied with a feeling that is distinct, so as to render us completely conscious of the progression. The gradual closing of the hand, therefore, must necessarily give a succession of feelings,—a succession, which, of itself, might, or rather must, furnish the notion of length, in the manner before stated, the length being different, according to the degree of the closing; and the gradual stretching out of the arm gives a succession of feelings, which, in like manner, must furnish the notion of length,—the length being different according to the degree of the stretching of the arm. To those who have had opportunities of observing infants, I need not say, how much use, or rather what constant use, the future inquirer makes of his little fingers and arms; by the frequent con-

traction of which, and the consequent renewal of the series of feelings involved in each gradual contraction, he cannot fail to become so well acquainted with the progress, as to distinguish each degree of contraction, and, at last, after innumerable repetitions, to associate with each degree the notion of a certain length of succession. The particular contraction, therefore, when thus often repeated, becomes the representative of a certain length, in the same manner as shades of colour, in vision become ultimately representative of distance,—the same principle of association, which forms the combination in the one case, operating equally in the other.

In these circumstances of acquired knowledge,—after the series of muscular feelings, in the voluntary closing of the hand, has become so familiar, that the whole series is anticipated and expected, as soon as the motion has begun,—when a ball, or any other substance, is placed for the first time in the infant's hand, he feels that he can no longer perform the usual contraction,—or, in other words, since he does not fancy that he has muscles which are contracted, he feels that the usual series of sensations does not follow his will to renew it,—he knows how much of the accustomed succession is still remaining; and the notion of this particular length, which was expected, and interrupted by a new sensation, is thus associated with the particular tactual feeling excited by the pressure of the ball,—the greater or less magnitude of the ball preventing a greater or less portion of the series of feelings in the accustomed contraction. By the frequent repetition of this tactual feeling, as associated with that feeling, which attends a certain progress of contraction, the two feelings at last flow together, as in the acquired perceptions of vision; and when the process has been repeated with various bodies innumerable times, it becomes, at last, as impossible to separate the mere tactual feeling, from the feeling of length, as to separate the whiteness of a sphere, in vision, from that convexity of the sphere, which the eye, of itself, would have been forever incapable of perceiving.

As yet, however, the only dimension of the knowledge, of which we have traced the origin, is mere length; and it must still be explained, how we acquire the knowledge of the other dimensions. If we had had but one muscle, it seems to me very

doubtful, whether it would have been possible for us, to have associated with touch any other notion than that of mere length. But nature has made provision, for giving us a wider knowledge, in the various muscles, which she has distributed over different parts, so as to enable us to perform motions in various directions at the same instant, and thus to have coexisting series of feelings, each of which series was before considered as involving the notion of length. The infant bends one finger gradually on the palm of his hand; the finger, thus brought down, touches one part of the surface of the palm, producing a certain affection of the organ of touch, and a consequent sensation; and he acquires the notion of a certain length, in the remembered succession of the muscular feelings during the contraction:—he bends another finger; it, too, touches a certain part of the surface of the palm, producing a certain feeling of touch, that coexists and combines, in like manner, with the remembrance of a certain succession of muscular feelings. When both fingers move together, the coexistence of the two series of successive feelings, with each of which the mind is familiar, gives the notion of coexisting lengths, which receive a sort of unity, from the proximity in succession of the tactual feelings in the contiguous parts of the palm which they touch,—feelings, which have before been found to be proximate, when the palm has been repeatedly pressed along a surface, and the tactual feelings of these parts, which the closing fingers touch at the same moment, were always immediately successive,—as immediately successive, as any of the muscular feelings in the series of contraction. When a body is placed in the infant's hand, and its little fingers are bent by it as before, sometimes one finger only is impeded in its progress, sometimes two, sometimes three,—and he thus adds to the notion of mere length, which would have been the same, whatever number of fingers had been impeded, the notion of a certain number of proximate and coexisting lengths, which is the very notion of breadth; and with these, according as the body is larger or smaller, is combined always the tactual affection produced by the pressure of the body, on more, or fewer, of the interior parts of the palm, and fingers, which had before become, of themselves, representative of certain lengths, in the manner described; and the concurrence of these three varieties of length, in the single

feeling of resistance, in which they all seem to meet, when an incompressible body is placed within the sphere of the closing fingers,—however rude the notions of concurring dimensions may be, or rather must be, as at first formed,—seems at least to afford the rude elements, from which, by the frequent repetition of the feeling of resistance, together with the proximate lengths, of which it has become representative, clearer notions of the kind may gradually arise.

The progressive contractions of the various muscles which move the arms, as affording similar successions of feelings, may be considered in precisely the same light, as sources of the knowledge of extension; and, by their motion in various directions, at the same time with the motion of the fingers, they concur powerfully, in modifying, and correcting, the information received from these. The whole hand is brought, by the motion of the arm, to touch one part of the face or body; it is then moved, so as to touch another part, and, with the frequent succession of the simple feelings of touch, in these parts, is associated the feeling of the intervening *length*, derived from the sensations that accompanied the progressive contraction of the arm. But the motion is not always the same; and, as the same feeling of touch, in one part, is thus followed by various feelings of touch in different parts, with various series of muscular feelings between, the notion of length in various *directions*, that is to say, of length in various series commencing from one power, is obtained in another way. That the knowledge of extension, or in other words, the association of the notion of succession with the simple feelings of touch, will be rude and indistinct at first, I have already admitted; but it will gradually become more and more distinct and precise: as we can have no doubt, that the perception of distance by the eye, is, in the first stages of visual association, very indistinct, and becomes clearer after each repeated trial. For many weeks or months, all is confusion in the visual perceptions, as much as in the tactual and muscular. Indeed, we have abundant evidence of this continued progress of vision, even in mature life, when, in certain professions that require nice perceptions of distance, the power of perception itself, by the gradual acquisitions which it obtains from experience, seems to unfold itself more and more, in proportion to the wants that require it.

The theory of the notion of extension, of which I have now given you but a slight outline, might, if the short space of these Lectures allowed sufficient room, be developed with many illustrations, which it is now impossible to give to it. I must leave you, in some measure, to supply these for yourselves.

It may be thought, indeed, that the notion of *time*, or *succession*, is, in this instance, a superfluous incumbrance of the theory, and that the same advantage might be obtained, by supposing the muscular feelings themselves, independently of the notion of their succession, to be connected with the notion of particular lengths. But this opinion, it must be remarked, would leave the difficulty precisely as before; and sufficient evidence in confutation of it, may be found in a very simple experiment, which it is in the power of any one to make. The experiment I cannot but consider as of the more value, since it seems to me,—I will not say *decisive*, for that is too presumptuous a word,—but strongly *corroborative* of the theory, which I have ventured to propose; for it shows, that, even after all the acquisitions, which our sense of touch has made, the notion of extension is still modified, in a manner the most striking and irresistible, by the mere change of accustomed *time*. Let any one, with his eyes shut, move his hand, with moderate velocity, along a part of a table, or any other hard smooth surface, the portion, over which he presses, will appear of a certain length; let him move his hand more rapidly, the portion of the surface pressed will appear *less;* let him move his hand *very slowly*, and the length, according to the degree of the slowness, will appear increased, in a most wonderful proportion. In this case, there is precisely the same quantity of muscular contraction, and the same quantity of the organ of touch compressed, whether the motion be rapid, moderate, or slow. The only circumstance of difference is the time, occupied in the succession of the feelings; and this difference is sufficient to give complete diversity to the notion of length.

If any one, with his eyes shut, suffer his hand to be guided by another, very slowly along any surface unknown to him, he will find it impossible to form any accurate guess as to its length. But it is not necessary, that we should be previously unacquainted with the extent of surface, along which the motion is performed; for the illusion will be nearly the same, and the experiment,

of course, be still more striking, when the motion is along a surface with which we are perfectly familiar, as a book which we hold in our hand, or a desk at which we are accustomed to sit.

I must request you, not to take for granted the result which I have now stated, but to repeat for yourselves an experiment, which it is so very easy to make, and which, I cannot but think is so very important, as to the influence of *mere difference of time*, in our estimation of *longitudinal extent*. It is an experiment, tried, unquestionably, in most unfavourable circumstances, when our tactual feelings, representative of extension, are so strongly fixed, by the long experience of our life; and yet, even now, you will find, on moving your hand, slowly and rapidly, along the same extent of surface, though with precisely the same degree of pressure in both cases, that it is as difficult to conceive the extent, thus slowly and rapidly traversed, to be the same, as it is difficult to conceive the extent of visual distance to be exactly the same, when you look alternately through the different ends of an inverted telescope. If when all other circumstances are the same, the different visual feelings, arising from difference of the mere direction of light, be representative of length, in the one case,—the longer or shorter succession of time, when all other circumstances are the same, has surely as much reason to be considered as representative of it, in the other case.

Are we, then, to believe, that the *feeling* of extension, or, in other words, of the definite figure of bodies, is a *simple feeling* of touch, *immediate*, *original*, and *independent of time;* or is there not rather reason to think, as I have endeavoured to show, that it is a *compound* feeling, of which *time*, that is to say, our notion of succession, is an *original element?*

LECTURE XXV.

ON THE DISTINCTION BETWEEN SENSATION AND PERCEPTION, —AND BETWEEN THE PRIMARY AND SECONDARY QUALITIES OF MATTER.

My last Lecture, Gentlemen, was chiefly employed in considering the nature of that complex process which takes place in the mind, when we ascribe the various classes of our sensations to their various external objects,—to the analysis of which process we were led, by the importance which Dr Reid has attached to the distinction of *sensation* and *perception*;—a sensation, as understood by him, being the simple feeling that immediately follows the action of an external body on any of our organs of sense, considered merely as a feeling of the mind; the corresponding perception being a reference of this feeling to the external body as its cause.

The distinction I allowed to be a convenient one, if the nature of the complex process which it expresses be rightly understood. The only question that seemed, philosophically, of importance, with respect to it, was, whether the *perception* in this sense,—the reference of the sensation to its external corporeal cause,—imply, as Dr Reid contends, a peculiar mental power, coextensive with sensation, to be distinguished by a peculiar name in the catalogue of our faculties, or be not merely one of the results of a more general power, which is afterwards to be considered by us,—the *power of association*,—by which one feeling suggests, or induces, other feelings that have formerly coexisted with it.

It would be needless to recapitulate the argument minutely, in its relation to *all* the senses. That of smell, which Dr Reid has

himself chosen as an example, will be sufficient for our retrospect.

Certain particles of odorous matter act on my nostrils,—a peculiar *sensation* of fragrance arises,—I refer this sensation to a rose. This reference, which is unquestionably something superadded to the original sensation itself, is what Dr Reid terms the perception of the fragrant body. But what is the reference itself, and to what source is it to be ascribed? That we should have supposed our sensations to have had a cause of some sort, as we suppose a cause of all our feelings internal as well as external, may indeed be admitted. But if I had had no other sense than that of smell, —if I had never *seen* a rose,—or, rather, since the knowledge which vision affords is chiefly of a secondary kind, if I had no mode of becoming acquainted with the compound of extension and resistance, which the mere sensations of smell, it is evident, are incapable of affording,—could I have made this reference of my sensation to a quality of a fragrant body? Could I, in short, have had more than the mere sensation itself, with that general belief of a cause of some sort, which is not confined to our sensations, but is common to them with all our other feelings?

By *mere smell*, as it appears to me, I could not have become acquainted with the existence of corporeal substances,—in the sense in which we now understand the term *corporeal*,—nor, consequently, with the *qualities* of corporeal substances; and, if so, how could I have had that perception of which Dr Reid speaks, —that reference to a fragrant body, of which, as a body, I was before in absolute ignorance? I should, indeed, have ascribed the sensation to some cause or antecedent, like every other feeling; but I could as little have ascribed it to a bodily cause, as any feeling of joy or sorrow. I refer it now to a *rose*; because, being endowed with *other* sensitive capacities, I have previously learned, from another source, the existence of causes without, extended and resisting,—because I have previously touched or seen a rose, when the sensation of fragrance coexisted with my visual or tactual sensation; and all which distinguishes the *perception* from the mere *sensation*, is this suggestion of former experience, which reminds me now of other feelings, with the continuance or cessation of which, in innumerable former instances, the fragrance itself also continued or ceased. The perception in short, in smell,

taste, hearing, is a sensation suggesting, by *association*, the notion of some extended and resisting substance, fragrant, vapid, vibratory,—a notion which smell alone, taste alone, hearing alone, never could have afforded; but which, when once received from any other source, may be suggested by these as readily as any other associate feeling that has frequently coexisted with them. To the simple primary sensations of *vision* the same remark may be applied. A mere sensation of colour could not have made me acquainted with the existence of bodies, that would resist my effort to grasp them. It is only in one sense, therefore,—that which affords us the knowledge of *resistance*,—that any thing like original perception can be found; and even in this, the process of perception, as I formerly explained to you, implies no peculiar power, but only common sensations, with associations and inferences of precisely the same kind, as those which are continually taking place in all our reasonings and trains of thought.

Extension and *resistance*, I need scarcely repeat, are the complex elements of what we term matter; and nothing is matter to our conception, or a body, to use the simpler synonymous term, which does not involve these elements. If we had no other sense than that of smell, and, therefore, could not have referred the sensations to any fragrant body, what, in Dr Reid's meaning of this term, would the supposed power of perception, in these circumstances, have been? What would it have been, in like manner, if we had had only the sense of taste in sweetness and bitterness,—or of hearing in melody,—or of vision in colour,—without the capacity of knowing light as a material substance, or the bodies that vibrated, or the bodies of another kind that were sweet or bitter? It is only by the sense of touch, or, at least, by that class of perceptions which Dr Reid ascribes to touch,—and which, therefore, though traced by us, in part, to another source, I, for brevity's sake, comprehend under that term in our present discussion,—it is only by *touch* that we become acquainted with those elements which are essential to our very notion of a *body;* and to touch, therefore, in his own view of it, we must be indebted, directly or indirectly, as often as we refer the sensations of any other class to a *corporeal* cause. Even in the supposed perceptions of touch itself, however, as we have seen, the reference of our feelings to an external cause is not demonstrative of

any peculiar power of the mind, to be classed separately from its other faculties. But when a body is first grasped, in infancy, by fingers that have been accustomed to contract without being impeded, we learn to consider the sensation as the result of a cause that is different from our own mind, because it breaks an accustomed series of feelings, in which all the antecedents, felt by us at the time, were such as were before uniformly followed by a different consequent, and were expected, therefore, to have again their usual consequent. The *cause* of the new sensation, which is thus believed to be something different from our sentient self, is regarded by us as something which has parts, and which resists our effort, that is to say, as an external body ;—because the muscular feeling, excited by the object grasped is, in the *first* place, the very feeling of that which we term resistance ; and, *secondly*, because, by uniformly supplying the place of a definite portion of a progressive series of feelings, it becomes ultimately representative of that particular length of series, or number of parts, of which it thus uniformly supplies the place. Perception, then, even in that class of feelings by which we learn to consider ourselves as surrounded by substances extended and resisting, is only another name, as I have said, for the result of certain associations and inferences that flow from other more general principles of the mind ; and with respect to all our other sensations, it is only another name for the suggestion of these very perceptions of touch, or at least of the feelings, tactual and muscular, which are, by Dr Reid, ascribed to that single sense. If we had been unsusceptible of these tactual and muscular feelings, and, consequently, had never conceived the existence of any thing extended and resisting till the sensation of fragrance, colour, sweetness, or sound had arisen, we should, after any one or all of these sensations, have still known as little of bodies without, as if no sensation whatever had been excited.

The distinction, then, on which Dr Reid has founded so much, involves, in his view of it, and in the view that is generally taken of it, a false conception of the nature of the process which he describes. The two words *sensation* and *perception*, are, indeed, as I have already remarked, very convenient for expressing, in one case, the mere existence of an external feeling,—in the other case, the reference which the percipient mind has made of this

feeling to an external cause. But this reference is all, which the perception superadds to the sensation;—and the source of the reference itself we are still left to seek, in the other principles of our intellectual nature. We have no need, however, to invent a peculiar power of the mind for producing it; since there are other principles of our nature, from which it may readily be supposed to flow,—the principle by which we are led to believe, that every new consequent, in a train of changes, must have had a new antecedent of some sort in the train,—and the principle of association, by which feelings, that have usually coexisted, suggest or become representative of each other. With these principles, it certainly is not wonderful, that when the fragrance of a rose has uniformly affected our sense of smell, as often as the flower itself was presented to us, we should ascribe the fragrance to the flower which we have seen and handled;—but though it would not be wonderful, that we should make it, it would indeed be wonderful, if, with these principles, we did not make that very reference, for which Dr Reid thinks it necessary to have recourse to a peculiar faculty of perception.

Such, then, is the view, which I would take of that distinction of *sensation* and *perception*, which Dr Reid, and the philosophers who have followed him, and many of philosophers, too, that preceded him,—for the distinction, as I have said, is far from being an original one,—have understood in a different sense; in consequence, as I cannot but think, of a defective analysis of the mental process, which constitutes the reference of our feelings of this class to *causes* that are *without*.

There is another distinction, which he has adopted from the philosophers that preceded him, and which forms an important part of his system of perception,—a distinction, that is just to a certain extent,—though not to the full extent, and in the precise manner, in which he and other writers have maintained;—and with respect to which, therefore, it will be necessary to point out to you, how far I conceive it to be safely admissible. I allude to the division, which has been formed of the *primary* and *secondary* qualities of matter.

"Every one knows that extension, divisibility, figure, motion, solidity, hardness, softness, and fluidity, were by Mr Locke called primary qualities of body; and that sound, colour, taste, smell, and

heat or cold, were called secondary qualities. Is there a just foundation for this distinction? Is there any thing common to the primary, which belongs not to the secondary? And what is it?

"I answer, that there appears to me to be a real foundation for the distinction; and it is this: That our senses give us a direct and a distinct notion of the primary qualities, and inform us what they are in themselves; but of the secondary qualities, our senses give us only a relative and obscure notion. They inform us only, that they are qualities that affect us in a certain manner, that is, produce in us a certain sensation; but as to what they are in themselves, our senses leave us in the dark.

"The notion we have of primary qualities is direct, and not relative only. A relative notion of the thing, is, strictly speaking, no notion of the thing at all, but only of some relation which it bears to something else.

"Thus gravity sometimes signifies the tendency of bodies towards the earth; sometimes it signifies the cause of that tendency: When it means the first, I have a direct and distinct notion of gravity: I see it, and feel it, and know perfectly what it is; but this tendency must have a cause: We give the same name to the cause; and that cause has been an object of thought and of speculation. Now what notion have we of this cause, when we think and reason about it? It is evident, we think of it as an unknown cause, of a known effect. This is a relative notion, and it must be obscure; because it gives us no conception of what the thing is, but of what relation it bears to something else. Every relation which a thing unknown bears to something that is known, may give a relative notion of it; and there are many objects of thought, and of discourse, of which our faculties can give no better than a relative notion.

"Having premised these things to explain what is meant by a relative notion, it is evident, that our notion of primary qualities is not of this kind; we know what they are, and not barely what relation they bear to something else.

"It is otherwise with secondary qualities. If you ask me, what is that quality or modification in a rose which I call its smell, I am at a loss to answer directly. Upon reflection I find, that I have a distinct notion of the sensation which it produces in

my mind. But there can be nothing like to this sensation in the rose, because it is insentient. The quality in the rose is something which occasions the sensations in me; but what that something is, I know not. My senses give me no information upon this point. The only notion, therefore, my senses give is this, That smell in the rose is an unknown quality or modification, which is the cause or occasion of a sensation which I know well. The relation which this unknown quality bears to the sensation with which nature hath connected it, is all I learn from the sense of smelling; but this is evidently a relative notion. The same reasoning will apply to every secondary quality.

"Thus I think it appears, that there is a real foundation for the distinction of primary from secondary qualities; and that they are distinguished by this, that of the primary we have by our senses a direct and distinct notion; but of the secondary only a relative notion, which must, because it is only relative, be obscure; they are conceived only as the unknown causes or occasions of certain sensations with which we are well acquainted."*

Though, as I have explained to you fully, in my former Lectures, we should not,—at least in far the greater number of our sensations,—have considered them, originally, as proceeding from external causes, we yet, after the acquisitions of knowledge, with which the first years of our life enrich us, believe, that there is an external cause of all our sensations,—of smells and tastes, as much as of those feelings of the mind, which constitute our notions of extension and resistance. But the difference, in these cases, is, that though we *learn*, by experience of certain successions or coexistences of feelings, to refer to a *corporeal* cause our sensations of fragrance, and various other species of sensations, there is nothing in the sensation of fragrance itself, or in the other analogous sensations, of which I speak, that might not indicate as much a cause directly spiritual, as a cause like that to which we at present give the name of *body*,—while the very notion of extension and resistance combined, seems necessarily to indicate a material cause, or rather is truly that which constitutes our very notion of matter.

We believe, indeed, that our sensations of fragrance, sweetness, sound, have causes of some sort, as truly as we believe, that

* On the Intellectual Powers, Essay II. c. 17.

our feelings of extension and resistance have a cause, or causes of some sort; but if we have previously given the name of matter, with direct reference to the one set of effects, and not with direct reference to the other, it necessarily follows, that, in relation to matter, as often as we speak or think of it, the qualities which correspond with the one set of effects, that have led us to use that name, must be regarded by us as primary, and the others, which may, or may not coexist with these, only as secondary. An external body may, or may not be fragrant, because fragrance is not one of the qualities previously included by us in our definition of a body; but it *must* be *extended*, and present an obstacle to our compressing force, because these are the very qualities, which we have included in our definition, and without which, therefore, the definition must cease to be applicable to the thing defined.

If, originally, we had invented the word *matter* to denote the cause, whatever it might be, of our sensations of smell, it is very evident, that *fragrance* would then have been to us the primary quality of *matter*, as being that which was essential to our definition of matter,—and all other qualities, by which the cause of smell might, or might not at the same time affect our other senses, would then have been *secondary* qualities only,—as being qualities compatible with our definition of matter, but not essential to it.

What we now term matter, however, I have repeatedly observed,—is that which we consider as *occupying space*, and *resisting our effort to compress it;* and those qualities of matter may well be said to be primary, by which matter itself, as thus defined, becomes known to us,—or by the union of which, in our conception, we form the complex notion of matter, and give or withhold that name according as these qualities are present or absent. Extension and resistance are the distinguishing qualities that direct us in all our applications of the word which comprehends them. They are truly *primary* qualities, therefore; since, without our consideration of them, we never could have formed the complex notion of the substance itself, to which we afterwards, in our analysis of that complex notion, ascribe them separately as qualities;—and all the other qualities, which we may afterwards find occasion to refer to an extended resisting substance, must evidently be secondary, in reference to those qualities, without which as previously

combined in our thought, we could not have had the primary notion of the substance to which we thus secondarily refer them. If, in the case which we have already frequently imagined, of the single sense of smell, we had been absolutely unsusceptible of every other external feeling, we might, indeed, have considered our sensation as the effect of *some* cause,—and even of a cause that was different from our mind itself; but it is very evident that we could not have considered it as the effect of the presence of *matter*, at least as that term is now understood by us. If, in these circumstances,—after frequent repetition of the fragrance, as the only quality of bodies with which we could be acquainted,—we were to acquire in an instant all the other senses which we now possess,—so as to become capable of forming that complex notion of things extended and resisting, which is our present notion of matter, we should then, indeed, have a fuller notion of the rose, of the mere fragrance of which we before were sensible, without knowing of what it was the fragrance, and might learn to refer the fragrance to the rose, by the same coexistences of sensations which have led us, in our present circumstances, to combine the fragrance with other qualities, in the complex conception of the flower. Even then, however, though the fragrance, which was our first sensation, had truly been known to us before the other qualities, and though the sensation, therefore, would deserve the name of primary, the *reference* of this earlier feeling to the external rose as its cause, would still truly be *secondary* to the earlier reference, or rather to the earlier combination of other qualities, in one complex whole, by which we had formed to ourselves the notion of the extended and resisting rose, as a body, that admitted the subsequent reference of the delightful sensation of fragrance to be made to it, as the equal cause of these different effects.

In this sense, then, the distinction of the primary and secondary qualities of matter is just,—that, whatever qualities we refer to a *material* cause must be, in reference, secondary to those qualities that are essential to our very notion of the body, to which the subsequent reference of the other qualities is made. We have formed our definition of matter; and, as in every other definition of every sort, the qualities included in the definition, must always, in comparison of other qualities, be primary and essential, relatively to the thing defined.

Nor is this all.—It will be admitted likewise, that the qualities termed *primary*,—which alone are included in our general definitions of matter, and which are all, as we have seen, modifications of mere extension and resistance, are, even after we have learned to consider the causes of all our sensations as substances external to the mind, still felt by us to be external, with more clearness and vividness, than the other qualities, which we term *secondary*. The difference is partly, and chiefly, in the nature of the sensations themselves, as already explained to you, but depends also, I conceive, in no inconsiderable degree, on the permanence and universality of the objects which possess the primary qualities, and the readiness with which we can renew our feeling of them at will, from the constant presence of our own bodily frame, itself extended and resisting, and of the other causes of these feelings of extension and resistance, that seem to be every where surrounding us. Tastes, smells, sounds,—even colours though more lasting than these—are not always before us;—but there is not a moment at which we cannot, by the mere stretching of our hand, produce at pleasure, the feeling of something extended and resisting. It is a very natural effect of this difference, that the one set of causes which are always before us, should seem to us, therefore, peculiarly permanent, and the other set, that are only occasionally present, should seem almost as fugitive as our sensations themselves.

In these most important respects, there is, then, a just ground for the distinction of the primary from the secondary qualities of bodies. They are primary in the order of our definition of matter; and they are felt by us as peculiarly permanent, independently of our feelings, which they seem at every moment ready to awake. The power of affecting us with smell, taste, sight, or hearing, may or may not be present; but the power of exciting the feelings of extension and resistance is constantly present, and is regarded by us as essential to our very notion of matter,—or, in other words, we give the name of *matter*, only where this complex perception is excited in us. We seem, therefore, to be constantly surrounded with a material world of substances extended and resisting, that is to say, a world of substances capable of exciting in us the feelings which are ascribed to the primary quality of matter;—but still the feeling of these primary qualities, which we

regard as permanent, is not less than the feeling of the secondary qualities, a state or affection of the mind, and nothing more ;—and in the one case, as much as in the other, in the perception of the qualities termed secondary, as much as of the qualities termed primary, the feeling, when it occurs, is the direct or immediate result of the presence of the external body with the quality of which it corresponds ;—or, if there be any difference in this respect, I conceive that our feeling of fragrance, or sweetness, was, originally at least, a more immediate result of the presence of odorous or sapid particles,—than any feeling of extension, without the mind, was the effect of the first body which we touched.

To the extent which I have now stated, then, the difference of these classes of qualities may be admitted. But as to the other differences asserted, they seem to be founded on a false view of the nature of perception. I cannot discover any thing in the sensations themselves, corresponding with the primary and secondary qualities, which is direct, as Dr Reid says, in the one case, and only relative in the other. All are *relative*, in his sense of the term, and equally relative,—our perception of extension and resistance, as much as our perception of fragrance or bitterness. Our feeling of extension is not itself matter, but a feeling excited by matter. We ascribe, indeed, our sensations as effects to external objects that excite them ; but it is only by the medium of our sensations that these, in any case, become known to us as objects. To say that our perception of extension is not relative, to a certain external cause of this perception, direct or indirect, as our perception of fragrance is relative to a certain external cause, would be to say that our perception of extension, induced by the presence of an external cause, is not a *mental* phenomenon, as much as the perception of fragrance, but is something more than a state of the mind ; for, if the perception of extension be, as all our perceptions and other feelings must surely be, a *mental* phenomenon, a state of *mind*, not of *matter*, the reference made of this to an external cause, must be only to something which is conceived relatively as the cause of this feeling. What matter is independently of our perception, we know not, and cannot know, for it is only by our sensations that we can have any connexion with it ; and even though we were supposed to have our connexion with it enlarged. by va-

rious senses additional to those which we possess at present, and our acquaintance with it, therefore, to be far more minute, this very knowledge, however widely augmented, must itself be a *mental phenomenon*, in like manner, the reference of which, to matter, as an external cause, would still be *relative* only like our present knowledge. That the connexion of the feeling of extension, with a corporeal substance really existing without, depends on the arbitrary arrangement made by the Deity; and that all of which we are conscious might, therefore, have existed, as at present, though no external cause had been, Dr Reid, who ascribes to an intuitive principle, our belief of an external universe, virtually allows; and this very admission surely implies, that the notion does not, directly and necessarily, involve the existence of any particular cause, whatever it may be in itself, by which the Deity has thought proper to produce the corresponding feeling of our mind. It is quite evident, that we cannot, in this case, appeal to experience, to inform us what sensations or perceptions are more or less direct; for experience, strictly understood, does not extend beyond the feelings of our own mind, unless in this very relative belief itself, that there are certain external causes of our feelings, —causes which it is impossible for us not to conceive as really existing, but of which we know nothing more than that our feelings, in all that wide variety of states of mind, which we express briefly by the terms sensation or perception, are made to depend on them. In the series of states in which the mind has existed, from the first moment of our life, to the present hour, the feelings of extension, resistance, joy, sorrow, fragrance, colour, hope, fear, heat, cold, admiration, resentment, have often had place; and some of these feelings, it has been impossible for us not to ascribe to a direct external cause; but there have not been in the mental series, which is all of which we can be conscious, both that feeling of the mind which we term the perception of extension, and also body itself, as the cause of this feeling; for body, as an actual substance, cannot be a part of the consciousness of the mind, which is a different substance. It is sufficient for us to believe, that there are external causes of this feeling of the mind, permanent and independent of it, which produce in regular series, all those phenomena that are found by us in the physical events of the universe, and with the continuance of which, therefore, our

perceptions also will continue; we cannot truly suppose more, without conceiving our very notion of extension, a mental state, to be itself a body extended, which we have as little reason to suppose, as that our sensation of fragrance, another mental state, is itself a fragrant body. It is needless to prolong this discussion, by endeavouring to place the argument in new points of view. The simple answer to the question, "Is our notion of extension, or of the other primary qualities of matter, a phenomenon or affection of matter or of mind?" would be of itself sufficient; for if it be a state of the *mind*, as much as our feeling of heat or of fragrance, and a state produced by the presence of an external cause, as our sensations of heat or fragrance are produced, then there is no reason to suppose, that the knowledge is, in one case, more direct than in the other. In both, it is the effect of the presence of an external cause, and in both it must be *relative* only, —to adopt Dr Reid's phrase,—to that particular cause which produced it; the knowledge of which cause, in the case of extension, as much as in the case of fragrance, is nothing more than the knowledge, that there is *without* us, something which is not our mind itself, but which exists, as we cannot but believe, permanently and independently of our mind, and produces according to its own varieties, in relation to our corporeal frame at one time, that affection of the mind which we denominate the perception of extension; at another time, that different affection of the mind, which we denominate the perception of fragrance. *What it is*, as it exists in absolute independence of our perceptions, we who become acquainted with it, only by those very perceptions, know not, in either case; but we know it at least,—which is the only knowledge important for us,—as it exists *relatively* to *us;* that is to say, it is impossible for us, from the very constitution of our nature, not to regard the variety of our perceptions, as occasioned by a corresponding variety of causes, external to our mind; though, even in making this reference, we must still believe our perceptions themselves, to be altogether different and distinct from the external causes, whatever they may be, which have produced them; to be, in short, phenomena purely mental, and to be this equally, whether they relate to the primary or the secondary qualities of matter; our notion of extension, in whatever way the Deity may have connected it with the presence of exter-

nal things, being as much a state of the mind itself, as our notion of sweetness or sound.

These observations, on the process of suggestion, which, in the reference to an external cause, distinguishes our *perceptions* from our *simpler sensations*,—and on the real and supposed differences of the primary and secondary qualities of matter,—will have prepared you, I trust, for understanding better the claim which Dr Reid has made to the honour of overthrowing what he has termed the ideal system of perception. It is a claim, as I have said, which appears to me truly wonderful, both as made by him and admitted by others; the mighty achievement which appeared to him to be the overthrow of a great system, being nothing more, than the proof that certain phrases are metaphorical, which were intended by their authors to be understood only as metaphors.

In perception there is, as I have already frequently repeated, a certain *series*—the presence of an external object—the affection of the sensorial organ—the affection of the sentient mind. As the two last, however, helong to one being—the being called *self*—which continues the same, while the external objects around are incessantly changing;—it is not wonderful, that, in speaking of perception, we should often think merely of the object as one, and of *ourself*, (this compound of mind and matter,) as also one, —uniting the organic and mental changes, in the single word which expresses our perception. To see and to hear, for example, are single words, expressive of this whole process—the bodily as well as the mental part—for we do not consider the terms as applicable, in strict philosophic propriety, to cases, in which the mere mental affection is the same, but the corporeal part is believed by us to be different,—as in sleep, or reverie, when the castle, the forest, the stream, rise before us as in reality, and we feel as if we were truly listening to voices which we love. That we feel, as if we were listening, and feel as if we saw, is our language, when, in our waking hours, we speak of this phenomena of our dreams,—not that we actually *saw* and *heard*—thus evidently shewing, that we comprehend, in these terms,—when used without the qualifying words *as if*—not the mental changes of state only, but the whole process of perception, corporeal as well as mental. The mere organic part of the process, however, be-

ing of importance, only as it is followed by the mental part,—and being always followed by the mental part,—scarcely enters into our conception, unless in cases of this sort, when we distinguish perception from vivid imagination, or when the whole compound process of perception is a subject of our philosophic inquiry. As sight, hearing, perception, involve, in a single word,—process both mental and corporeal,—so, I have no doubt, that idea, though now confined more strictly to the feelings of the mind, was long employed with a more vague signification, so as sometimes to mean the mental affection, sometimes the organic affection, sometimes both;—in the same manner, as at present we speak of sight, sometimes as mental, sometimes as organic, sometimes as *both*. It comprehends both, when we distinguish the mountain or forest which we *see*, from the mountain or forest of which we *dream*. It is *mental* only, when we speak of the pleasure of sight. It is organic only, when we say of an eye, in which the passage of the rays of light has become obstructed, that its *sight* is lost, or has been injured by disease.

The consideration of this double sense of the term *idea*, in some of the older metaphysical writers, corresponding with our present double sense of the word perception, as involving both the corporeal and mental part of the process, removes, I think, much of that apparent confusion, which is sometimes to be found in their language on the subject; when they combine with the term expressions, which can be understood only in a *material* sense, after combining with it, at other times, expressions, which can be understood only of the *mind;* as it is not impossible that a period may arrive, when much of our reasoning, that involves no obscurity at present, may seem obscure and confused, to our successors, in that career of inquiry, which, perhaps, is yet scarcely begun; merely because they may have limited, with stricter propriety, to one part of a process, terms, which we now use as significant of a whole process. In the same manner, as we now exclude wholly from the term *idea* every thing *organic*, so may every thing organic hereafter be excluded from the term *sight;* and from the simple phrase, so familiar at present, that an eye has lost its sight, some future philosopher may be inclined to assert, that we, who now use that phrase, consider the perception of vision, as in the *material organ;* and, if he have the talents of Dr

Reid, he may even form a series of admirable ratiocinations, in disproof of an opinion which nobody holds, and may consider himself, and perhaps, too, if he be as fortunate as the author of the Inquiry into the Human Mind, may be considered, by others, as the overthrower of a mighty system of metaphysical illusion.

How truly this has been the case, in the supposed overthrow of the ideal system, I shall proceed to shew in my next Lecture.

LECTURE XXVI.

ON DR REID'S SUPPOSED CONFUTATION OF THE IDEAL SYSTEM; HYPOTHESIS OF THE PERIPATETICS REGARDING PERCEPTION; AND OPINIONS OF VARIOUS PHILOSOPHERS ON THE SAME SUBJECT.

THE remarks which I offered, in my last Lecture, in illustration of what have been termed the *primary* and *secondary* qualities of matter, were intended chiefly to obviate that false view of them, in which the one set of these qualities is distinguished, as affording us a knowledge that is direct, and the other set, a knowledge that is relative only;—as if any qualities of matter could become known to the mind, but as they are capable of affecting the mind with certain feelings, and as *relative*, therefore, to the feelings which they excite. What matter is, but as the cause of those various states of mind, which we denominate our sensations or perceptions, it is surely impossible for us, by perception, to discover. The physical universe, amid which we are placed, may have innumerable qualities that have no relation to our percipient mind, —and qualities, which, if our mind were endowed with other capacities of sensation, we might discover as readily as those which we know at present; but the qualities that have *no relation* to the present state of the mind, cannot to the mind, in its present state, be elements of its knowledge. From the very constitution of our nature, indeed, it is impossible for us not to believe, that our sensations have *external* causes, which correspond with them, and which have a permanence, that is independent of our transient feelings,—a permanence, that enables us to predict in certain circumstances, the feelings which they are again to excite in our percipient mind; and to the union of all these permanent external causes, in one great system, we give the name of the materi-

al world. But the material world, in the sense in which alone we are entitled to speak of it, is still only a name for a multitude of external causes of our feelings,—of causes which are recognized by us as permanent and uniform in their nature; but are so recognized by us, only because, in similar circumstances, they excite uniformly in the mind the same perceptions, or, at least, are supposed by us to be uniform in their own nature, when the perceptions which they excite in us are uniform. It is according to their mode of affecting the mind, then, with various sensations, that we know them,—and not according to their own absolute nature, which it is impossible for us to know,—whether we give the name of primary or secondary to the qualities which affect us. If our sensations were different, our perceptions of the qualities of things, which induce these sensations in us, would instantly have a corresponding difference. All the external existences, which we term matter,—and all the phenomena of their motion or their rest,—if known to us at all, are known to us only by exciting in *us*, the percipients of them, certain feelings:—and qualities, which are not more or less directly *relative* to our feelings, as sentient or percipient beings, are, therefore, qualities which *we* must be forever incapable even of divining.

This, and some other discussions which have of late engaged us, were in part intended as preparatory to the inquiry on which we entered in the close of my Lecture,—the inquiry into the justness of the praise which has been claimed and received by Dr Reid, as the confuter of a very absurd theory of perception, till then universally prevalent:—and if, indeed, the theory, which he is said to have confuted, had been the general belief of philosophers till confuted by him, there can be no question, that he would have had a just claim to be considered as one of the chief benefactors of the Philosophy of Mind. At any rate, since this glory has been ascribed to him, and his supposed confutation of the theory of perception, by little images of objects conveyed to the mind, has been considered as forming one of the most important eras in intellectual science, it has acquired, from this universality of mistake with respect to it, an interest which, from its own merits, it would certainly be far from possessing.

In the Philosophy of the Peripatetics, and in all the dark ages of the scholastic followers of that system, *ideas* were truly con-

sidered as little images derived from objects without; and, as the word *idea* still continued to be used after this original meaning had been abandoned, (as it continues still, in all the works that treat of perception,) it is not wonderful that many of the accustomed forms of expression, which were retained together with it, should have been of a kind that, in their strict etymological meaning, might have seemed to harmonize more with the theory of ideas as images, which prevailed when these particular forms of expression originally became habitual, than with that of *ideas* as mere *states of the mind itself;* since this is only what has happened with respect to innumerable other words, in the transmutations of meaning which they have received during the long progress of scientific inquiry. The idea, in the old philosophy, had been that, of which the presence immediately preceded the mental perception,—the direct external cause of perception; and accordingly, it may well be supposed, that when the direct cause of perception was believed to be, not a foreign phantasm, but a peculiar affection of the sensorial organ, that word, which had formerly been applied to the supposed object, would still imply some reference to the organic state, which was believed to supply the place of the shadowy film, or phantasm, in being, what it had been supposed to be, the immediate antecedent of perception. Idea, in short, in the old writers, like the synonymous word perception at present, was expressive, not of one part of a process, but of two parts of it. It included, with a certain vague comprehensiveness, the *organic* change as well as the *mental*,—in the same way as perception now implies a certain change produced in our organs of sense, and a consequent change in the state of the mind; and hence it is surely not very astonishing, that while many expressions are found in the works of these older writers, which, in treating of ideas, have a reference to the mental part of the process of perception, other expressions are occasionally employed which relate only to the material part of the process, —since both parts of the process, as I have said, were, to a certain degree, denoted by that single word. All this might very naturally take place, though nothing more was meant to be expressed by it than these two parts of the process,—the organic change, whatever it might be, and the subsequent mental change, without the necessary intervention of something distinct from both, such as Dr Reid supposes to have been meant by the term Idea.

It is this application, to the bodily part of the process, of expressions, which he considered as intended to be applied to the mental part of perception, that has sometimes misled him in the views which he has given of the opinions of former philosophers. But still more frequently has he been misled, by understanding in a literal sense phrases which were intended in a metaphorical sense, and which seem so obviously metaphorical, that it is truly difficult to account for the misapprehension. Indeed, the same metaphors, on the mere use of which Dr Reid founds so much, continue still to be used in the same manner as before he wrote. We speak of impressions on the mind,—of ideas bright or obscure, permanent or fading,—of senses, that are the inlets to our knowledge of external things,—and of memory, in which this knowledge is stored, —precisely as the writers and speakers before us used these phrases; without meaning any thing more, than that certain organic changes, necessary to perception, are produced by external objects,—and that certain feelings, similar to those originally excited in this manner, are afterwards renewed, with more or less permanence and vivacity, without the recurrence of the objects that originally produced them;—and to arrange all the moods and figures of logic in confutation of mere metaphors, such as I cannot but think the images in the mind to have been, which Dr Reid so powerfully assailed, seems an undertaking not very different from that of exposing, syllogistically and seriously, all the follies of Grecian Paganism as a system of theological belief, in the hope of converting some unfortunate poetaster or poet, who still talks, in his rhymings to his mistress, of *Cupid* and the *Graces*.

There is, however, one very important practical inference to be drawn from this misapprehension,—the necessity of avoiding, as much as possible, in philosophic disquisition, the language of *metaphor*, especially when the precise meaning has not before been pointed out, so as to render any misconception of the intended meaning, when a metaphor is used, as nearly impossible as the condition of our intellectual nature will allow. In calculating the possibility of this future misconception, we should never estimate our own perspicuity very highly; for there is always in man a redundant facility of mistake, beyond our most liberal allowance. As Pope truly says,—

> "The difference is as great between
> The optics seeing, as the objects seen;"

and, unfortunately, it is the object only which is in our power. The fallible optics, that are to view it, are beyond our controul; and whatever opinion, therefore, the most cautious philosopher may assert, he ought never to flatter himself with the absolute certainty, that, in the course of a few years, he may not be exhibited, and confuted, as the assertor of a doctrine, not merely different from that which he has professed, but exactly opposite to it.

The true nature of the opinions really held by philosophers is, however, to be determined by reference to their works. To this then let us proceed.

The language of Mr Locke,—to begin with one of the most eminent of these,—is unfortunately, so very figurative, when he speaks of the intellectual phenomena, (though I have no doubt that he would have avoided these figures, if he could have foreseen the possibility of their being interpreted literally,) that it is not easy to show, by any single quotation, how very different his opinions as to perception were, from those which Dr Reid has represented them to be. The great question is, whether he believed the existence of ideas, as things in the mind, separate from perception, and intermediate between, the organic affection, whatever it might be, and the mental affection; or whether the *idea* and the *perception* were considered by him as the same. "In the perception of external objects," says Dr Reid, "all languages distinguish three things,—the mind that perceives,—the operation of that mind, which is called perception,—and the object perceived. Philosophers have introduced a fourth thing, in this process, which they call the idea of the object."* It is the merit of shewing the nullity of this supposed *fourth thing*, which Dr Reid claims, and which has been granted to him, without examination. The perception itself, as a state of the mind, or, as he chooses to call it, an operation of the mind, he admits, and he admits also the organic change which precedes it. Did Mr Locke then contend for any thing more, for that fourth thing, the idea, distinct from the perception,—over which Dr Reid supposes himself to have triumphed? That he did not contend for any thing more, nor conceive the idea to be any thing different from the perception itself, is sufficiently apparent from innumerable passages both of his Essay itself, and of his

* On the Intellectual Powers, Essay II. chap. xii.

admirable defence of the great doctrines of his Essay, in his controversy with Bishop Stillingfleet. He repeatedly states, that he uses the word *idea*, as synonymous with *conception* or *notion*, in the common use of those terms; his only reason for preferring it to notion, (which assuredly Dr Reid could not suppose to mean any thing, distinct from the mind) being, that the term notion seems to him better limited to a particular class of ideas, those which he technically terms *mixed modes*. That ideas are not different from perceptions is clearly expressed by him. "To ask at what time a man has first any *ideas*," he says, "is to ask when he begins to *perceive*; having ideas and perception being the same thing."* If he speaks of our senses, as the *inlets* to our ideas, the metaphor is surely a very obvious one; or, if any one will still contend, that what is said metaphorically must have been intended really, it must be remembered, that he uses precisely the same metaphor, in cases in which the *real* application of it is absolutely impossible, as, for example, with respect to our perceptions or sensations, and that, if we are to understand, from his use of such metaphors, that he believed the ideas, thus introduced, to be distinct from the mind, we must understand, in like manner, that he believed our sensations and perceptions, introduced, in like manner, to be also things self-existing, and capable of being admitted, at certain inlets, into the mind as their recipient. "Our senses, conversant about particular sensible objects, do convey," he says, "into the mind, several distinct perceptions of things, according to those various ways wherein those objects do affect them."† "The senses are avenues provided by nature for the reception of sensations."‡ I cannot but think, that these, and the similar passages that occur in the Essay, ought, of themselves, to have convinced Dr Reid, that he who thus spoke of PERCEPTIONS, conveyed into the mind, and of avenues provided for the reception of SENSATIONS, might also, when he spoke of the conveyance of ideas into the mind, and of avenues for the reception of ideas, have meant nothing more than the simple external origin of those notions, or conceptions, or feelings, or affections of mind, to which he gave the name of *ideas*; especially when there is not a single argument in his Essay, or in any of his works, that is founded on the substan-

* Essay concerning Human Understanding, B. ii. chap. i. sect. 9.
† Sect. 3. ‡ Sect. 12.

tial reality of our ideas, as separate and distinct things in the mind. I shall refer only to one additional passage, which I purposely select, because it is, at the same time, very full of the particular figures, that have misled Dr Reid, and shews, therefore, what the true meaning of the author was at the time at which he used these figures.

"The other way of retention, is the power to revive again in our minds those ideas, which after imprinting have disappeared, or have been as it were laid aside out of sight; and thus we do, when we conceive heat or light, yellow or sweet, the object being removed. This is memory, which is, as it were the storehouse of our ideas. For the narrow mind of man not being capable of having many ideas under view and consideration at once, it was necessary to have a repository to lay up those ideas, which at another time it might have use of. But our ideas being nothing but actual perceptions in the mind, which cease to be any thing, when there is no perception of them, this laying up of our ideas in the repository of the memory, signifies no more but this, that the mind has a power in many cases to revive perceptions, which it has once had, with this additional perception annexed to them, that it has had them before. And in this sense it is, that our ideas are said to be in our memories, when indeed they are actually no where, but only there is an ability in the mind when it will to revive them again, and as it were paint them a-new on itself, though some with more, some with less difficulty; some more lively, and others more obscurely."*

The doctrine of this truly eminent philosopher, therefore, is, that the presence of the external object, and the consequent organic change, are followed by an idea, "which is nothing but the actual perception;" and that the laying up of these ideas in the memory, signifies nothing more, than that the mind has, in many cases, a power to revive perceptions which it has once had. All this, I conceive, is the very doctrine of Dr Reid on the subject; and to have confuted Mr Locke, therefore, if it had been possible for him, must have been a very unfortunate confutation, as it would have been also to have confuted as completely the very opinions on the subject, which he was disposed himself to maintain.

* Essay concerning Human Understanding, B. ii. chap. x. sect. 2.

I may now proceed further back, to another philosopher of great eminence, whose name, unfortunately for its reputation, is associated more with his political and religious errors, than with his analytical investigations of the nature of the phenomena of thought. The author to whom I allude is Hobbes, without all question one of the most acute intellectual inquirers of the country and age in which he lived. As the physiology of the mind, in Britain at least seemed at that time to be almost a new science, he was very generally complimented by his contemporary poets, as the discoverer of a *new land*. Some very beautiful Latin verses, addressed to him, I quoted to you, in a former Lecture, in which it was said, on occasion of his work on Human Nature, that the mind, which had before known all things, was now for the first time made known to itself.

"Omnia hactenus
Quæ nosse potuit, nota jam primum est sibi."

And in which he was said, *in revealing* the mind, to have performed a work, next in divinity to that of creating it.

"Divinum est opus
Animum creare, proximum huic ostendere."

By Cowley, who styles him "the discoverer of the golden lands of new philosophy," he is compared to Columbus, with this difference, that the world, which that great navigator found, was left by him, rude and neglected, to the culture of future industry; while that which Hobbes discovered might be said to have been at once explored by him and civilized. The eloquence of his strong and perspicuous style, I may remark by the way, seems to have met with equal commendation, from his poetical panegyrists, with whom, certainly not from the excellence of his own verses, he appears to have been in singular favour. His style is thus described, in some verses of Sheffield, Duke of Buckingham:

"Clear as a beautiful transparent skin,
Which never hides the blood, yet holds it in;
Like a delicious stream it ever ran
As smooth as woman, and as strong as man."*

The opinions of Hobbes, on the subject which we are considering, are stated at length, in that part of his Elements of Philos-

* On Hobbes and his Writings, v. 37—40.—Works, p. 180. 4to Edit.

ophy, which he has entitled *Physica;* and, far from justifying Dr Reid's assertion, with respect to the general ideal system of philosophers, may be considered, in this important respect, as far, at least, as relates to the unity of the idea, and the perception itself, as similar to his own. *Sensation* or *perception*, he traces to the impulse of external objects, producing a motion along the nerves towards the brain, and a consequent reaction outwards, which he seems to think, very falsely indeed, may account for the reference to the object as external. This hypothesis, however, is of no consequence. The only important point in reference to the supposed universality of the system of ideas, is whether this philosopher of another age, asserted the existence of ideas, as intermediate things, distinct from the mere perception; and, on this subject, he is as explicit as Dr Reid himself could be. The idea or *phantasma*, as he terms it, is the very perception or *actus sentiendi.* "Phantasma enim est sentiendi actus; neque differt a sensione, aliter quam *fieri* differt a *factum esse.*"* The same doctrine, and I may add also, the same expression of the unity of the actus sentiendi and the phantasma, are to be found in various other parts of his works.

I may, however, proceed still further back, to an author of yet wider and more varied genius, one of those extraordinary men whom nature gives to the world, for her mightiest purposes, when she wishes to change the aspect, not of a single science merely, but of all that can be known by man; that illustrious *rebel*, who, in overthrowing the authority of Aristotle, seemed to have acquired, as it were by right of conquest, a sway in philosophy, as absolute, though not so lasting, as that of the Grecian despot. "Time," says one of the most eloquent of his countrymen, "has destroyed the opinions of Des Cartes. But his glory subsists still. He appears like one of those dethroned monarchs, who, on the very ruins of their empire, still seem born for the sovereignty of mankind."

On the opinions of Des Cartes, with respect to perception, Dr Reid has dwelt at great length, and has not merely represented him as joining in that belief of ideas, distinct from perception, which he represents as the universal belief of philosophers, but

* Elementa Philosophiæ, Pars IV. c. xxv. sect. 3.

has even expressed astonishment, that Des Cartes, whose general opinions might have led him to a different conclusion, should yet have joined in the common one. "The system of Des Cartes," he says, "is with great perspicuity and acuteness explained by himself, in his writings, which ought to be consulted by those who would understand it."* He probably was not aware, when he wrote these few lines, how important was the reference which he made, especially to those whom he was addressing; since, the more they studied the view which he has given of the opinions of Des Cartes, the more necessary would it become for them to consult the original author.

"It is to be observed," he says, "that Des Cartes rejected a part only of the ancient theory, concerning the perception of external objects by the senses, and that he adopted the other part. That theory may be divided into two parts,—the *first*, that images, species, or forms of external objects, come from the object, and enter by the avenues of the senses to the mind; the *second* part is, that the external object itself is not perceived, but only the species or image of it in the mind. The first part Des Cartes and his followers rejected, and refuted by solid arguments; but the second part, neither he nor his followers have thought of calling in question; being persuaded that it is only a representative image, in the mind, of the external object that we perceive, and not the object itself. And this image, which the Peripatetics called a *species*, he calls an *idea*, changing the name only, while he admits the thing."†—"Des Cartes, according to the spirit of his own philosophy, ought to have doubted of both parts of the Peripatetic hypothesis, or to have given his reasons, why he adopted one part, as well as why he rejected the other part; especially since the unlearned, who have the faculty of perceiving objects by their senses, in no less perfection than philosophers, and should therefore know, as well as they, what it is they perceive, have been unanimous in this, that the objects they perceive are not ideas in their own minds, but things external. It might have been expected, that a philosopher, who was so cautious as not to take his own existence for granted, without proof, would not have taken it for granted, without proof, that every thing he perceived was only *ideas* in his own mind."‡

* On the Intellectual Powers, Essay II. c. 3. † Ibid. ‡ Ibid.

All this might certainly have been expected, as Dr Reid says, if the truth had not been, that the opinions of Des Cartes are precisely opposite to the representation which he has given of them,—that, far from believing in the existence of images of external objects, as the immediate causes or antecedents of perception, he strenuously contends against them. The presence of the external body,—the organic change, which he conceives to be a sort of motion of the small febrils of the nerves and brain,—and the affection of the mind, which he expressly asserts to have no resemblance whatever to the motion that gave occasion to it,—these are all which he conceives to constitute the process of perception, without any *idea*, as a thing distinct,—a fourth thing intervening between the organic and the mental change. And this process is exactly the process which Dr Reid himself supposes, with this only difference,—an unimportant one for the present argument,—that Dr Reid, though he admits some intervening organic change, does not state, positively, what he conceives to be its nature, while the French philosopher supposes it to consist in a motion of the nervous fibrils. The doctrine of Des Cartes is to be found, very fully stated, in his *Principia Philosophiæ*, in his *Dioptrics*, and in many passages of his small controversial works. He not merely rejects the Peripatetic notion, of images or shadowy films, the resemblance of external things, received by the senses,—contending, that the mere organic affection—the motion of the nervous fibril—is sufficient, without any such images, "diversos motus tenuium uniuscujusque nervi capillamentorum sufficere ad diversos sensus producendum;" and proving this by a very apposite case, to which he frequently recurs, of a blind man determining the dimensions of bodies by comprehending them within two crossed sticks,—in which case, he says, it cannot be supposed, that the sticks *transmit*, through themselves, any *images* of the body; but he even proceeds to account for the common prejudice, with respect to the use of images of perception, ascribing it to the well-known effect of pictures in exciting notions of the objects pictured. "Such is the nature of the mind," he says, "that, by its very constitution, when certain bodily motions take place, certain thoughts immediately arise, that have no resemblance whatever, as images, to the motions in consequence of which they arise. The thoughts which words, written or spoken, excite, have surely no resemblance to

the words themselves. A slight change in the motion of a pen may produce, in the reader, affections of mind the most opposite; nor is it any reply to this to say, that the characters traced by the pen are only occasions, that excite the mind itself to form opposite images,—for the case is equally striking, when no such image can be formed, and the feeling is the immediate result of the application of the external body. When a sword has pierced any part, is not the feeling excited as different altogether from the mere motion of the sword, as colour, or sound, or smell, or taste; and since we are sure, in the case of the mere pain from the sword, that no image of the sword is necessary, ought we not to extend the same inference, by analogy, to all the other affections of our senses, and to believe these also to depend, not on any images, or things transmitted to the brain, but on the mere constitution of our nature, by which certain thoughts are made to arise, in consequence of certain corporeal motions?" The passage is long, indeed, but it is so clear, and so decisive, as to the misrepresentation by Dr Reid of the opinion which he strangely considered himself as confuting, that I cannot refrain from quoting the original, that you may judge for yourselves, of the real meaning, which a translation might be supposed to have erred in conveying.

"Probatur deinde, talem esse nostræ mentis naturam, ut ex eo solo quod quidam motus in corpore fiant ad quaslibet cogitationes, nullam istorum motuum imaginem referentes, possit impelli; et speciatim ad illas confusas, quæ sensus, sive sensationes dicuntur. Nam videmus, verba, sive ore prolata, sive tantum scripta, quaslibet in animis nostris cogitationes et commotiones excitare. In eadem charta, cum eodem calamo et atramento, si tantum calami extremitas certo modo supra chartam ducatur, literas exarabit, quæ cogitationes præliorum, tempestatum, furiarum, affectusque indignationis et tristitiæ in lectorum animis concitabunt; si vero alio modo fere simili calamus moveatur, cogitationes valde diversas, tranquillitatis, pacis, amœnitatis, affectusque plane contrarios amoris et lætitiæ efficiet. Respondebitur fortasse, scripturam vel loquelam nullos affectus, nullasque rerum a se diversarum imaginationes immediate in mente excitare, sed tantummodo, diversas intellectiones; quarum deinde occasione anima ipsa variarum rerum imagines in se efformat. Quid autem dicetur de sensu doloris et titillationis? Gladius corpori nostro admovetur; illud scin-

dit; ex hoc solo sequitur dolor; qui sane non minus diversus est a gladii, vel corporis quod scinditur locali motu, quam color, vel sonus, vel odor, vel sapor. Atque ideo cum clare videamus, doloris sensum in nobis excitari ab eo solo, quod aliquae corporis nostri partes contactu alicujus alterius corporis localiter moveantur, concludere licet, mentem nostram esse talis naturæ, ut ab aliquibus etiam motibus localibus omnium aliorum sensuum affectiones pati possit.

"Præterea non deprehendimus ullam differentiam inter nervos, ex qua liceat judicare, aliud quid per unos, quam alios, ab organis sensuum externorum ad cerebrum pervenire, vel omnino quidquam eo pervenire præter ipsorum nervorum motum localem." *

It is scarcely possible to express more strongly, or illustrate more clearly, an opinion so exactly the reverse of that doctrine of perception, by the medium of representative ideas or images, ascribed by Dr Reid to its illustrious author. It would not be more unjust, even after all his laborious writings on the subject, to rank the supposed confuter of the ideal system, as himself one of its most strenuous champions, than to make this charge against Des Cartes, and to say of him, in Dr Reid's words, that "the image which the Peripatetics called a species, he calls an idea, changing the name only, while he admits the thing."†

To these authors, whose opinions, on the subject of perception, Dr Reid has misconceived, I may add one, whom even he himself allows, to have shaken off the ideal system, and to have considered the idea and the perception, as not distinct, but the same, a modification of the mind, and nothing more. I allude to the celebrated Jansenist writer, Arnauld, who maintains this doctrine as expressly as Dr Reid himself, and makes it the foundation of his argument in his controversy with Malebranche. But, if I were to quote to you every less important writer, who disbelieved the reality of ideas or images, as things existing separately and independently, I might quote to you almost every writer, British and foreign, who, for the last century, and for many years preceding it, has treated of the mind. The narrow limits of a Lecture have forced me to confine my notice to the most illustrious.

* Principia Philosophiæ, Pars IV. Sect. 196.—p. 190, 191. Amst. 1664.

† On the Intellectual Powers, Essay II. c. 8.

Of all evidence, however, with respect to the prevalence of opinions, the most decisive is that which is found, not in treatises read only by a few, but in the popular elementary works of science of the time, the general text-books of schools and colleges. I shall conclude this long discussion, therefore, with short quotations from two of the most distinguished and popular authors, of this very useful class.

The first is from the logic or rather the pneumatology, of Le Clerc, the Friend of Locke. In his chapter, on the nature of ideas, he gives the history of the opinions of philosophers on this subject, and states among them the very doctrine which is most forcibly and accurately opposed to the ideal system of perception. "Others," he says, "held that ideas and the perception of ideas are absolutely the same in themselves, and differ merely in our relative application of them; that same feeling of the mind, which is termed an idea, in reference to the object which the mind considers, is termed a perception, when we speak of it relatively to the percipient mind; but it is only of one modification of the mind that we speak in both cases." According to these philosophers, therefore, there are, in strictness of language, no ideas distinct from the mind itself. "Alii putant ideas et perceptiones idearum easdem esse, licet relationibus differant. Idea, uti censent, proprie ad objectum refertur, quod mens considerat;—perceptio, vero, ad mentem ipsam quæ percipit; sed duplex illa relatio ad unam modificationem mentis pertinet. Itaque secundum hosce philosophos, nullæ sunt proprie loquendo ideæ a mente nostra distinctæ."* What is it, I may ask, which Dr Reid considers himself as having added to this very philosophic view of perception? and, if he added nothing, it is surely too much to ascribe to him the merit of detecting errors, the counter statement to which had long formed a part of the elementary works of the schools.

In addition to these quotations,—the number of which may perhaps already have produced at least as much weariness as conviction,—I shall content myself with a single paragraph, from a work of De Crousaz, the author, not of *one* merely, but of many very popular elementary works of logic, and unquestionably one of the most acute thinkers of his time. His works abound with

* Clerici Pneumatologia, Sect. i. cap. v. subsect. 10.

many sagacious remarks, on the sources of the prejudice involved in that ideal system, which Dr Reid conceived himself the first to have overthrown; and he states, in the strongest language, that our ideas are nothing more than states or affections of our mind itself. "Cogitandi modi—quibus cogitatio nostra modificatur, quos induit alios post alios, sufficiunt, ut per eos ad rerum cognitionem veniat; nec sunt fingendæ ideæ, ab illis modificationibus diversæ."* I may remark by the way, that precisely the same distinction of sensations and perceptions, on which Dr Reid founds so much, is stated and enforced in the different works of this ingenious writer. Indeed so very similar are his opinions, that if he had lived after Dr Reid, and had intended to give a view of that very system of perception which we have been examining, I do not think that he could have varied in the slightest respect, from that view of the process which he has given in his own original writings.

It appears then, that, so far is Dr Reid from having the merit of confuting the universal, or even general illusion of philosophers, with respect to ideas in the mind, as images or separate things, distinct from the perception itself; that his own opinions as to perception on this point at least, are precisely the same, as those which generally prevailed before. From the time of the decay of the Peripatetic Philosophy, the process of perception was generally considered, as involving nothing more, than the presence of an external object—an organic change or series of changes—and an affection of the mind immediately subsequent,—without the intervention of any idea as a fourth separate thing between the organic and the mental affection. I have no doubt, that,—with the exception of Berkeley and Malebranche,—who had peculiar and very erroneous notions on the subject, all the philosophers whom Dr Reid considered himself as opposing, would, if they had been questioned by him, have admitted, before they heard a single argument on his part, that their opinions, with respect to ideas were precisely the same as his own;—and what then would have remained for him to confute? He might, indeed, still have said, that it was absurd, in those who considered perception as a mere state or modification of the mind, to speak of ideas in their mind: but the very language, used by him for this purpose, would prob-

* Tentamen Novum Metaphysicum, Sect. xxxvii.—*Groningæ*, 1725.

ably have contained some metaphor as little philosophic. We must still allow men to speak of ideas in their mind, if they will only consent to believe that the ideas are truly the mind itself variously affected;—as we must still allow men to talk of the rising and setting of the sun, if they will only admit that the motion which produces those appearances is not in that majestic and tranquil orb, but in our little globe of earth, which, carrying along with it, in its daily revolution, all our busy wisdom and still busier folly, is itself as restless as its restless inhabitants.

That a mind, so vigorous as that of Dr Reid, should have been capable of the series of misconceptions which we have traced, may seem wonderful, and truly is so; and equally, or rather, still more wonderful, is the general admission of his merit in this respect. I trust it will impress you with *one* important lesson,—which could not be taught more forcibly than by errors of so great a mind,—that it will always be necessary for you to consult the opinions of authors,—when their opinions are of sufficient importance to deserve to be accurately studied—in their *own works* and not in the works of those who profess to give a faithful account of them. From my own experience, I can most truly assure you, that there is scarcely an instance, in which, on examing the works of those authors whom it is the custom more to cite than to read, I have found the view which I had received of them to be faithful. There is usually something more or something less, which modifies the general result,—some mere conjecture represented as an absolute affirmation, or some limited affirmation extended to analogous cases, which it was not meant to comprehend. And, by the various additions or subtractions, thus made, in passing from mind to mind, so much of the spirit of the original doctrine is lost, that it may, in some cases, be considered as having made a fortunate escape, if it be not at last represented, as directly opposite to what it is. It is like those engraved portraits of the eminent men of former ages,—the copies of mere copies,—from which every new artist, in the succession, has *taken* something, or to which he has *added* something, till not a lineament remains the same. If we are truly desirous of a faithful likeness, we must have recourse once more to the original painting.

LECTURE XXVII.

EXAMINATION OF DR REID'S SUPPOSED CONFUTATION OF IDEALISM, CONCLUDED.

My last Lecture, Gentlemen, brought to a conclusion the remarks which I had to offer on the Sense of Touch, and particularly on the manner in which I supposed the mind to acquire its knowledge of external things.

With this very important question of the existence of matter, the name of Dr Reid is intimately connected, to whom the highest praise is usually given, for his supposed confutation of all scepticism on the subject; as if he had truly established, *by argument*, the existence of a material world. And yet, I confess, that with all my respect for that excellent philosopher, I do not discover, in his reasonings on the subject, any ground for the praise which has been given. The evidence for a system of external things,—at least, the sort of evidence for which he contends,—was not merely the same, but was felt also to be precisely the same, before he wrote as afterwards. Nay, I may add, that the force of the evidence,—if that term can be justly applied to this species of belief,—was admitted, in its fullest extent, by the very sceptic, against whom chiefly his arguments were directed.

That Dr Reid was a philosopher of no common rank, every one, who has read his works with attention, and with candour, must admit. It is impossible to deny, that, to great power of patient investigation, in whatever inquiries he undertook, he united great caution, in discriminating the objects of legitimate inquiry, together with considerable acuteness, of the same sage and temperate kind, in the prosecution of such inquiries as appeared to him legitimate. And,—which is a praise, that, unfortunately for mankind, and still more unfortunately for the individual, does not

always attend mere intellectual renown,—it is impossible to deny to him the more covetable glory, that his efforts, even when he erred speculatively, had always in view those great interests, to which, and to which alone, philosophy itself is but a secondary consideration,—the primary and essential interests of religion and morality.

These praises are certainly not higher than his merits. But, at the same time, while by philosophers in one part of the island, his merits seem to have been unjustly undervalued, I cannot but think also, that, in his own country, there has been an equal or rather a far greater tendency to over-rate them,—a tendency arising in part from the influence of his academic situation, and his amiable personal character—partly, and in a very high degree, from the general regard for the moral and religious objects which he uniformly had in view, as contrasted with the consequences that are supposed to flow from some of the principles of the philosopher, whose opinions he particularly combated—and partly also, I may add, from the eloquence of his Illustrious Pupil, and Friend, and Biographer, whose understanding, so little liable to be biassed by any prejudices but those of virtue and affectionate friendship, has yet, perhaps, been influenced in some degree by those happy and noble prejudices of the heart, and who, by the persuasive charms both of his Lectures and of his Writings, could not fail to cast, on any system of opinions which he might adopt and exhibit, some splendour of reflection from the brilliancy of his own mind.

The genius of Dr Reid does not appear to me to have been very inventive, nor to have possessed much of that refined and subtile acuteness, which,—capable as it is of being abused,—is yet absolutely necessary to the perfection of metaphysical analysis.

It is chiefly on his opinions, in relation to the subject at present under our view, that his reputation as an *original thinker* rests. Indeed, it is on these that he has inclined himself to rest it. In a part of a letter to Dr Gregory, preserved in Mr Stewart's Memoir, he considers his confutation of the ideal system of perception, as involving almost every thing which is truly his. "I think there is hardly any thing that can be called mine," he says, "in the philosophy of mind, which does not follow with ease from the

detection of this prejudice."* Yet there are few circumstances, connected with the fortune of modern philosophy, that appear to me more wonderful, than that a mind, like Dr Reid's, so learned in the history of metaphysical science,—and far too honourable to lay claim to praise to which he did not think himself fairly entitled,—should have conceived, that, on the point of which he speaks, any great merit—at least any merit of originality—was justly referable to him particularly. Indeed, the only circumstance, which appears to me more wonderful, is, that the claim thus made by him, should have been so readily and generally admitted.

His supposed confutation of the ideal system is resolvable into two parts—*first*, his attempt to overthrow what he terms "the common theory" of *ideas* or images of things in the mind, as the immediate objects of thought—and *secondly*, the evidence which the simpler theory of perception may be supposed to yield, of the *reality* of an external world. The latter of these inquiries would, in order, be more appropriate to our late train of speculation; but we cannot understand it fully, without some previous attention to the former.

That Dr Reid *did* question the theory of ideas or images, as separate existences in the mind, I readily admit; but I cannot allow, that, in doing this, he questioned the *common* theory. On the contrary, I conceive, that, at the time at which he wrote, the theory had been universally, or at least almost universally, abandoned; and that, though philosophers might have been in the habit of speaking of ideas or images in the mind,—as we continue to speak of them at this moment,—they meant them to denote nothing more *then*, than we use them to denote *now*. The phraseology of any system of opinions, which has spread widely, and for a length of time, does not perish with the system itself. It is transmitted from the system which expires, to the system which begins to reign,—very nearly as the same crown and sceptre pass, through a long succession, from monarch to monarch. To tear away our very language, as well as our belief, is more than the boldest introducer of new doctrines can hope to be permitted, for it would be to force our ignorance or errors too glaringly on our

* Account of the Life, &c. p. xci. prefixed to Reid's Works. Edin. 1803.

view. He finds it easier, to seduce our vanity, by leaving us something which we can still call *our own*, and which it is not very difficult for him to accommodate to his own views; so that, while he allows us to pronounce the same words, with the same confidence, we are sensible only of what we have gained, and are not painfully reminded of what we have been forced to discard. By this, too, he has the advantage of adding, in some measure, to his own novelties the weight and importance of ancient authority; since the feelings, associated with the name as formerly used, are transferred, secretly and imperceptibly, with the name itself. There is scarcely a term in popular science, which has not gone through various transmutations of this sort. It is not wonderful, therefore, that the phrase *image in the mind*, which was no metaphor as used by the Peripatetics, should have been retained, in a figurative sense, in metaphysical discussions, long after the authority of Aristotle had ceased, and when one who could maintain, with a square cap on his head, "a thesis on the universal *a parti rei*," was no longer, as Voltaire says, "considered as a prodigy." At the time of Dr Reid's publication, the *image in the mind* was as truly a mere relic of an obsolete theory of perception, as the rising and setting of the sun were relics of that obsolete astronomy, in which this great luminary was supposed to make his daily journey, round the atom which he enlightened.

Before proceeding to the proof of this assertion, however, with respect to the originality and importance of Dr Reid's remarks on this subject, some previous observations will be necessary.

In the discussions, which, as yet, have engaged our attention, you may, perhaps, have remarked that I have made little, if any, use of the word *idea*,—a word of very frequent occurrence, in the speculations of philosophers, with respect to the phenomena of perception, and the intellectual phenomena in general. I have avoided it, partly on account of its general ambiguity, but, more especially, with a view to the question at present before us, that, on examining it, you might be as free as possible, from any prejudice, arising from our former applications of the term.

The term, I conceive, though convenient for its brief expression of a variety of phenomena, which might otherwise require a more paraphrastic expression, might yet be omitted altogether, in the metaphysical vocabulary, without any great inconvenience,—

certainly without inconvenience, equal to that which arises from the ambiguous use of it, with different senses, by different authors. But, whatever ambiguity it may have had, the notion of it, as an image in the mind separate and distinct from the mind itself, had certainly been given up, long before Dr Reid had published a single remark on the subject. In its present general use, it is applied to many species of the mental phenomena, to our particular sensations or perceptions, simple or complex, to the remembrances of these, either as simple or complex, and to the various compositions or decompositions of these, which result from certain intellectual processes of the mind itself. The presence of certain rays of light, for example, at the retina, is followed by a certain affection of the sensorial organ, which is immediately followed by a certain affection of the sentient mind. This particular affection, which is more strictly and definitely termed the sensation or perception of redness, is likewise sometimes termed, when we speak more in reference to the external light, which causes the sensation, than to ourselves, as sentient of it, an idea of redness; and when, in some train of internal thought, without the renewed presence of the rays, a certain state of the mind arises, different, indeed, from the former, but having a considerable resemblance to it, we term this state the conception or remembrance of redness, or the idea of redness; or, combining this particular idea with others, which have not co-existed with it as a sensation, we form, what we term the complex idea, of a red tree, or a red mountain, or some other of those shadowy forms, over which Fancy, in the moment of creating them, flings, at pleasure, her changeful colouring. An *idea*, however, in all these applications of the term, whether it be a perception, a remembrance, or one of those complex or abstract varieties of conception, is still nothing more than the mind affected in a certain manner, or, which is the same theory, the mind existing in a certain state. The idea is not distinct from the mind, or separable from it, in any sense, but is truly the mind itself, which in its very belief of external things, is still recognizing one of the many forms of its own existence.

> " Qualis Hamadryadum, quondam, si forte sororum
> Una novos peragrans saltus et devia rura,
> (Atque illam in viridi suadet procumbere ripa
> Fontis pura quies et opaci frigoris umbra)

Dum prona in latices speculi de margine pendet,
Mirata est subitam venienti occurrere Nympham;
Mox eosdem quos ipsa artus, eadem ora gerentem
Una inferre gradus, una succedere sylvæ,
Aspicit alludens, seseque agnoscit in undis.
Sic sensu interno rerum simulacra suarum
Mens ciet, et proprios observat conscia vultus."*

In sensation, there is, as we have seen, a certain series,—the presence of the external body, whatever this may be in itself, independently of our perception,—the organic affection, whatever it may be, which attends the presence of this body,—and the affection of mind that is immediately subsequent to the organic affection. I speak only of *one* organic affection; because, with respect to the mind, it is of no consequence whether there be one only, or a series of these, prior to the new mental state induced. It is enough, that, whenever the immediate sensorial organ has begun to exist in a certain state, whether the change which produces this state be single, or second, third, fourth, or fifth, of a succession of changes, the mind is instantly affected in a certain manner. This new mental state induced is sensation.

But, says Dr Reid, the *sensation* is accompanied with a *perception*, which is very different from it; and on this difference of sensation and perception is founded the chief part of his system. The distinction thus made by him, has been commonly, though very falsely, considered as original; the radical difference itself, whether accurate or inaccurate, and the minor distinctions founded upon this, being laid down with precision in some of the common elementary works of logic, of a much earlier period.

"When I smell a rose," he says, "there is in this operation both sensation and perception. The agreeable odour I feel, considered by itself, without relation to any external object, is merely a sensation. It affects the mind in a certain way; and this affection of the mind may be conceived, without a thought of the rose, or any other object. This sensation can be nothing else than it is felt to be. Its very essence consists in being felt; and when it is not felt, it is not. There is no difference between the sensation and the feeling of it; they are one and the same thing. It is for this reason, that we before observed, that, in sensation, there is no

* Gray, de Princip. Cogit. Lib. I. v. 143—153.

object distinct from that act of the mind by which it is felt; and this holds true with regard to all sensations.

"Let us next attend to the perception which we have in smelling a rose. Perception has always an external object; and the object of my perception, in this case, is that quality in the rose which I discern by the sense of smell. Observing that the agreeable sensation is raised when the rose is near, and ceases when it is removed, I am led, by my nature, to conclude some quality to be in the rose, which is the cause of this sensation. This quality in the rose is the object perceived; and that act of my mind, by which I have the conviction and belief of this quality, is what in this case I call perception."*

That the reference to an external object is, in this case, something more than the mere sensation itself, is very evident; the only question is, whether it be necessary to ascribe the reference to a peculiar power termed perception, or whether it be not rather the result of a common and more general principle of the mind.

When I smell a rose, that is to say, when certain odorous particles act on my organ of smell, a certain state of mind is produced, which constitutes the sensation of that particular fragrance; and this is all which can justly be ascribed to the mind as simply *sentient*. But the mind is not sensitive merely, in the strict sense of that term, for there are many states of it, which do not depend on the immediate presence of external objects. Those feelings, of any kind, which have before existed, together, or in trains of succession, arise afterwards, as it were spontaneously, in consequence merely of the existence of some other part of the train. When the fragrance of a rose, therefore, has been frequently accompanied with the sensations of vision, that arise, when a rose is before us, with the muscular and tactual sensations, that arise on handling it, the mere fragrance, of itself, will afterwards suggest these sensations, and this suggestion is all, which, in the case of smell, instanced by Dr Reid, is termed the perception, as distinguished from the mere sensation. We ascribe the fragrance to the unseen external rose, precisely in the same manner as we ascribe smoke and ashes to previous combustion; or, from a por-

* On the Intellectual Powers, Essay II. c. 16.

trait, or a pictured landscape, infer the existence of some artist who painted it. Yet, in inferring the artist from the picture, it is surely not to any mere power of sense, that we ascribe the inference, and as little should we trace to any such simple power, what is in this instance termed perception. The perception is a suggestion of memory, combined with the simple sensation. There are not, in ascribing the smell to odorous particles of a rose, as its cause, sensation, perception, and association or suggestion, as three powers or general principles of the mind. But there are sensation and the associate suggestion; and, when these coexist, perception coexists, because perception is the name which we give to the union of the former two. There is, indeed, the belief of some cause of the sensation, as there is a belief of some cause of every feeling of the mind, internal as well as external; but the cause, in the case of smell, is supposed to be external, and corporeal, merely because the presence of an external rose has been previously learned from another source, and is suggested when the sensation of fragrance recurs, in intimate association.

In the case of *taste*, to proceed to our other senses—the perception, as it is termed by Dr Reid, is precisely of the same kind —a mere reference of association. We have previously learned, from other sources, to believe in things without, and these, as sapid bodies acting on our tongue, are suggested by the mere sensation, which, but for the means of this suggestion, would have been a sensation alone, of which the cause would have been as little conceived to be corporeal as the causes of any of the internal affections of the mind. The melody of a flute, if we had had no sense but that of hearing—the redness of a rose, if we had had no sense but that of vision, would as little, as the sensation of smell when considered as a transient state of the mind, have involved, or given occasion to, the notion of corporeal substance. We refer the melody to the external flute, and redness to the external rose, because we have previously acquired the notions of extension and resistance—of a flute and of a rose as external substances—and this reference of mere suggestion is all, which, in these cases, distinguishes the perception from the sensation. Without the suggestions of memory, in short, we could not in these cases have had, in Dr Reid's sense of the term, any perceptions whatever, to distinguish the causes of our sensations as external, more

than the causes of any of our other feelings. The great perception, then, in the sense, in which he understands the term, is that by which we primarily form the complex notion of extension and resistance—that which has parts, and that which resists our attempt to grasp it—since all the other perceptions, of which he speaks, in contradistinction from mere sensations, are only these complex notions, *suggested* by the particular sensations, and combined with them, in consequence of former association, and the general reference to a cause of some sort, which may be supposed to attend our feelings of every kind, internal as well as external, when considered as changes or new phenomena. It is not, however, from any peculiar power, to be distinguished by the name of perception, that this complex notion of extended resistance appears to me to arise, but from the union of our notion of *extension*, acquired by the mere remembrance of various progressive series of feelings, with the notion of *resistance*, when an accustomed series of muscular feelings without any change of circumstances, in the mind itself, is interrupted by that peculiar and very different muscular feeling which arises from impeded effort. Perception, in short, in all our senses, is nothing more than the association of this complex notion with our other sensations—the notion of something extended and resisting, suggested by these sensations, when the sensations themselves have previously arisen; and suggested in the same manner, and on the same principle, as any other associate feeling suggests any other associate feeling.

It is very evident that perception, in Dr Reid's sense, is not the mere reference to a cause of some sort, for it would then be as comprehensive as all the feelings or changes of the mind,—our hope, fear, anger, pity,—which we ascribe to some cause or antecedent, as much as our tastes and smells; it is the reference of certain feelings to a *corporeal* cause, that is say, to a cause *extended* and *resisting*. If, for example, without any previous knowledge of external things, on the first sensation of fragrance, or sweetness, or sound, or colour, we could be supposed to be capable of believing that there was some cause of this new state of our being, this would not be *perception*, in the sense in which he uses that term; and yet but for our organ of touch, or at least but for feelings which are commonly ascribed to that organ, it would be manifestly impossible for us to make more than this vague and

general inference. When a rose is present, we find, and have uniformly found, that a certain sensation of fragrance arises, which ceases when the rose is removed. The influence of association, therefore, operates in this, as in every other case of ordinary coexistence. We do not merely suppose that the sensation has some cause, as we believe that our joys and sorrows have a cause, but we ascribe the fragrance to the external substance, the presence of which we have found to be so essential to the production of it. Perception in every case, as I have said, in which it is to be distinguished from the prior sensation, is a reference of this prior sensation to a *material cause*;—and this complex notion of a material cause,—that is to say, of something extended and resisting,—mere smell, mere taste, mere hearing, mere vision, never could have afforded. I have already explained how this notion of matter, as it appears to me, is produced, or may be imagined to be produced. A train of muscular feelings has been frequently repeated, so that the series has become familiar to the infant, constituting in its remembrance the notion of a certain progressive length.—When all the known antecedent circumstances have been the same, the well-known series is suddenly broken, so as to excite in the mind of the infant the notion of a cause which is not in itself;—this cause, which is something foreign to itself, is that which excites the particular muscular feeling of resistance,—and it is combined with the notion of a certain length, because it uniformly supplies the place of what has been felt as a certain length, so as at last, by the operation of the common laws of association, to become truly representative of it, or rather to involve it in one complex feeling, in the same manner as colour, in vision, seems to involve whole miles of distance. Such is all that seems to me to constitute what Dr Reid would term perception, even with respect to the feelings commonly termed tactual;—and in all the other classes of sensations it is obviously nothing more than the suggestion of these associate feelings, in the same way as any other feelings, in our trains of thought and emotions, are suggested by those conceptions or other feelings which have frequently accompanied them.—It is sufficient to think of a mind, possessing all the other susceptibilities of sensation, *but those* which give us the perceptions commonly ascribed to touch, to be sensible how truly what we term perception in the other senses,

is the mere suggestion of these. If we were capable only of smelling,—or had no other sensations than those of mere taste, mere sound, mere colour,—what perception could we have had of a material cause of these sensations?—and if it be to the mere suggestion of the object of another sense that we owe what is termed perception in all these sensations,—in what circumstance does the reference of these to a resisting and extended substance, differ from any other of the common references which the principle of association enables us to make?

"Sensation," says Dr Reid, "can be nothing else than it is felt to be. Its very essence consists in being felt; and when it is not felt, it is not. There is no difference between the sensation and the feeling of it; they are one and the same thing."* But this is surely equally true, of what he terms *perception*, which, as a state of mind, it must be remembered, is, according to his own account of it, as different from the object perceived, as the sensation is. We may say of the mental state of perception too, in his own language, as indeed we must say of all our states of mind, whatever they may be, that it can be nothing else than it is felt to be. Its very essence consists in being felt; and when it is not felt, it is not. There is no difference between the perception and the feeling of it; they are one and the same thing. The sensation, indeed, which is mental, is different from the object exciting it, which we term material; but so also is the state of mind which constitutes perception; for Dr Reid was surely too zealous an opponent of the systems, which ascribe every thing to mind alone, or to matter alone, to consider the perception as itself the object perceived. That in sensation, as contradistinguished from perception, there is no reference made to an external object, is true; because, when the reference is made, we then use the new term of perception; but that in sensation there is no object distinct from that act of the mind by which it is felt; no object independent of the mental feeling, is surely a very strange opinion of this philosopher; since what he terms perception, is nothing but the reference of this very sensation to its external object. The sensation itself he certainly supposes to depend on the presence of an external object, which is all that can be understood, in the case of perception, when we speak of its objects, or, in other words, of those

* See before, p. 416.

external causes, to which we refer our sensations; for the material object itself, he surely could not consider as forming a part of the perception which is a state of the mind alone. To be the object of perception, is nothing more than to be the foreign cause or occasion, on which this state of the mind directly or indirectly arises; and an object, in this only intelligible sense, as an occasion, or cause of a certain subsequent effect, must on his own principles, be equally allowed to sensation. Though he does not inform us, what he means by the term *object*, as peculiarly applied to perception—(and indeed, if he had explained it, I cannot but think that a great part of his system, which is founded on the confusion of this single word, as something different from a mere external cause of an internal feeling must have fallen to the ground,)—he yet tells us, very explicitly, that to be the object of perception, is something more than to be the external occasion, on which that state of the mind arises which he terms perception; for, in arguing against the opinion of a philosopher, who contends for the existence of certain images or traces in the brain, and yet says, "that we are not to conceive the images or traces in the brain to be perceived, as if there were eyes in the brain; these traces are only occasions, on which, by the laws of the union of soul and body, ideas are excited in the mind; and, therefore, it is not necessary, that there should be an exact resemblance between the traces and the things represented by them, any more than that words or signs should be exactly like the things signified by them:"*—He adds, "These two opinions, I think cannot be reconciled. For if the images or traces in the brain are perceived, they must be the *objects* of perception, and not the occasions of it only. On the other hand, if they are only the *occasions* of our perceiving, they are not perceived at all."†—Did Dr Reid, then, suppose that the feeling, whatever it may be, which constitutes perception as a state of the mind, or, in short, all of which we are conscious in perception, is not strictly and exclusively mental, as much as all of which we are conscious in remembrance, or in love, or hate;—or did he wish us to believe that matter itself, in any of its forms, is, or can be, a part of the phenomena or states of the mind;—a part therefore of that mental state or feeling which we

* On the Intellectual Powers, Essay II. c. 8. † Ibid.

term a perception? Our sensations like our remembrances or emotions, we refer to some cause or antecedent. The difference is, that in the one case we consider the feeling as having for its cause some previous feeling or state of the mind itself; in the other case we consider it as having for its cause something which is external to ourselves, and independent of our transient feelings, —something which, in consequence of former feelings suggested at the moment, it is impossible for us not to regard as extended and resisting.—But still what we thus regard as extended and resisting, is known to us only by the feelings which it occasions in our mind. What matter, in its relation to the percipient mind, can be, but the cause or occasion, direct or indirect, of that class of feelings which I term sensations or perceptions, it is absolutely impossible for me to conceive.

The percipient mind, in no one of its affections, can be said to be the mass of matter which it perceives, unless the separate existence, either of matter or of mind, be abandoned by us, the existence of which, Dr Reid would have been the last of philosophers to yield. He acknowledges that our perceptions are consequent on the presence of external bodies, not from any necessary connexion subsisting between them, but merely from the arrangement which the Deity, in his wisdom, has chosen to make of their mutual phenomena; which is surely to say, that the Deity has rendered the presence of the external object the occasion of that affection of the mind, which is termed perception; or, if it be not to say this, it is to say nothing. Whatever state of mind perception may be; whether a primary result of a peculiar power, or a mere secondary reference of association that follows the particular sensation, of which the reference is made, it is itself, in either view of it, but a state of the mind; and to be the external occasion or antecedent of this state of mind, since it is to produce, directly or indirectly, all which constitutes perception, is surely, therefore, to be perceived, or there must be something in the mere word *perceived*, different from the physical reality which it expresses.

The confusion of Dr Reid's notions on this subject, seems to have arisen from a cause, which has been the chief source of the general confusion that prevails in intellectual science; and, indeed, it was principally with the view of exhibiting this confusion, and

its source, to you *strongly*, that I have dwelt so long on a criticism, which, to those among you who are not acquainted with the extensive and important applications that have been made of this doctrine, may, perhaps, have appeared of very little interest. Dr Reid, it is evident, was not sufficiently in the habit of considering the phenomena of the mind,—its perceptions, as well as its remembrances, judgments, passions, and all its other affections, whatever these may be,—in the light in which I have represented them to you, merely as the mind affected, in a certain manner, according to certain regular laws of succession, but as something more mysterious than the subject of this sequence of feelings; for, but for this notion of something more mysterious, the object of perception, and the external occasion of that state of mind which we term perception, must have conveyed precisely the same notion. To have a clear view of the phenomena of the mind, as mere affections or states of it, existing successively, and in a certain series, which we are able, therefore, to predict, in consequence of our knowledge of the past, is, I conceive, to have made the most important acquisition which the intellectual inquirer can make. To say, merely, that it is to have learned to distinguish that which may be known, from that which never can be known, and which it therefore would be an idle waste of labour to attempt to discover,—would be to say far too little. It is to see the mind, in a great measure, as it is in nature, divested of every thing foreign, passing instantly from thought to thought, from sensation to sensation, in almost endless variety of states, and differing as completely from that cumbrous representation of it, which philosophers are fond of representing to us, as the planets revolving freely in the immense space of our solar system, differ from those mimic orbs, which, without any principle of motion in themselves, are, as it were, dragged along, in the complex mechanism of our orreries.

In objecting, however, to Dr Reid's notion of perception, I am far from wishing to erase the word from our metaphysical vocabulary. On the contrary, I conceive it to be a very convenient one, if the meaning attached to it be sufficiently explained, by an analysis of the complex state of mind, which it denotes, and the use of it confined rigidly to cases in which it has this meaning. Sensation may exist, *without* any reference to an external cause,

in the same manner as we may look at a picture, without thinking of the painter; or read a poem, without thinking of the poet,—or it may exist *with* reference to an external cause; and it is convenient, therefore, to confine the term *sensation* to the former of these cases, and *perception* to the latter. But, then, it must be understood, that the perception is nothing but the suggestion of ideas associated with the simple *sensation*, as it originally took place,—or is only another name for the original simple sensation itself, in the cases, if any there be, in which sensation involves immediately in itself, the belief of some existence external to the sentient mind,—or is only a mere inference, like all our other inferences, if it arise, in the manner in which I have endeavoured to explain to you, how the notions of extension and resistance in an external cause of our feelings, might arise, and be afterwards suggested in association with other feelings that had frequently accompanied it.

To give a brief summary, however, of the argument which I have urged;—in that state of acquired knowledge, long after the first elementary feelings of infancy, in which modified state alone, the phenomena of the mind can become to us objects of reflective analysis, certain feelings are referred by us to an external material cause. The feelings themselves, as primarily excited, are termed *sensations*, and, when followed by the reference to an external cause, receive the name of *perceptions*, which marks nothing more in addition to the primary sensations, than this very reference. But what is the reference itself, in consequence of which the new name is given? It is the suggestion of some extended resisting object, the presence of which had before been found to be attended with that particular sensation, which is now again referred to it. If we had had no sense but that of smell; no sense but that of taste; no sense but that of sound; no sense but that of sight; we could not have known the existence of extended resisting substances, and, therefore, could not have referred the pleasant or painful sensations of those classes to such external causes, more than we refer directly to an external cause, any painful or pleasing emotion, or other internal affection of the mind. In all but *one* class of our sensations, then, it is evident that what Dr Reid calls *perception*, as the operation of a peculiar mental faculty, is nothing more than a suggestion of memory or association, which differs in no respect from other suggestions,

arising from other coexistences or successions of feelings, equally uniform or frequent. It is only in a single class of sensations, therefore,—that which Dr Reid ascribes to touch,—that perception, which he regards as a peculiar faculty, extending to all our sensations, can be said to have any primary operation, even though we should agree with him in supposing, that our belief of extended resistance is not reducible by analysis, to any more general principles. If, however, my analysis of the complex notion of matter be just, perception, in its relation to our original sensations of touch, as much as in relation to the immediate feelings which we derive from smell, taste, sight, and hearing, is only one of the many operations of the suggesting or associating principle. But, even on his own principles, I repeat, it must be confined to the single class of feeling, which he considers as tactual, and is not an original principle, coextensive with all the original varieties of sensation. Even in the single class, to which it is thus, on his own principles, to be confined, it is not so much what he would term a faculty, as an intuitive belief, by which we are led irresistibly, on the existence of certain sensations, to ascribe these to causes that are external and corporeal; or, if we give the name of faculty to this peculiar form of intuition, we should give it equally to all our intuitions, and rank among our faculties, the belief of the continued order of Nature, or the belief of our own identity, as much as our belief of external things, if our senses themselves are unable to give us any information of them.

LECTURE XXVIII.

ON DR REID'S SUPPOSED PROOF OF A MATERIAL WORLD—ON VISION—AND ANALYSIS OF THE FEELINGS ASCRIBED TO IT.

In my Lecture of yesterday, Gentlemen, we were engaged in considering the grounds of Dr Reid's claim to the honour of detecting and exposing the fallacy of the hypothesis of *ideas* as *images*, or things, in the mind, distinct from the mind itself,—a claim which, though made by one who has many other indubitable titles to our respect and gratitude, we found, in this particular instance, to be inadmissible.

It appeared, on an examination of the original works of the eminent philosophers who preceded him for more than a century, and even of the common elementary treatises of the schools, that, though after the Peripatetic hypothesis of species had been universally or generally abandoned, the language of that hypothesis continued to subsist metaphorically,—as it continues with equal force at this moment,—it was only metaphorically that it did thus continue; and that when Dr Reid, therefore, conceived,—in proving ideas not to be self-existing things, separate and distinct from the percipient mind itself,—that he was confuting what every body believed, he merely assumed as *real* what was intended as *metaphorical*, and overthrew opinions which the authors, to whom he ascribes them, would themselves have been equally eager to overthrow. But there is yet another point, connected with the theory of perception, on which he is believed to have made an important addition to our metaphysical knowledge. I allude to his supposed proof of the existence of a material world. In this, too, we shall find, that he has truly added nothing to our former knowledge; that he has left us, in short, our belief as originally felt by us, but has not supplied us with the slightest evidence in

addition to the force of that original belief itself, nor given any additional strength to that very belief, which before was confessedly irresistible.

The confutation of the scepticism on this subject, it is evident, may be attempted in *two ways*,—by shewing the arguments urged by the sceptic to be *logically false*; or by opposing to them the belief itself, as of evidence either directly intuitive, or the result, at least, of other intuitions, and early and universal associations and inferences, so irresistible after the first acquisitions of infancy, as to have then all the force of intuition itself. As long as Dr Reid confines himself to the latter of these pleas, he proceeds on safe ground; but his footing is not so firm when he assails the mere logic of the sceptic,—for the sceptical argument, as a mere play of reasoning, admits of no reply. It is vain for him to say, that the scepticism proceeding, as he thinks, on the belief of ideas in the mind, as the direct objects of perception, must fall with these ideas; for, though the scepticism may be consistent with the belief of ideas as separate existences in the mind, it does not depend, in the slightest degree, on their existence or non-existence. We have only to change the term *ideas* into the synonymous phrase *affections or states of the mind*, and the scepticism, if not stronger, is at least in strength exactly what it was before. In the one case the sceptic will say, that we are sensible of ideas only, not of external objects, which may have no resemblance to our ideas; in the other case, that perception is but a state of the mind as much as any of our other feelings, and that we are conscious only of this, and other states or affections of our mind, which have variously succeeded each other, and not of external objects, which themselves can be no parts of that train of mental consciousness. Whatever weight there may be in the former of these sceptical theories, exists, I may say, even with greater force, because with greater simplicity, in the second; and the task, therefore, of proving by logic,—if logical proof were requisite for our belief,—the existence of a material world, would remain as laborious as before, after the fullest confutation of the system, which might suppose perception to be carried on by the medium of little images of bodies in the mind.

So far, indeed, would the confutation of this hypothesis as to perception,—even if Dr Reid had truly overthrown it,—be from

lessening the force of the scepticism as to the existence of matter, that, of two sceptics, one believing every thing with respect to ideas which Dr Reid supposed himself to have confuted, and the other believing ideas to be mere states of his mind, there can be no question, that the former would be the more easy to be overcome, since his belief would already involve the existence of SOMETHING separate from the mind; while the other might maintain, that all of which he was conscious, was the mere series of affections of his own mind, and that beyond this consciousness he could know nothing.

Against the argument of one, who founds his very argument on his consciousness merely, and professes to have no knowledge either of little images, or of any thing else beyond his consciousness, it would be as idle to urge, that ideas are not little images in the mind, as it would have been for a Cartesian to attempt to confute the Newtonian system of attraction, by a denial of the Ptolemaic spheres.

All that remains, then, to supply the place of logical demonstration, which would be needless where the belief is as strong as that of demonstration itself, is the paramount force of this universal and irresistible belief; and there is no fear that this can be weakened by any argument, or be less felt by him who denies it, than by him who asserts it. We are conscious, indeed, only of the feelings that are the momentary states of our own mind; but some of these it is absolutely impossible for us not to ascribe to causes that are external, and independent of us; and the belief of a system of external things, is one of these very states of the mind, which itself forms, and will ever form, a part of the train of our consciousness. This Mr Hume himself, the great sceptic whom Dr Reid opposes, admits as readily as Dr Reid himself:— "A Copernican or Ptolemaic, who supports each his different system of astronomy, may hope to produce a conviction, which will remain constant and durable, with his audience. A Stoic or Epicurean displays principles, which may not only be durable, but which have an effect on conduct and behaviour. But a Pyrrhonian cannot expect, that his philosophy will have any constant influence on the mind: or, if it had, that its influence would be beneficial to society. On the contrary, he must acknowledge, if he will acknowledge any thing, that all human life must perish,

were his principles universally and steadily to prevail. All discourse, all action, would immediately cease; and men remain in a total lethargy, till the necessities of nature, unsatisfied, put an end to their miserable existence. It is true, so fatal an event is very little to be dreaded. Nature is always too strong for principle; and, though a Pyrrhonian may throw himself, or others, into a momentary amazement and confusion by his profound reasonings, the first and most trivial event in life will put to flight all his doubts and scruples, and leave him the same, in every point of action and speculation, with the philosophers of every other sect, or with those who never concerned themselves in any philosophical researches. When he awakes from his dream, he will be the first to join in the laugh against himself."* In what respect does this differ from the language of Dr Reid himself, when he says, that "the belief of a material world is older, and of more authority, than any principles of philosophy. It declines the tribunal of reason, and laughs at all the artillery of the logician."† Surely, if it decline the tribunal of reason, it is not by reasoning that it is to be supported,—even though the reasoner should have the great talents which Dr Reid unquestionably possessed.

The sceptic, and the orthodox philosopher of Dr Reid's school, thus come precisely to the same conclusion. The creed of each, on this point, is composed of two propositions, and of the same two propositions; the first of which is, that the existence of a system of things, such as we understand when we speak of an external world, cannot be proved by argument; and the second, that the belief of it is of a force, which is paramount to that of argument, and absolutely irresistible. The difference, and the only difference is, that, in asserting the same two propositions, the sceptic pronounces the first in a loud tone of voice, and the second in a whisper,—while his supposed antagonist passes rapidly over the first, and dwells on the second, with a tone of confidence. The negation in the one case, and the affirmation in the other case, are, however, precisely the same. To him, indeed, who considers the *tone* only, and not the *meaning*, there may seem to be a real strife of sentiment; but, if we neglect the tone, which is of no consequence, and attend to the meaning only of what is

* Essays—Inquiry concerning Human Understanding, Sect. xii. Part 2.

† Inquiry into the Human Mind, &c. Chap. v. Sect. 7.

affirmed and denied by both, we shall not be able to discover even the slightest discrepancy. There is no argument of mere reasoning that can prove the existence of an external world; it is absolutely impossible for us not to believe in the existence of an external world. We may call these two propositions, then, a summary of the doctrine of Reid, or of the doctrine of Hume, as we please; for it is truly the common and equal doctrine of the two.

Though we have thus seen reason to deny to Dr Reid the merit commonly ascribed to him, on the points which we have been considering, relative to the theory of perception, I trust you will not on that account, be insensible to the merits which he truly possessed. *He* knows little, indeed, of the human mind, who does not know, how compatible many errors and misconceptions are with the brighest and most active energies of intellect. On this "Isthmus of a middle State," of which Pope speaks, man, though not "reasoning but to err," is yet subject to occasional error, even in his proudest reasonings. With all his wisdom, he is still but "darkly wise;" and with all the grandeur of his being, but "rudely great."

VISION.

Our inquiry into the nature of the sensations of *touch*,—or at least of those sensations, which are truly, and of others which are commonly, though, I think, falsely, ascribed to this organ, has led us into speculations, in the course of which I have been obliged to anticipate many remarks, that more peculiarly belong to the sense which still remains to be considered by us,—the sense of sight, that to which we owe so much of our most valuable information, with respect to nature, and so many of those pleasures, which the bounty of Him, who, has formed us to be happy, as well as to be wise, has so graciously intermingled, with all the primary means of our instruction.

The anticipations, into which I have been led, were necessary for throwing light on the subjects before considered, particularly on the complex feelings ascribed to touch,—the knowledge of which feelings, however, was still more necessary, for understanding fully the complex perceptions of this sense. It is thus

scarcely possible, in science, to treat of *one* subject, without considering it in relation to some other subject, and often to subjects between which, on first view, it would be difficult to trace any relation. Every thing throws light upon every thing,—though the reflection,—which is, in many cases, so bright, as to force itself upon common eyes—may, in other cases, be so faint, as to be perceptible only to eyes of the nicest discernment. It may almost be said, that there is an universal *affinity* in *truths*,—like that universal attraction, which unites to each other, as one common system, the whole masses which are scattered through the infinity of space, and by which, as I have before remarked, the annihilation of a single particle of matter, in any one of these orbs,—however inconceivably slight its elementary modification might be of the general sum of attraction,—would in that very instant be productive of change throughout the universe. It is not easy to say, what any *one* science would have been, if any other science had not existed. How different did Astronomy become, in consequence of the accidental burning of a few sea-weeds upon the sand, to which the origin of glass has been ascribed; and, when we think of the universal accessions, which navigation has made to every department of knowledge, what an infinity of truths may be considered as almost starting into existence, at the moment, when the polarity of the magnet was first observed!

> "True to the pole, by thee the pilot guides
> His steady helm, amid the struggling tides,
> Braves with broad sail the unmeasurable sea,
> Cleaves the dark air, and asks no star but thee."*

The anticipations, which have been made, in the present instance, will be of advantage, in abridging much of the labour, which would have been necessary in treating of vision simply. I may now safely leave you, to make, for yourselves, the application of many arguments, on which I have dwelt at length, in treating of the other senses.

The organ of sight, as you well know, is the eye,—a machine of such exquisite and obvious adaptation to the effects produced by it, as to be, of itself, in demonstrating the existence of the Di-

* Darwin's Botanic Garden, Canto II. v. 203—6.

vine Being who contrived it, equal in force to many volumes of theology. The atheist, who has seen, and studied, its internal structure, and yet *continues an atheist*, may be fairly considered as beyond the power of mere argument to reclaim. The minute details of its structure, however, belong to the anatomist. It is enough for our purpose to know, that, by an apparatus of great simplicity, all the light, which, from every quarter strikes on the pellucid part of the ball of the eye,—and which if it continued to pass in the same direction, would thus produce one mingled and indistinct expanse of colour,—is so *refracted*, as it is termed, or bent from its former direction to certain focal points, as to be distributed again on the retina, in distinct portions, agreeing with the portions which come from each separate object, so exactly, as to form on it a miniature landscape of the scenery without. Nor is this all. That we may vary, at our pleasure, the field of this landscape, the ball of the eye is furnished with certain muscles, which enable us to direct it more particularly toward the objects which we wish to view; and according as the light which falls from these may be more or less intense, there are parts which minister to the sensibility of the eye, by increasing or diminishing in proportion the transparent aperture at which the light is admitted. There are, then, in this truly wonderful and beautiful process, in the first place, as determining what objects, in the wide scene around us, are to be visible at the moment, *the contraction of certain muscles*, on which the particular field of our vision depends, and which may almost be said to enable us to increase the extent of our field of vision, by enabling us to vary it at will;—in the second place, the *external light*, emitted from all the objects within this radiant field, which, on its arrival at the retina, is itself the direct object of vision; in the third place, the provision for increasing or diminishing the diameter of the pupil, in proportion to the quantity of that incident light;—in the fourth place, the *apparatus*, by which the dispersed rays of light are made to assume within the eye, the focal convergence necessary for distinct vision;—and lastly, the expansion of the optic nerve, as a part of the great sensorial organ, essential to sensation. The difference of the phenomena, produced by the varieties of the external light itself, is exhibited in almost every moment of our waking existence; and the diversities, arising from other parts of the

process, are not less striking. There are peculiar diseases which affect the optic nerve, or other parts of the sensorial organ immediately connected with it,—there are other diseases which affect the refracting apparatus,—others which affect the iris, so as to prevent the enlargement or diminution of the pupil, when different quantities of light are poured on it,—others, which affect the muscles that vary the position of the ball,—and, in all these cases, we find, as might be expected, a corresponding difference of the phenomena.

To open our eyes at present, is not to have a single simple feeling; it is, as it were, to have innumerable feelings. The colour, the magnitude, the figure, the relative position of bodies, are seen by us at once. It is not a small expanse of light, which we perceive, equal merely to the surface of the narrow expansion of the optic nerve. It is the universe itself. We are present with stars, which beam upon us, at a distance that converts to nothing the whole wide diameter of our planetary system. It is as if the tie, which binds us down to the globe on which we dwell, belonged only to our other senses, and had no influence over *this*, which, even in its union with the body, seems still to retain all the power, and unbounded freedom, of its celestial origin.

It is of importance, however, to remember, that, even in the perception of the most distant body, the true object of vision is not the distant body itself, but the light that has reached the expansive termination of the optic nerve; and the sense of vision, therefore, which seems so independent of the tie that binds us to our small spot of earth, is as truly limited to it, as any of our other senses. If the light could exist in the same manner, moving in the same varieties of direction, as at present,—though no other bodies were in existence, than the light itself, and our sensorial organ,—all the sensations belonging to mere sight would be exactly the same as now; and accordingly we find, as light is, in a great measure, manageable by us, that we have it in our power to vary at pleasure, the visual notions, which any one would otherwise have formed of bodies,—without alteriug the bodies themselves, or even their position with respect to the eye,—by merely interposing substances, to modify the light reflected or emitted from them. The same paper, which we term white, when we observe it with our naked eye, seems blue or red, when we look

at it through glass, of such a kind, as absorbs all the light which enters it, but the rays of those particular colours; and it seems larger or smaller, as we look at it through a concave or convex lens, which leaves the object precisely as it was, and affects only the direction of the rays that come from it:—the reason of all which diversities of perception is, that, though what we are accustomed to term the *object* continues the same,—whatever substance may be interposed between it and the eye,—that, which is really the object of vision, is *different;* and our perceptions, therefore, correspond with the diversity of their real objects.

In treating of the distinction which has been made, of those objects of sense which act *directly* on our organs, and of those which act through a *medium*, as it has been termed, I before remarked to you the confusion, into which we might be led, by this distinction, which forgets that the supposed *medium* is itself the real *object*, as truly, as any of the objects, which in their relations to other senses, are termed *direct*. In no instance, however, has it led to so much confusion, as in the case of vision. It is the more important, therefore, for you, to have precise notions on this subject, and to have constantly in mind, that, though indirectly, we may be said to perceive by sight distant objects, as truly as we perceive colour, still the *direct* object of *vision* is not the object, existing permanently at a distance, but those rays of light, whose existence is independent of the object, and which have received, from the object that reflects them, nothing more than a change of their direction, in consequence of which they have come within the boundary of that small pellucid circle of the eye, which, insignificant as it may seem, comprehends in itself what is truly the whole sphere of our vision.

Sight, then, which comprehends all the varieties of colour, is the object, and the only object, of the sense which we are considering. But, simple as it is, of what instruction, and joy, and beauty, and ever-varying magnificence, is it the source!

> "Carmine quo Dea te dicam, gratissima cœli
> Progenies, ortumque tuum; gemmantia rore
> Ut per prata levi lustras, et floribus halans
> Purpureum Veris gremium, scenamque virentem
> Pingis, et umbriferos colles, et cærula regna?
> Gratia te Venerisque lepos, et mille colorum,

Formarumque chorus sequitur, motusque decentes.
At caput invisum Stygiis Nox atra tenebris.
Abdidit, horrendæque simul Formidinis ora
Pervigilesque æstus Curarum, atque anxius Angor;
Undique Lætitiâ florent mortalia corda,
Purus et arridet largis fulgoribus Æther."*

"Hail, holy light, offspring of heaven first born!
Or of the Eternal, coeternal beam,
May I express thee unblam'd? since God is light,
And never but in unapproached light
Dwelt from eternity; dwelt then in Thee,
Bright Effluence of bright Essence increate!
—Or hear'st thou rather, pure ethereal Stream!
Whose fountain who shall tell? Before the Sun,
Before the heavens, *Thou* wert, and at the voice
Of God, as with a mantle didst invest
The rising world of waters dark and deep,
Won from the void and formless infinite."†

How pathetic is the very beauty of this invocation, when we consider the feelings with which it must have been written by him, who,

"Like the wakeful bird,
Sung *darkling*,"‡

and who seems to have looked back on that loveliness of nature, from which he was separated, with the melancholy readiness, with which the thoughts of the unfortunate and the sorrowful still revert to past enjoyments; as the prisoner, even when fettered to his dungeon-floor, still turns his eye, almost involuntarily, to that single gleam of light, which reminds him only of scenes that exist no longer to him.

"Thus with the year
Seasons return; but *not* to *me* returns
Day, or the sweet approach of even or morn,
Or sight of vernal bloom, or summer's rose,
Or flocks, or herds, or human face divine;
But cloud instead, and ever-during dark
Surround me."§

* Gray, de Princip. Cogit. lib. i. v. 85—96.
† Paradise Lost, Book III. v. 1—12.
‡ Ib. v. 38, 39. § Ib. v. 40—41.

How often must he have felt,—and how deeply must such a mind have felt,—the force of that complaint, which he puts into the mouth of Samson,—a complaint, which may surely be forgiven, or almost forgiven, to the blind:—

"O why was sight
To such a tender ball as the eye confined,
So obvious, and so easy to be quench'd;
And not, as feeling, through all parts diffused,
That she might look at will through every pore?"*

The immediate object of vision, we have seen, then, is *light*, which gives rise to all the various sensations of colour; and, since the days of Berkeley, philosophers have, with scarcely any exception, admitted, that the knowledge of the distance, magnitude, and real figure of objects, which seems at present to be immediately received by sight, is the result of knowledge acquired by the other senses:—though they have,—I think without sufficient reason,—as universally supposed, that the superficial extension, of length and breadth, becomes known to us by sight originally;—that there is, in short, a *visible figure* of objects, corresponding with the picture which they form on the retina, and changing, therefore, with their change of position relatively to the eye,—and a *tangible figure* of objects, permanent and independent of their change of place; the latter being the real figure suggested by the former, nearly in the same manner as the conception of objects is suggested, by the arbitrary sounds, or written character, which denote them. The inquiry, with respect to the truth of this visible figure, as a sensation, may, however, be omitted, till we have considered the former opinion, which respects the visual perception of distance, and of the figure and magnitude which are termed *tangible*.

If it had been duly considered, that it is *light* which is the true object of vision, and not the luminous body, the question, as far as it depends on reasoning *a priori*, exclusively of any instinctive connexions that might be supposed, could not have admitted of very long discussion. From whatever distance light may come, it is but the *point* of the long line which terminates at the retina, of which we are sensible; and this terminating point must be the

* Samson Agonistes, v. 93—97.

same, whether the ray has come from a few feet of distance, or from many miles. The rays, that beam from the adjacent meadow, or the grove, are not nearer to my eye, at the instant of vision, than those which have been reflected from the mountain, on the very verge of the horizon, or from the cloud that hangs at an immeasurable distance above my head. The light, that converges on our eye, from all the stars of heaven, within what we term the field of our vision, is collected, in a space, that cannot be larger than the retina on which it falls. A *cube* or a *sphere* is represented to us, by the two dimensions of a coloured *plane*, variously shaded, as truly, as by the object itself with its triple dimensions; and, in the determination of the exact correspondence of these double and triple dimensions, in all their varieties of relation to the eye, the whole art of perspective consists. A coin of a single inch in diameter, when placed before the eye, and, of course, intercepting only an extent of light equal to the extent of its own surface, is sufficient to hide from us, by actual eclipse, the fields, and villages, and woods, that seemed stretched in almost endless continuity before us.

Unless, therefore, there be some instinctive and immediate suggestion, of certain distances, magnitudes, and figures, by certain varieties of the sensation of colour, there is nothing in the mere light itself, or in its relation to the eye at the moment of vision, which seems fit to communicate the knowledge of these. Not of *distance;* for the rays from distant objects, when they produce vision, are as near to the retina, as the rays from objects that are contiguous to the eye. Not of *real magnitude;* for an object, with which we are familiar, appears to us of the same size, at distances, at which every thing merely visual is so completely changed, that its magnitude, as far as it depends on mere radiation, may be demonstrated, from the laws of optics, to be equal only to a half, or a tenth part of its apparent magnitude, when nearer. Not of *figure;* for, without the knowledge of longitudinal distance, we could not distinguish a sphere or a cube from a plane surface of two dimensions; and an object, with the shape of which we are familiar, appears to us of the same form, in all directions; though it may be demonstrated optically, that the visual figure, as far as it depends on mere radiation, must vary with every variety of position.

I have said, that the knowledge of the real magnitude, figure, and position of bodies, could not be obtained immediately from the diversities of the mere surfaces of light at the retina; unless it were the suggestion of some instinctive principle, by which the one feeling was, originally and inseparably, connected with the other: and I have made this exception, to prevent you from being misled, by the works on this subject, so as to think, that the original perception of distance implies, in the very notion of it, a physical impossibility. Some diversity there evidently must be of the immediate sensation of sight, or of other feelings coexisting with it, when a difference of magnitude or figure is suggested: the visual affection, which is followed by the notion of a mile, cannot be the same as that which is attended with the notion of half a foot; nor that which is attended with the perception of a sphere, be the same as that which suggests a plane circular surface. Whatever the number of the varied suggestions of this kind may be, there must be, at least, an equal variety of the immediate sensations that give rise to them; and these corresponding series of sensations and suggestions, may originally be associated together by an instinctive principle, as much as any other pairs of phenomena, the connexion of which we ascribe to instinct; or, in other words, suppose an adaptation of them to each other, by the gracious provision of the Power which formed us, for a purpose unforeseen by us, and unwilled at the moment. It is not more wonderful, *a priori*, that a sensation of colour should be immediately followed by the notion of a mile of distance, than that the irritation of the nostril, by any very stimulant odour, should be immediately and involuntarily, followed by the sudden contraction of a distant muscular organ, like the diaphragm, which produces, in sneezing, the violent expiration necessary for expelling the acrid matter;—or that an increase of the quantity of light poured on the eye, should be instantly, and without our consciousness, followed by a contraction of the transparent aperture. I am far from saying, that there truly is such an instinctive association of our original visual feelings, with corresponding notions of distance and magnitude, in the present case; for, at least in *man*, I believe the contrary. I mean only, that the question has, *a priori*, only greater probability on one side, not absolute certainty; and that experience is necessary, before we can decide it with perfect confidence.

In the case of the other animals, there seems to be little reason to doubt, that the tedious process, by which man may be truly said to learn to see, is not necessary for their visual perceptions. The calf, and the lamb, newly dropt into the world, seem to measure forms and distances with their eyes, as distinctly, or at least almost as distinctly, as the human reasoner measures them, after all the acquisitions of his long and helpless infancy. Of these races of our fellow animals, Nature is as once the *Teacher* and the great *Protectress*,—supplying to them, immediately, the powers which are necessary for their preservation,—as, in the long continued affection of the human parent, she far more than compensates to man, the early instincts which she has denied to him. If the other animals had to learn to see, in the same manner with ourselves, it would be scarcely possible, that their existence should be preserved to the period, at which the acquisitions necessary for accurate perception could be made; even though the hoof had been an instrument of touch and measurement, as convenient as the hand. For this difference in the relative circumstances of their situation, the Almighty Being,—to whose universal benevolence, nothing which he has created is too humble for his care,—has made sufficient provision, in giving them that early maturity, which makes them, for many months, the *superiors* of him, who is afterwards to rule them with a sway, that is scarcely conscious of effort.

> "Hale are their young, from human frailties freed,
> Walk unsustained, and, unsupported, feed.
> They live *at once*,—forsake the dam's warm side,—
> Take the wide world, with nature for their guide,—
> Bound o'er the lawn, or seek the distant glade,
> And find a home in each delightful shade."*

This instinctive suggestion, which, however subsequent it may be to the primary visual sensation, seems like immediate perception in the young of other races of animals, is a very strong additional proof, if any such were necessary, that there is no physical impossibility, in the supposition that a similar original suggestion may take place in man. The question, as I before said, becomes truly a question of observation and experiment.

But, in man, there is not that necessity for the instinct, which

* Young's Paraphrase on a part of the Book of Job, v. 235—240.

exists in the peculiar situation of the other animals; and we find accordingly, that there is no trace of the instinct in *him*. It is long before the little nurseling shews, that his eye has distinguished objects from each other, so as to fix their place. We are able almost to trace in his efforts the progress which he is gradually making;—and, in those striking cases, which are sometimes presented to us, of the acquisition of sight, in mature life, in consequence of a surgical operation,—after vision had been obstructed from infancy,—it has been found, that the actual magnitude and figure, and position, of bodies, were to be learned like a new language,—that all objects seemed equally close to the eye,—and that a sphere and a cube, of each of which the tangible figure was previously known, were not so distinguishable in the mere sensation of vision, that the one could be said, with certainty, to be the cube, and the other the sphere. In short, what had been *supposed*, with every appearance of probability, was *demonstrated* by experiment,—that we *learn* to *see*,—and that vision is truly, what Swift has paradoxically defined it to be, *the art of seeing things that are invisible.*

LECTURE XXIX.

ANALYSIS OF THE FEELINGS ASCRIBED TO VISION, CONTINUED.

THE chief part of my last Lecture was employed in considering the Phenomena of *Vision*, and particularly in proving, that vision, —simple and immediate, as it now seems to us, even in its most magnificent results,—is truly the application of an art, of long and tedious acquirement,—of that art with which we learn to measure forms and distances, with a single glance, by availing ourselves of the information, previously received from other sources;—the mixed product of innumerable observations, and calculations, and detections of former mistakes—which were the philosophy of our infancy, and each of which, separately, has been long forgotten, —recurring to the mind, in after-life, with the rapidity of an instinct.

Of all the arts, which man can acquire, this is, without question, the richest, both in wonder and in value—so rich in value, that if the race of man had been incapable of acquiring it, the very possibility of their continued existence seems scarcely conceivable; and so rich in subjects of wonder, that to be most familiar with these, and to study them with most attention, is to find at every moment new miracles of nature, worthy of still increasing admiration.

> " Per te quicquid habet mundus, mirabile nobis,
> Panditur; acceptumque tibi decus omne refertur
> Terrarum. Gentes nequicquam interluit æstu
> Vicinas pelagus; tu das superare viarum
> Ardua, et obtutu Seston conjungis Abydo.
> Necmaris angusti tantum discrimina solers
> Decipis, oceanique moras; Tu sidera Cœli
> Subjicis humanis oculis, et dissita longe

Das spectare loca, et Dias invisere sedes.
Nativa hinc quamvis ferimur gravitate deorsum
Ad Stygias sedes, Ditisque inamabile regnum,—
Mente tamen sursum rapti ad sublimia; molem
Exuimus terrenam, animosque æquamus Olympo."*

On this subject the remarks of Dr Reid, which I am about to quote, are not less just than they are strikingly expressed. "If we shall suppose an order of beings, endued with every human faculty but that of sight, how incredible would it appear to such beings, accustomed only to the slow informations of touch, that, by the addition of an organ, consisting of a ball and socket of an inch diameter, they might be enabled in an instant of time, without changing their place, to perceive the disposition of a whole army, or the order of a battle, the figure of a magnificent palace, or all the variety of a landscape? If a man were by feeling to find out the figure of the peak of Teneriffe, or of even St Peter's Church at Rome, it would be the work of a lifetime.

"It would appear still more incredible to such beings as we have supposed, if they were informed of the discoveries which may be made by this little organ in things far beyond the reach of any other sense: That by means of it we can find our way in the pathless ocean; that we can traverse the globe of the earth, determine its figure and dimensions, and delineate every region of it. Yea, that we can measure the planetary orbs, and make discoveries in the sphere of the fixed stars.

"Would it not appear still more astonishing to such beings, if they should be further informed, That, by means of this same organ, we can perceive the tempers and dispositions, the passions and affections of our fellow-creatures, even when they want most to conceal them? That when the tongue is taught most artfully to lie and dissemble, the hypocrisy should appear in the countenance to a discerning eye; And that by this organ, we can often perceive what is straight and what is crooked in the mind as well as in the body?—How many mysterious things must a blind man believe, if he will give credit to the relations of those that see! Surely he needs as strong a faith as is required of a good Christian."†

*Judicium Paridis, v. 146—158. Ap. Mus. Anglican, vol. II. p. 274. EDIT. 1741.

† Inquiry into the Human Mind, &c. c. 6. sect. 1.

The same observation has been put in a strong light, by the supposition, that it had been as uncommon, to be born with the power of sight, as it is now to be born incapable of it;—in which case it has been truly said, that "the few who had this rare gift would appear as prophets or inspired teachers to the many."* The very easy predictions thus made, would be found, constantly, or almost constantly fulfilled, by those who could form no conception of the means by which the effects predicted were foreseen; and wonderful as the dreams and visions of prophetic inspiration may appear, they surely could not seem more wonderful, as a medium of communication, than that by which the very secrets of the mind, and events apparently the most distant, were made known, through the intervention of a small ball like the eye.

In shewing the manner by which we learn to combine, with our visual sensations, the knowledge obtained by touch; or, as I am rather inclined to think, for reasons formerly stated, the knowledge falsely ascribed to mere touch; it will not be necessary to go over the different varieties of figure, magnitude, distance. The most striking of these is *distance*,—which, indeed, may be truly said to involve the other two; since the distance of an object is merely the extension of the long line that intervenes between the object and our eye, and the consequent magnitude of the intervening objects, and that which we consider, regarded as one extended whole. Of this one great whole, what we term the distant object, is nothing more than the boundary. The cottage, at the end of a field, is a part of that compound magnitude of which the field and the cottage are separately parts, exactly in the same manner as the wing of a house, is a part of the compound magnitude of the whole building. The line of field which connects our eye with the cottage, may, indeed, be a longer line, but it is a line of precisely the same sort as that which connects the wings of the house with our organ of sight, or with each other.

It is vain to think of ascribing the perception of distance to the measurement of the different angles subtended by objects, at different distances, or to an equally nice measurement of the dif-

* Reid's Inquiry into the Human Mind, &c. c. 6. sect. 2.

ferent degrees of inclination of the axis of the eyes, necessary for distinct vision, in particular cases,—as if all men were instinctively geometers, and the peasant and the very idiot were incessantly occupied in measuring angles; for if this measurement were truly *instinctive*, it would occur, in infancy, as in maturity, and be *immediate*, in those who have acquired the power of vision, by that surgical operation to which I alluded in my last Lecture. But the most decisive of all considerations, with respect to this supposed *geometry*, is, that the angles, subtended by the object at its different distances, and the inclination of the optic axis, in the spontaneous accommodation of the eyes to the distinct vision of the object at different distances, though truly existing, to the mere optical examiner of the object, and the light, and the eye, as one compound phenomenon, have no real existence, as feelings of the mind, of the individual who sees, and are known but to very few of the immense multitudes, who without the slightest acquaintance with geometry, or the slightest knowledge of the very lines, whose angles they are supposed to measure, are yet able to distinguish the distances of objects as accurately as the most expert mathematician. How is it possible that the angles, which remote objects make relatively to the eye, should be known originally, when the remote objects themselves are not known, but merely the points of light on the retina? In relation to the eye, as the organ, and to the mind, as originally sentient in vision, these points of light were truly all that existed. The light, indeed, traversed a certain space, in passing from the object to the eye, and the lines of direction of the different rays, in arriving at one focal point at the retina, formed truly different angles. But the angles could not be known, unless the radiant lines themselves were known; and of these, the mind could have no knowledge. During the whole time of their convergence, till they reached the expansion of the optic nerve, the rays of light were as little capable of producing vision, as darkness itself; and, when they reached the retina, the lines, and consequently the angles, existed no more. Of whatever use, therefore, such angles may be to the optician, in laying down, and illustrating the principles of his science, they are of no use in the actual living measurements of sight. Man may reason, indeed,—but he must reason from what he *knows*; and, therefore, if the determination of distance

be the result of any *judgment*, it must be of a judgment formed from feelings which truly have, or have had existence.

Such feelings, the elements of our visual judgments, it is not very difficult to discover.

The great principle, in this case, is the principle of association, by which the notions derived from touch,—or, at least, the notions which are commonly supposed to be derived from that sense, are suggested immediately by the visual feelings which coexisted with the sensations of touch; in the same manner, as the words of a language, when a language has been fully learned, suggest whatever the words may have been used to denote. A child, whose eye has already learned to distinguish objects, hears the word *cup* frequently repeated, when a cup is held before him; and the *word* afterwards suggests the *thing*. This process every one understands. But we are not equally aware, that, in the prior stage of learning to distinguish the cup by the eye, the child went through a process exactly similar,—that the visual feeling, which the rays of light from the cup excited, coexisted with the tactual and muscular feeling, when he handled the cup; and that the one feeling was thus associated, forever after with the other.

The means by which we acquire our knowledge of the distance of objects, may be reduced to three,—the difference of the affections of the *optic nerve*,—the different affections of the *muscles*, employed in varying the refracting power of each eye, according to the distance of objects, and in producing that particular inclination of the axis of the two eyes, which directs them both equally on the particular object,—and, *thirdly*, the previous knowledge of the distance of other objects, which form, with that which we are considering, a part of one compound perception.

To begin, then, with the affections of the retina. These become signs of distance, in two ways, by the extent of the part of the retina affected, and by the more or less vivid affection of the part.

It is evident, from the laws of optics, that, according to the distance of the object from the eye, there must, when all other circumstances are the same, be a difference of the extent of the retina, on which the light falls. This illuminated portion of the nervous expanse, as supposed to be instantly perceived, is what is termed the visible figure of an object; and, though I am dispos-

ed to question the knowledge, which the mind is believed to acquire of this figure, from the mere sensation of colour, to which the affection of the retina gives rise,—I am far from denying, that the sensation itself, whatever it may originally be, will be different according to the extent of the retina affected, as the sensation of *heat* is different, according to the extent of the surface, which has grown warmer or colder,—or of *fragrance*, according as a small number of odorous particles have acted on a portion of the surface of the organ of smell, or a greater number of these on a greater portion of that surface. The different feelings, then, when more or less of the retina has been affected, are capable of being associated with other feelings, which may coexist with them. An object, held at the distance of a foot from the eye, affects one part of the retina,—held at arm's length, it affects less of the retina; and this difference, not indeed as perceived in figure, but as perceived in the variety, whatever that may originally be, of the resulting sensation, being found constant and uniform, becomes of itself significant of the distance.

Another mode, in which the affection of the retina becomes significant of distance, is by the *brightness* or dimness of the visible figure, and its distinctness or indistinctness of outline; or, as I would rather say, by the peculiar sensations, without regard to figure, which accompany those varieties of light. Since, at a distance, less light falls from objects on the eye, and their outline becomes less definite, a new measure is thus obtained, in addition to that which is derived from the mere difference in extent of the retina affected. In the illusion of this spontaneous measurement, consists the chief magic of the painter's art. By different shades of colour, he produces corresponding perceptions of distance; and thus, making one part of a plane surface seem more remote than another, converts it, as far as the mere eye can judge, into a cube or sphere, or any other solid, which he chuses to present to us. By the indistinct outline which he gives to his small figures, in the back ground of a landscape, he leads us to consider them, not as diminutive in themselves, which we should conceive them to be, if, with equal smallness, their outline were clearer, but merely as less or more remote. He is thus able to vary his figures in three ways, to make them larger or smaller, more or less bright, and more or less precisely defined; and, by uniting these varieties, in

various proportions, to distinguish not merely what is large from what is small, but the diminutive from the distant, and the gigantic from the near.

Accordingly we find, that, in circumstances, in which the medium of transmission of light from objects is much altered, our perception of distance and magnitude becomes less accurate. In a fog, objects appear to us greatly magnified; because, the effect produced on the retina, in the extent of the visible figure and its dimness and indefinite outline, is truly the same, as when a larger object, in the common state of the atmosphere, is seen by us at a distance. From the same principle, objects seen under a brighter sky, and in purer air, seem nearer than they really are, to those, whose notions of distance have been acquired in a less happy climate. This has been remarked, by travellers in Italy, and particularly by one of the most illustrious of those who have visited that beautiful country,—a traveller, whose attention had been particularly turned to observations of this sort. The very acute observer, of whom I speak, is Berkeley, in whose Theory of Vision there is to be found a very interesting Section, in which he at once describes this impression, and accounts for it.

Our affections of the retina, then, both in the extent of the nervous expansion affected, and in the species of affection, afford one set of feelings, with which the notion of distance may be associated, in the same manner as the sounds or visual characters of a language may be associated with the conceptions which they denote, or any other feelings with any other feelings.

The next set of feelings which we have to consider, in relation to our perception of distance, belong to a class, of the importance of which I have had frequent occasion to speak, *the muscular feelings*, in the contraction of those muscles, which adapt the nice refracting apparatus in each eye, to the degree of refraction, necessary for distinct vision in the particular case, and produce that inclination of the axis of vision to each other, which is necessary for directing both eyes equally on the object. The muscular feeling may be slight indeed, but still it is sufficient to modify, in some degree, the whole compound sensation of the moment. One degree of contraction is attended with a particular feeling; another degree with a different feeling; and, as there are various muscles, subservient to the motions of the eyes, some of which are

exerted, while others are quiescent,—the feeling, it is evident, must vary, not with the degree of contraction merely, but also with the muscles contracted. A certain muscular feeling, however simple or complex, accompanies the mere visual sensation, and blends with it; and it is with this compound feeling, *muscular* and *visual*, that the notion of distance is associated.

The muscular adaptation, however, it may be remarked, seems, in a great measure, to imply the very knowledge which it is supposed to give; since we cannot, instantly and voluntarily, adapt our eyes to the state necessary for distinct vision, at a particular distance, unless we have previously known that particular distance. The necessary adaptation, however, if it be not the result of a rapid change of various degrees of contraction in each particular case may depend, not on our knowledge and will, but on an instinctive connexion of certain motions with certain feelings, in which there is as little consciousness of design, as in that very analogous instinct, or connexion of motions with feelings, which increases or diminishes the diameter of the pupil, according to the quantity of light which is poured upon the eye, when the individual, far from willing the contraction, does not know even that such a contraction has taken place.

A third element, in the calculation of the distance of an object, is the previous knowledge of the distance of other objects, which form together with it one compound perception. Thus, when we look along a road, and observe a man on horseback, who has nearly approached a house which we know, we have of course little difficulty in determining the distance of the rider. Every one must have felt how much easier his judgments of the distance of moving objects are, in scenes with which he is in some degree acquainted, than in a country which is new to him; and what aid the interposition of a variety of objects gives, even though we may not be well acquainted with the exact extent and distance of each. To an inexperienced eye, therefore, in a first voyage, a ship at a distance seems far nearer than it truly is, from the absence of varied intervening objects in the line between. Even in the case of a river, which is not so broad as to prevent us from distinguishing objects on the opposite side, it is with great difficulty that we attempt to guess the distance, with any approach to exactness. There is a constant tendency to suppose the breadth

of the river less than it is, and consequently the objects on the opposite bank nearer than they are. For the same reason, the horizontal line, in which innumerable objects intervene between the eye and the horizon, appears so much longer than the line of altitude of the meridian, that the vault of the sky does not seem a hemisphere, but a far smaller segment of a great sphere. On this subject, however, rich as it is in illustration, my time will not allow me to dwell longer. But I regret this the less, as the subject is one of those, which in the department of optics, come under the consideration of one of my Colleagues, whose happy Genius has the art of describing fully what the narrow compass of his lectures may have obliged him to state briefly; and who leaves little for others to add, even on subjects to which he alludes only for incidental illustration.

These few very slight remarks, however, will be sufficient to to show, in what manner the notion of distance may be associated with mere *visual feelings*, that in themselves originally involve no notion of distance, as the words of a language, which, in themselves, either as sounds or characters, involve no relation to one object more than to another, become instantly significant of particular objects, and excite emotions of love or joy, or hate, or indignation, like the very presence of some living friend or foe.

It has been very justly remarked, that, if all men had uniformly spoken the same language, in every part of the world, it would be difficult for us not to think that there is a natural connexion of our ideas and the words which we use to denote them; and it is not wonderful, therefore, that a similar illusion should take place with respect to what may be termed the universal language of vision; since, in the case of visual perception, all men may be truly said to have the same language; the same sensations of sight, being to all significant of magnitude and distance. And it is well that the judgments which we form, on these important points, are thus prompt and spontaneous; for, if we had to wait till we had calculated the distance and magnitude of every thing around us, by a measurement of angles, we should be cut off, in our optical career, before we could, with all our geometry, determine, with precision, whether the things which we needed most, or the objects of greatest peril to us, were ten or a thousand paces distant, and whether they were of the bulk of a mole hill or of a mountain.

A miniature image of the objects which we see, is pictured on the retina, in an inverted position; and though an image is pictured in each eye, we see not *two* object but *one*. To philosophers, who are even more expert in finding mysteries than in solving them, this single vision of the erect object, from a double image of the object inverted, has usually seemed very mysterious; and yet there is really nothing in it at all mysterious, to any one, who has learned to consider how much of the visual perception is referable to association. If the light, reflected from a single object touched by us, had produced not two merely, but two thousand separate images in our eyes, erect or inverted, or in any intermediate degree of inclination, the visual feeling, thus excited, however complex, would still have accompanied the touch of a single object; and if only it had accompanied it uniformly, the single object would have been suggested by it, precisely in the same manner as it is now suggested by the particular visual feeling that attends the present double inverted image. To this supposed anomaly in the language of vision, a perfect analogy is to be found in the most obvious cases of common language. The two words *he conquered* excite exactly the same notion as the single Latin word *vicit;* and if any language were so paraphrastic as to employ *ten* words for the same purpose, there would be no great reason for philosophic wonder at the unity of the notion suggested by so many words. The two images of the single object, in the arbitrary language of visual perception, are, as it were, two words significant of one notion.

Whatever the simple original sensation of vision may be, then, it is capable of being associated with other notions, so as to become significant of them. But to what does the simple original sensation itself amount? Is it mere colour,—or is it something more?

The universal opinion of philosophers is, that it is not *colour* merely which it involves, but *extension* also,—that there is a visible figure, as well as a tangible figure—and that the visible figure involves, in our instant original perception, superficial length and breadth, as the tangible figure which we learn to see, involves length, breadth, and thickness.

That it is impossible for us, at present, to separate, in the sensation of vision, the colour from the extension, I admit; though

not more completely impossible, than it is for us to look on the thousand feet of a meadow, and to perceive only the small inch of greenness on our retina; and the one impossibility, as much as the other, I conceive to arise only from intimate association, subsequent to the original sensations of sight. Nor do I deny, that a certain part of the retina,—which, being limited, must therefore have figure,—is affected by the rays of light that fall on it, as a certain breadth of nervous expanse is affected in all the other organs. I contend only, that the perception of this limited figure of the portion of the retina affected, does not enter into the sensation itself, more than in our sensations of any other species, there is a perception of the nervous breadth affected.

The immediate perception of visible figure has been assumed as indisputable, rather than attempted to be proved,—as, before the time of Berkeley, the immediate visual perception of distance, and of the three dimensions of matter, was supposed, in like manner, to be without any need of proof;—and it is, therefore, impossible to refer to arguments on the subject. I presume, however, that the reasons, which have led to this belief, of the immediate perception of a figure termed visible, as distinguished from that tangible figure, which we learn to see, are the following two,—the only reasons which I can even imagine,—that it is absolutely impossible, in our present sensations of sight, to separate colour from extension,—and that there are, in fact, a certain length and breadth of the retina, on which the light falls.

With respect to the first of these arguments, it must be admitted, by those who contend for the immediate perception of visible figure, that it is now impossible for us to refer to our original feelings, and that we can speak, with absolute certainty, only of our present feelings, or, at least, of those which we remember, as belonging to a period long after our first sensations.

What may, or may not, have been originally separable, we cannot then, determine. But what, even now, is the *species of extension*, which it is impossible for us, in our visual perceptions, to separate from colour? Is there the slightest consciousness of a perception of visible figure, corresponding with the affected portion of the retina,—or is not the superficial magnitude, and the only magnitude, which we connect with colour, in any case, the very superficial magnitude which we term tangible,—a magni-

tude, that does not depend on the diameter of the retina, but is variously, greater or less, depending only on the magnitude and distance of the external object.

The mere length and breadth, then, which we cannot separate from colour, are not the length and breadth of the figure termed visible,—for of the perception of these limited dimensions, we have no consciousness,—but the length and breadth that are truly tangible ;—and there is not a single moment of visual perception, in which the slightest evidence is afforded by our consciousness of that difficulty of separation, with respect to the affected portion of the expanse of the retina, on which the supposed argument, as to the perception of visible figure, is founded.

Even though the superficial dimensions of length and breadth, connected with colour in vision, were those of the figured retina affected, and were necessarily limited to its small expanse, there would still be no greater impossibility of separating the colour from mere length and breadth in vision, than of separating it from the triple dimensions of length, breadth, and thickness: and the argument, therefore, if it had any force, would be equally applicable to these.

I open my eyes, in the light of day, with a wide landscape around me. I have a sensation, or perception, of varieties of colour, and of all the dimensions of matter. I cannot separate the colour from the length and breadth of the trunk of a large oak before me; but equally impossible is it for me, to separate the colour from the convexity and the magnitude; and, from this equal impossibility, I might conclude, with equal force, that the perception of the convexity and the magnitude is immediate and original, as the perception of mere length and breadth. Where all things are equal, we cannot justly deny to one what we allow to another. He who affirms, that, in looking at a sphere, he can separate, as elements of his sensation, the colour and the convexity, may be allowed to use this argument of impossibility, as proof of original connexion, in the other case. But it is only a person so privileged by nature,—and where is such a person to be found? —who can fairly use it.

We are able, indeed,—not while we continue to look at the sphere, but with a sort of mental effort, afterwards to separate the colour from the convexity, and to imagine the same colour

united with any other surface, plane or concave,—the reason of which is very evident. Our sensation of colour has not been uniformly associated with one species of extension, but with all its varieties; and may, therefore, be suggested in possible coexistence with all. In all these varieties, however, two dimensions have been constantly implied; and, therefore, the association of colour with *these* is complete and indissoluble. If every surface in nature had been convex, it is by no means improbable, that we should have found the same difficulty, in attempting to separate colour from convexity, which we now find, in attempting to separate it from mere length and breadth.

It is the same, in various other affections of the mind, as in our sensations. There are feelings, which we cannot separate from other feelings, and which, we yet know, must have been originally separate. I might refer to the silent growth and maturity of almost every passion, of which the mind is susceptible. But there is sufficient proof, even in affections, which seem instantaneous. The mother, when she looks at her babe, cannot behold it without feelings, very different from those, which the same form and colour, in another infant, would have excited; and yet, impossible as it is to separate, in this case, the mere visual sensation, from that emotion of happy and instant fondness which accompanies it, there is surely no natural connexion of the emotion, with the mere length, and breadth, and colour.

The impossibility of separating the sensation of colour from the notion of extension, it appears, then, is not a decisive proof of an original connexion of these; for, if it were decisive, it would prove still more;—and we might, from this alone, assert with equal confidence, the original visual perception of three dimensions, as that of two, and of the magnitude and figure, which we term *tangible*, as much as of those, which we have chosen to term *visible*. It is surely as little possible for us, when we open our eyes on some wide and magnificent landscape, to separate the colour, as a mere visual sensation, from the field, the mountain, the forest, the stream, the sky, as to separate it from the half inch, or inch of our retina, of the perception of which we have no consciousness in any case; and it is too much for those who deny the immediate perception of those greater magnitudes, to urge, in proof of the necessary original perception of this inch

or half inch, what, if valid in any respect, must establish no less the proposition which they deny, than the proposition which they affirm.

But, it will be said, there is truly a certain figure of the part of the retina, on which the light falls. The fact is undeniable. But the question is, not whether such a figure exist, but whether the perception of the figure necessarily form a part of the sensation. The brain, and nervous system in general, are of a certain form, when they are affected in any manner. But it does not therefore, follow,—as the fact sufficiently shows,—that the knowledge of this form constitutes any part of the changeful feeling of the moment. To confine ourselves, however, to the mere senses,—it is not in the organ of sight only, that the nervous matter is of a certain shape :—it is expanded into some shape or other, in every organ. When the whole, or a part, therefore, of the olfactory organ, is affected by the rays of odour, if I may so term them, we might, with exactly the same ground for our belief, suppose, that the knowledge of a certain extension must accompany the fragrance, because a certain nervous expanse is, in this case, affected, as that the notion of a certain extension must, for the same reason, and for the same reason alone, accompany the sensation of colour. It is because the same light, which acts upon the organ of one person, may be made visible to another, that we conceive it more peculiarly to be figured, as it were, on the nervous expanse, when it is not in itself truly more figured, than the number of coexisting particles of odour, which affect the nerve of smell. We cannot exhibit the particles of odour, however, acting on the nostril of any one. But, when the eye is dissected from its orbit, we can show the image of a luminous body, distinctly formed upon the retina. *We*, the observers of the dissected eye, have thus a clearer notion of the length and breadth of the nervous matter affected in the one case than in the other. But it is not in the dissected eye that vision takes place; and as the living eye, and the living nostrils, are alike affected in more than one physical point, we must surely admit, that in both cases, and in both cases equally, a certain length and breadth are affected, and that there is an olfactory figure as truly as a visible figure. The mere visibility of the image to another person cannot alter the nature of the organic affection itself to the sentient individual. If the olfactory figure be

not necessarily accompanied with the perception of extension, there is no stronger reason *a priori*, to suppose that what is termed the visible figure,—which is nothing more than a similar affection of a nervous expanse,—should be accompanied with the knowledge of the part of the retina affected.

These arguments, however, though they seem to me to invalidate completely the only arguments which I can imagine to be urged in support of our original perception of figure by the eye, are negative only. But there is also a *positive* argument, which seems to me truly decisive, against the supposed necessary perception of visible figure,—that it implies the blending of things which cannot be blended. If the mere visual sensation of colour imply, in itself, no figure, I can conceive it to be blended with any figure; but not so, if it imply, in itself, a fixed definite figure, so essential to the very sensation of the colour, that without it the colour could not for a single moment be perceived. During the whole time, then, in which I am gazing on a wide landscape, there is, according to the opinion of those who contend for the necessary perception of visible figure, not colour merely, but a certain small coloured expanse, of definite outline, constantly perceived—since, without this, colour itself could not be perceived; and, during all this time, there is also a notion of a figure of a very different kind, of three dimensions, and of magnitude almost infinitely greater, combined, not with colour merely, but with the same coloured expanse. There must, therefore, be some possible combination of these forms and magnitudes; since it is the colour which we perceive that is blended with the tangible magnitudes suggested. Now, though there are certain feelings which may coexist and unite, it appears to me, that there are others which cannot be so blended. I may combine, for example, my notion of a plane or convex surface, with my notion of whiteness or blueness, hardness or softness, roughness or smoothness; but I cannot blend my notions of these two surfaces, the plane and the convex, as one surface, both plane and convex, more than I can think of a whole which is less than a fraction of itself, or a square, of which the sides are not equal, and the angles equal only to three right angles. The same blue or white surface cannot appear to me, then, at once plane and convex, as it must do if there be a visible figure of one exact outline coexisting with the tactual fig-

ure which is of a different outline; nor, even though the surface were in both cases *plane*, can it appear to me, at the same moment, half an inch square, and many feet square. All this must be done, however, as often as we open our eyes, if there be truly any perception of visible figure coexisting with the mere suggestions of touch. The visible figure of the sphere, on which I fix my gaze, is said to be a plane of two dimensions inseparable from colour, and this inseparable colour must yet be combined with the sphere, which I perceive distinctly to be convex. According to the common theory, therefore, it is at once, to my perception, *convex* and *plane;* and, if the sphere be a large one, it is perceived, at the same moment, to be a spbere of many feet in diameter, and a plane circular surface of the diameter of a quarter of an inch. The assertion of so strange a combination of incongruities would, indeed, require some powerful arguments to justify it; yet is has been asserted, not merely without positive evidence, as if not standing in need of any proof, but in absolute opposition to our consciousness; and the only arguments which we can ever imagine to be urged for it, are, as we have seen, of no weight,—or would tend as much to prove the original visual perception of tangible figures, as of the figure that is termed visible.

Is it not at least more probable, therefore, that though, like the particles of odour when they act upon our nostrils, the rays of light affect a portion of the retina, so as to produce on it an *image*, which, if the eye were separated from its orbit, and its coats dissected, might be a distinct visible figure to the eye of another observer; this figure of the portion of the retina affected, enters as little into the simple original sensation of sight, as the figure of the portion of the olfactory nervous expanse, when it is affected, enters into the sensations of smell?—and that, when the simple affection of sight is blended with the ideas of suggestion, in what are termed the acquired perceptions of vision,—as, for example, in the perception of a sphere,—it is colour only which is blended with the large convexity, and not a small coloured plane?—which small coloured plane being necessarily limited in extent and form, so as never to be larger than the retina itself, cannot blend with various forms and magnitudes, and which, if it could even be supposed to constitute a *part* of the convexity of a sphere

perceived by us, still could not diffuse its own limited and inseparable colour over the whole magnitude of the sphere.

I have stated to you my own opinion with respect to visible figure,—an opinion, which to myself, I confess, appears almost certain, or, at least, far more probable than the opinion generally entertained, that has no evidence in our consciousness at any one moment of vision to support it. But on subjects of this kind, which are in themselves so very subtile, and, therefore, so liable to error, I must beg you, at all times, and especially when the opposite sentiment has the authority of general belief, to consider any opinion, which I may submit to you, as offered more to your *reflection*, than for your passive adoption of it. If I wish you,—reverently, indeed, but still freely,—to weigh the evidence of doctrines of philosophy, which are sanctioned even by the greatest names of every age, I must wish you still more, because it will be still more your duty, to weigh well the evidence of opinions that come to you, with no other authority than that of *one* very fallible individual.

In looking back on the senses which we have been considering, what a boundless field do we seem already to have been endeavouring to traverse? and how admirable would the mind have been, even though it had been capable of no other office than that of representing, in the union of all its sensations, as in a living mirror of the universe, the splendid conceptions of the great Being who formed it; or, rather of creating a-new in itself, that very universe which it represents and admires?

Such is the power of the senses;—of

> ——"senses, that inherit earth and heavens,
> Enjoy the various riches Nature yields;—
> Far nobler, *give* the riches they enjoy;
> Give taste to fruits, and harmony to groves,
> Their radiant beams to gold, and gold's bright fire:
> Take in at once the landscape of the world,
> At a small inlet, which a grain might close,
> And half create the wonderous world they see.
> But for the magic organ's powerful charm,
> Earth were a rude, uncoloured chaos still;—
> Like Milton's Eve, when gazing on the lake,
> Man makes the matchless image, man admires."*

* Young's Night Thoughts, VI. v. 420—427. 429—430. and 435—136.

LECTURE XXX.

HISTORY OF OPINIONS REGARDING PERCEPTION.

Gentlemen, in my last Lecture, I brought to a conclusion my remarks on Vision, with an inquiry into the justness of the universal belief, that, in the perception of objects by this sense, there are two modifications of extension, a visible as well as a tangible *figure*; the one originally and immediately perceived by the eye, the other suggested by former experience. I stated, at considerable length, some arguments which induce me to believe, in opposition to the universal doctrine,—that, in what are termed the acquired perceptions of sight, there is not this union of two separate figures of different dimensions, which cannot be combined with each other, more than the mathematical conceptions of a square and a circle can be combined in the conception of one simple figure; that the original sensations of colour, though, like the sensations of smell or taste, and every other species of sensation, arising from affections of definite portions of nervous substance, do not involve the perception of this definite outline, more than mere fragrance or sweetness, but that the colour is perceived by us as *figured*, only in consequence of being blended by intimate associations with the feelings commonly ascribed to touch. Philosophers, indeed, have admitted, or, at least, must admit, that we have no consciousness of that which they yet suppose to be constantly taking place, and that the *only figure* which does truly seem to us, in vision, to be combined with colour, is that which they term tangible,—that, for example, we cannot look at a coloured sphere, of four feet diameter, without perceiving a coloured figure, which is that of a sphere four feet in diameter, and not a plain circular surface of the diameter of half an inch; yet, though we have no consciousness of perceiving any such small coloured circle, and have

no reason to believe that such a perception takes place, they still contend, without any evidence whatever, that we see at every moment what we do not remember to have ever seen.

After our very full discussion of the general phenomena of perception,—as common to all our senses, and as peculiarly modified in the different tribes of our sensations,—I might now quit a subject, to which its primary interest as the origin of our knowledge, has led me to pay, perhaps, a disproportionate attention. But besides the theories, to the consideration of which our general inquiry has incidentally led us, there are some hypothetical opinions on the subject, of which it is necessary that you should know at least the outline,—not because they throw any real light on the phenomena of perception, but because, extravagantly hypothetical as they are, they are yet the opinions of philosophers, whose eminence, in other respects, renders indispensable some slight knowledge even of their very errors.

In reviewing these hypotheses, it will be necessary to call your attention to that doctrine of causation, which I before illustrated at great length, and which I trust, therefore, I may safely take for granted that you have not forgotten.

In sensation, I consider the feeling of the mind to be the simple effect of the presence of the object; or, at least, of some change, which the presence of the object produces in the sensorial organ. The *object* has the power of affecting the mind; the *mind* is susceptible of being affected by the object,—that is to say, when the organ, in consequence of the presence of the external object, exists in a certain state, the affection of the mind immediately follows. If the object were absent, in any particular case, the mind would not exist in the state which constitutes the sensation produced by it; and, if the susceptibility of the mind had been different, the object might have existed, as now, without any subsequent sensation. In all this series of mere changes, or affections, in consequence of certain other preceding changes, or affections, though a part of the series be material, and another part mental, there is truly, as I have repeatedly remarked to you, no more mystery than in any other series of changes, in which the series is not in matter and mind successively, but exclusively in one or the other. There is a change of state of one substance, in consequence of a change of some sort in another substance; and

this mere sequence of change after change is all which we know in either case. The same Almighty Being, who formed the various substances to which we give the name of *matter*, formed also the substance to which we give the name of *mind*; and the qualities with which he endowed them, for those gracious ends which he intended them to answer, are mere susceptibilities of change, by which, in certain circumstances, they begin immediately to exist in different states. The weight of a body is its tendency to other bodies, varying according to the masses and distances;—in this instance, the quality may be said to be strictly material. The greenness or redness ascribed to certain rays of light, are words expressive merely of changes that arise in the *mind* when these rays are present on the retina; in this case, the quality, though ascribed to the material rays as antecedent, involves the consideration of a certain change of state in the mind which they affect. But the greenness or redness, though involving the consideration both of mind affected, and matter affecting, is not less conceivable by us as a quality of matter than the weight, which also involves the consideration of two substances, affecting and affected, though both go under the name of matter alone. *All* the sequences of phenomena are mysterious, or *none* are so.

It is wonderful, that the presence of a loadstone should cause a piece of iron to approach it; and that the presence of the moon, in different parts of the heavens, should be continually altering the relative tendencies of all the particles of our earth. In like manner, it is, indeed, wonderful, that a state of our bodily organs should be followed by a change of state of the mind, or a state of our mind by a change of state of our bodily organs; but it is not more wonderful, than that matter should act on distant matter, or that one affection of the mind, should be followed by another affection of the mind, since all which we know in either case, when matter acts upon matter, or when it acts upon mind, is, that a certain change of one substance has followed a certain change of another substance,—a change which, in all circumstances exactly similar, it is expected by us to follow again. We have experience of this sequence of changes alike in both cases; and, but for experience, we could not, in either case, have predicted it.

This view of causation, however,—as not more unintelligible in the reciprocal sequences of events in matter and mind than in

their separate sequences,—could not occur to philosophers while they retained their mysterious belief of secret links, connecting every observed antecedent with its observed consequent; since mind and matter seemed, by their very nature, unsusceptible of any such common bondage. A peculiar difficulty, therefore, as you may well suppose, was felt, in the endeavour to account for their mutual successions of phenomena, which vanishes, when the necessity of any connecting links in causation is shewn to be falsely assumed.

In their views of perception, therefore, as a mental effect produced by a material cause, philosophers appear to have been embarrassed by two great difficulties:—the production of this effect by remote objects,—as when we look at the sun and stars, in their almost inconceivable distances above our heads; and the production of this effect by a substance, which has no common property that renders it capable of being linked with the mind in the manner supposed to be necessary for causation. These two *supposed* difficulties appear, to me, to have led to all the wild hypotheses that have been advanced with respect to perception.

The former of these difficulties,—in the remoteness of the object perceived,—even though the principle had not been false which supposes, that a change cannot take place in any substance, in consequence of the change of position of a distant object,—a principle, which the gravitation of every atom disproves,—arose, it is evident, from false views of the real objects of perception. It is on this account, that I was at some pains, when we entered on our inquiry into the nature of perception, to shew the futility of the distinction which is made of objects that act immediately on the senses, and those which act on them through a medium,—the medium, in this case, as light in vision, and the vibrating air in sound, being the real object of the particular sense,—and the reference to a more remote object being the result, not of the simple original sensation, but of knowledge previously acquired.

The mistake as to the real object of perception, and the supposed difficulty of action at a distance, must have had very considerable influence in producing the Peripatetic doctrine of perception by species, of which the cumbrous machinery seems to have been little more than a contrivance for destroying, as it were, the distance between the senses and the objects that were supposed

to act on them. According to this doctrine, every object is continually throwing off certain shadowy films or resemblances of itself, which may be directly present to our organs of sense, at whatever distance the objects may be, from which they flowed. These species or phantasms,—the belief of the separate existence of which must have been greatly favoured by another tenet of the same school, with respect to *form* as essentially distinct from the *matter* with which it is united, were supposed to be transmitted, in a manner, which there was no great anxiety to explain, to the brain and to the mind itself. I need not detail to you the process by which these sensible species, through the intervention of what were termed the active and passive intellect, were said to become, at last, intelligible species, so as to be objects of our understanding. It is with the mere *sensitive* part of the process, that we have at present any concern; and in this, of itself, there is sufficient absurdity, without tracing all the further modifications, of which the absurdity is capable, if I may speak so lightly of follies that have a name, which, for more than a thousand years, was the most venerable of human names, to pass them current as wisdom, —and which were read and honoured as wisdom by the wise of so many generations.

I cannot pay you so very poor a compliment, as to suppose it necessary to employ a single moment of your time in confuting what is not only a mere hypothesis, (and an hypothesis which leaves all the real difficulties of perception precisely as before,) but which, even as an hypothesis, is absolutely inconceivable. If vision had been our *only sense*, we might, perhaps, have understood, at least, what was meant by the species, that directly produce our visual images. But what is the phantasm of a sound or an odour? or what species is it, which, at one moment, produces only the feeling of cold, or hardness, or figure, when a knife is pressed against us, and the next moment, when it penetrates the skin, the pain of a cut? The knife itself is exactly the same unaltered knife, when it is merely pressed against the hand, and when it produces the incision; and the difference, therefore, in the two cases, must arise, not from any *species* which it is constantly throwing off, since these would be the same, at every moment, but from some state of difference in the mere *nerves affected*.

I fear, however, that I have already fallen into the folly which

I professed to avoid,—the folly of attempting to confute, what, considered in itself, is not worthy of being seriously confuted, and scarcely worthy even of being proved to be ridiculous. It must be remembered, however, in justice to its author, that the doctrine of perception, by intermediate phantasms, is not a single opinion alone, but a part of a system of opinions, and that there are many errors, which, if considered singly, appear too extravagant for the assent of any rational mind, that lose much of this extravagance, by combination with other errors, as extravagant. Whatever difficulties the hypothesis of species involved, it at least seemed to remove the supposed difficulty of perception at a distance, and by the half spiritual tenuity of the sensible images, seemed also to afford a sort of intermediate link, for the connexion of matter with mind; thus appearing to obviate, or at least to lessen, the two great difficulties, which I suppose to have given occasion to the principal hypothesis on this subject.

When the doctrine of *species*, as modified, in the dark and barren age of Dialectics, by all the additional absurdities, which the industrious sagacity of the schoolmen could give to it, had, at length, lost that empire, which it never should have possessed, the original difficulty of accounting for perception, remained as before. If the cause was to be linked, in some manner or other, with its effect, how was matter, so different in all its properties, to be connected with mind?

The shortest possible mode of obviating this difficulty, was, by denying that any direct causation whatever took place between our mind and our bodily organs? and hence arose the system of *occasional causes*, as maintained by the most distinguished of the followers of Des Cartes,—a system, which supposed, that there is no direct agency of our mind on matter, or of matter on our mind, —that we are as little capable of moving our own limbs by our volition, as of moving, by our volition, the limbs of any other person,—as little capable of perceiving the rays of light, that have entered our own eyes, as the rays which have fallen on any other eyes,—that our perception or voluntary movement is, therefore, to be referred, in every case, to the immediate agency of the Deity, the presence of rays of light, within our eye, being the mere occasion on which the Deity himself affects our mind with vision, as our desire of moving our limbs is the mere occasion, on which the Deity himself puts our limbs in motion.

It is of so much importance to have a full conviction of the dependence of all events on the *great Source of Being*, that it is necessary to strip the doctrine, as much as possible, of every thing truly objectionable, lest, in abandoning what is objectionable, we should be tempted to abandon also the important truth associated with it. The *power of God* is so magnificent in itself, that it is only when we attempt to add to it in our conception, that we run some risk of *degrading* what it must always be impossible for us to *elevate*.

That the changes which take place, whether in mind or in matter, are all, ultimately, resolvable into the will of the Deity, who formed alike the spiritual and material system of the universe, making the earth a habitation worthy of its noble inhabitant, —and *man* an inhabitant almost worthy of that scene of divine magnificence, in which he is placed, is a truth, as convincing to our reason, as it is delightful to our devotion. What confidence do we feel, *in our joy*, at the thought of the Eternal Being, from whom it flows, as if the very thought gave at once *security* and *sanctity* to our delight; and how consolotary, in our little hour of suffering, to think of *Him* who *wills* our happiness, and who knows how to produce it, even from sorrow itself, by that power which called light from the original darkness, and still seems to call, out of a similar gloom, the sunshine of every morning. Every joy thus becomes gratitude,—every sorrow resignation. The eye which looks to Heaven seems, when it turns again to the scenes of earth, to bring down with it a purer radiance, like the very beaming of the presence of the Divinity, which it sheds on every object on which it gazes,—a light

> "That gilds all forms
> Terrestrial, in the vast, and the minute;
> The unambiguous footsteps of the God,
> Who gives its lustre to an insect's wing,
> And wheels His throne upon the rolling worlds."*

That the Deity, in this sense, as *the Creator* of the world, and *willer* of all those great ends, which the laws of the universe accomplish,—is the author of the physical changes which take place in it, is then most true,—as it is most true also, that the same Power, who gave the universe its laws, can, for the particular

* Cowper's Task, Book V. v. 810—814.

purposes of his providence, vary these at pleasure. But there is no reason to suppose, that the objects which he has made surely for some ends, have, as made by him, no efficacy, no power of being instrumental, to his own great purpose, merely because whatever power they can be supposed to have, must have been derived from the Fountain of all power. It is, indeed, only as possessing this power, that we know them to exist; and their powers, which the doctrine of occasional causes would destroy altogether, are, relatively to us, their whole existence. It is by affecting us that they are known to us. Such is the nature of the mind, and of light, for example, that light cannot be present, or, at least, the sensorial organ cannot exist in a certain state, in consequence of its presence, without that instant affection of mind, which constitutes vision. If light have not this power of affecting us with sensation, it is, with respect to us, nothing,—for we know it only as the cause of the visual affection. That which excites in us the feelings of extension, resistance, and all the qualities of matter, is matter; and, to suppose that there is nothing, without us, which excites these feelings, is to suppose, that there is no matter without, as far as we are capable of forming any conception of matter. The system of occasional causes seems, therefore, to be only a more awkward and complicated modification of the system of Berkeley; for, as the Deity is, in this system, himself the author of every change, the only conceivable use of matter, which cannot affect us, more than if it were not in existence, must be as a *remembrance*, to Him who is *Omniscience itself*, at what particular moment he is to excite a feeling in the mind of some one of his sensitive creatures, and of what particular kind that feeling is to be; as if the *Omniscient* could stand in need of any memorial, to excite in our mind any feeling, which it is His wish to excite, and which is to be traced wholly to his own immediate agency. Matter then, according to this system, has no relations to us; and all its relations are to the Deity alone. The assertors of the doctrine, indeed, seem to consider it, as representing, in a more sublime light, the divine Omnipresence, by exhibiting it to our conception, as the only power in nature; but they might, in like manner, affirm, that the creation of the infinity of worlds, with all the life and happiness that are diffused over them, rendered less instead of more sublime, the existence of Him, who, till then, was the sole

existence; for power, that is derived, derogates as little from the primary power, as derived existence derogates from the Being from whom it flows. Yet the assertors of this doctrine, who conceive, that light has no effect in vision, are perfectly willing to admit that light exists, or rather, are strenuous affirmers of its existence, and are anxious only to prove, in their zeal, for the glory of Him, who made it, and who makes nothing in vain, that this, and all His works, exist for no purpose. Light, they contend, has no influence whatever. It is as little capable of exciting sensations of colour, as of exciting a sensation of melody or fragrance; but still it exists. The production of so very simple a state as that of vision, or any other of the modes of perception, with an apparatus, which is not merely complicated, but, in all its complication, absolutely without efficacy of any sort, is so far from adding any sublimity to the divine nature, in our conception, that it can scarcely be conceived by the mind, without lessening, in some degree, the sublimity of the Author of the universe, by lessening, or rather destroying, all the sublimity of the universe which he has made. What is that idle mass of matter, which cannot affect us, or be known to us, or to any other created being, more than if it *were not?* If the Deity produces, in every case, by his own immediate operation, all those feelings which we term sensations or perceptions, he does not first create a multitude of inert and cumbrous worlds, invisible to every eye but his own, and incapable of affecting any thing whatever, that *he* may know when to operate, as he would have operated before. This is not the awful simplicity of that Omnipresence,

> "Whose word leaps forth at once to its effect;
> Who calls for things that are not, and they come." *

If, indeed, the complication of the process could remove any difficulty which truly exists, or even any difficulty which is supposed to exist, the system might be more readily adopted by that human weakness, to which the removal of a single difficulty is of so much value. But the very attempt to remove the difficulty, is merely by presenting it in another form. Omnipresent, as the Creator is, he is still, like that mind which he has formed after

* Cowper's Task, Book V. v. 686—7.

his own image, a *spiritual Being;* and though there can be no question as to the extent of his power over matter, the operation of this infinite power is as little conceivable by us, in any other way than as a mere antecedence of change, as the reciprocal limited action of mind and matter, in man, and the objects which he perceives and moves. It is itself indeed, a proof of action of this very kind; and to state it, with the view of obviating any difficulty that may be supposed to be involved in the mutual influence of mind and matter, seems as absurd, as it would be for a sophist, who should profess to believe, from an examination of the wings of birds, that their heavy pinions are incapable of bearing them through the air, to illustrate his paradox by the majestic soaring *of the eagle*, when he mounts still higher and higher through the sunshine that encircles him, before he stoops from his height above the clouds, to the cliffs which he deigns to make his *lowly home.*

The system of *occasional causes*, though it ceased to be known, or at least to be adopted, under that name, has not the less continued, by a mere change of denomination, to receive the assent of philosophers, who rejected it under its ancient name. It is, indeed, the spirit of this system alone, which gives any sense whatever to the distinction that is universally made of causes, as *physical* and *efficient*,—a distinction which implies, that, beside the antecedents and consequents, in a series of changes, which are supposed to have no mutual influence, and might, therefore, be antecedent and consequent in any other order,—there is some intervening agency, which is, in every event of the series, the true efficient. Matter, in short, does *not act* on mind, nor mind on matter. The *physical cause*, in this nomenclature, that exists for no purpose, as being absolutely insufficient; or, in other words, absolutely incapable of producing any change whatever, is the *occasional cause* of the other nomenclature, and nothing more; and all which was cumbrous and superfluous in the one, is equally cumbrous and superfluous in the other. On this subject, however, which I have discussed at large in my Work on Cause and Effect, I need not add any remarks to those which I offered in an early part of the course. It is sufficient, at present, to point out the absolute identity of the two doctrines in every thing but in name.

The next system to which I would direct your attention, is that of *Malebranche*, who is, indeed, to be ranked among the principal asserters of the doctrine of *occasional causes*, which we have now been considering, but who, in addition to this general doctrine, had peculiar views of the nature of perception.

His opinions, on this subject, are delivered, at great length, in the second volume of his Search of Truth—La Recherche de la Verité—a work which is distinguished by much eloquence, and by many very profound remarks on the sources of human error, but which is itself an example, in the great system which it supports, of error as striking as any of those which it eloquently and profoundly discusses. It is truly unfortunate for his reputation as a philosopher, that these discussions do not form a separate work, but are blended with his own erroneous system, the outline of which every one knows too well, to think of studying its details. All that is necessary, to give him his just reputation, is merely that he *should have written less*. He is at present known, chiefly as the author of a very absurd hypothesis. He would have been known, and studied, and honoured, as a very acute observer of our nature, if he had never composed those parts of his work, to which, probably, when he thought of other generations, he looked as to the basis of his philosophic fame.

His hypothesis, as many of you probably know, is, that we perceive not *objects themselves*, but the *ideas* of them which are in God.

He begins his supposed demonstration of this paradox with a sort of *negative* proof, by attempting to shew the inadequacy of every other mode of accounting for our perception of the ideas of things; for I need scarcely state to you, what is involved in the very enunciation of his metaphysical theorem,—that he regards *ideas* as distinct from perception itself, not the mind affected in a certain manner, but something separate and independent of the mind.

He then proceeds to his *positive* proof, asserting, in the first place, that it is "absolutely necessary that God should have in himself the ideas of all the beings which he has created, since otherwise he could not have produced them;"* and, in the second place, that God is united to our soul by his presence, "so that he

* Recherche de la Verite, Liv. III. c. vi.

may be said to have that relation of place to the mind, which space has to body."* Wherever the human mind is, there God is, and consequently all the ideas which are in God. We have thus a fund of all the ideas necessary for perception, and a fund, which, in consequence of the *ubiquity* of the divine mind, is ever present, requiring, therefore, for our perception of them, only that divine will, without which no change can take place.

That perception takes place, by the presence of this one stock of ideas eternally present in the divine mind, with which every other mind is united,—rather than by the creation of an infinite number of ideas in each separate mind,—he conceives to be proved, by various reasons,—by the greater simplicity of this mode,—by its peculiar consistency with that state of dependence on the divine Being, as the source of all light, in which the mind of man is represented in many passages of Scripture,—by various notions, such as those of *infinity*, *genera*, *species*, &c. the universality of which he conceived to be inconsistent with the absolute unity and limitation of every idea, that does not derive a sort of infinity from the mind in which it exists,—and by some other reasons, very mystical and very feeble, in which, though it may not be difficult to discover what their author meant, it is certainly very difficult to conceive, how a mind so acute as his, could have been influenced by them.

It is, indeed, only this relation of the mind of Malebranche to his own very strange hypothesis, which there is any interest in tracing; for, though I have thought it my duty to give you a slight sketch of the hypothesis itself, as a part of the general history of our science, with which the reputation and genius of its author render it necessary for you to have some acquaintance, I am far from thinking, that it can throw any light on our speculations, in the present improved state of the Science of Mind. I shall not waste your time, therefore, with pointing out to you the innumerable objections to his hypothesis, which, after the view already given by me of the simple process of perception, are, I trust, so manifest, as not to require to be pointed out. It may be more interesting to consider, in the history of the Philosophy of Mind, what circumstances led to the formation of the hypothesis.

In the first place I may remark, that, notwithstanding his ven-

* Recherche de la Verite, Liv. III. c. vi.

eration for the greater number of the opinions of Des Cartes, Malebranche unfortunately had not adopted the very enlightened views of that eminent philosopher, with respect to the nature of *ideas*. He considered them as existing distinct from the sentient or percipient mind,—and, reasoning very justly from this error, inferred their presence in the mind of the Deity,—who formed the universe, not casually, but according to conceptions, that must have preceded creation,—the archetypes, or exemplars, of all that was to be created. This opinion, as to the eternal forms subsisting in the divine mind, agrees exactly with that of Plato, in one of the most celebrated of his doctrines, and certainly one of the most poetical,—which, though a term of praise that usually does not imply much excellence of philosophy, is the species of praise to which the philosophy of Plato has the justest claim. It has been delivered, in very powerful verse, by one of our own poets, who describes himself as, in science, a follower of the genius of ancient Greece, and who was worthy of the inspiring presence of that majestic guide:

> "Ere the radiant sun
> Sprang from the east, or 'mid the vault of night
> The moon suspended her serener lamp!
> Ere mountains, woods, or streams, adorn'd the globe,
> Or Wisdom taught the sons of men her lore,—
> Then lived the Almighty One, then, deep retired
> In his unfathom'd essence, view'd the forms,
> The forms eternal of created things;
> The radiant sun, the moon's nocturnal lamp,
> The mountains, woods, and streams, the rolling globe,
> And Wisdom's mien celestial. From the first
> Of days, on them, his love divine, he fix'd
> His admiration, till, in time complete,
> What he admired and loved, his vital smile
> Unfolded into being. Hence, the breath
> Of life, informing each organic frame;
> Hence, the green earth, and wild resounding waves;
> Hence, light and shade alternate, warmth and cold,
> And clear autumnal skies, and vernal showers,
> And all the fair variety of things."*

It is in the writings of St Augustine, however,—who had himself imbibed a considerable portion of the spirit of the Platonic

* Pleasures of Imagination, Book I. v. 59—78.

philosophy,—that the true source of the hypothesis, which we are now reviewing, is to be found. This very eminent father of the church,—whose acuteness and eloquence would have entitled him to very high consideration, even though his works had related to subjects less interesting to man, than those noble subjects of which they treat,—seems to have met with peculiar honour from the French theologians, and to have given a very evident direction to their intellectual inquiries. It is indeed impossible to read the works of any of the theological metaphysicians of that country, without meeting with constant references to the opinions of St Austin, and an implied reference, even where it is not expressed,—particularly to the very opinions most analogous to those of Malebranche.

The opinion of Augustine, to which I particularly allude, is that which forms the principal doctrine of his metaphysical philosophy,—that there is a supreme eternal universal *Truth*, which is internally present to every mind, and in which all minds alike perceive the truths, which all alike are, as it were, necessitated to believe,—the truths of arithmetic and geometry, for example, and the primary essential truths of morality.

These truths we feel to be *eternal*, because we feel that they are not contingent on the existence of those who perceive them, but were, and are, and must forever be the same; and we feel also, that the *truth* is *one*, whatever be the number of individuals that perceive it, and is not converted into many truths, merely by the multitude of believers. "If," says he, in discoursing of any truth, I perceive that to be true which *you* say, and you perceive that to be true which *I* say,—where, I pray you, do we both see this at the very moment? I certainly see it not in you, nor you in me,—but both see it in that unchangeable truth, which is beyond and above our individual minds. "Si ambo videmus verum esse quod dicis, et ambo videmus verum esse quod dico, ubi, quæso, id videmus? Nec ego utique in te, nec tu in me; sed ambo in ipsa quæ supra mentes nostras est, incommutabili veritate."

You must not conceive that I am contending for the justness of the opinion which I am now stating to you—I state it merely as illustrative of the system of Malebranche. If we suppose, with Augustine, that there is *one eternal Truth*, which contains all truths,

and is present to all minds that perceive in it the truths which it contains, it is but one step more, and scarcely one step more, to believe that our ideas of all things are contained and perceived in one omnipresent Mind, to which all other minds are united, and which is itself the eternal Truth, that is present to all. Indeed, some of the passages which are quoted in the Search of Truth, from St Austin, show how strongly the author conceived his own opinions to be sanctioned by that ancient authority.

For some of the happiest applications which have been made of this very ancient system of Christian metaphysics, I may refer you particularly to the works of Fenelon,—to his demonstration of the existence of God, for example,—in which many of the most abstract subtleties of the Metaphysics of Augustine become *living* and *eloquent*, in the reasonings of this amiable writer, who knew so well how to give, to every subject which he treated, the tenderness of his own heart, and the persuasion and devout confidence of his own undoubting belief.

In this Protestant country, in which the attention of theologians has been almost exclusively devoted to the Scriptures themselves, and little comparative attention paid to the writings of the Fathers,—unless, as strictly illustrative of the texts of Scripture, or of the mere History of the Church,—the influence of the metaphysical opinions of St Austin is less to be traced; and the argument drawn from the eternal omnipresent ideas of unity, and number and infinity, on which so much stress is laid by Catholic philosophers, in demonstrating the existence of God, is hence scarcely to be found at all, or, at least, occupies a very inconsiderable place, in the numerous works of our countrymen, on the same great subject. The system of Malebranche, might, indeed have arisen in this country; for we have had writers, who, without his genius, have adopted his errors; but there can be no doubt, that it was, by its very nature, much more likely to arise in the country which actually produced it.

LECTURE XXXI.

HISTORY OF OPINIONS REGARDING PERCEPTION, CONCLUDED—ON THE EXTERNAL AFFECTIONS COMBINED WITH DESIRE, OR ON ATTENTION.

In my last Lecture, Gentlemen, I gave you a slight sketch of some theories,—or, to speak more accurately, of some hypothetical conjectures, which have been formed with respect to perception,—pointing out to you, at the same time, the two supposed difficulties which appear to me to have led to them, in false views of the real objects of perception, and of the nature of causation; the difficulty of accounting, with these false views, for the supposed perception of objects at a distance, and for the agency of matter on a substance, so little capable as mind, of being linked with it, by any common bond of connexion.

Of such hypotheses, we considered three,—the doctrine of the Peripatetics as to perception by *species*, or shadowy films, that flow from the object to the organ,—the Cartesian doctrine of the indirect subserviency of external objects, as the mere occasions on which the Deity himself, in every instance, produces in the mind the state which is termed perception,—and the particular doctrine of Malebranche, himself a zealous defender of that general doctrine of *occasional causes*, as to the perception of objects, or rather of the ideas of objects in the divine mind.

The only remaining hypothesis, which deserves to be noticed, is a very celebrated one, of Leibnitz, the doctrine of the *pre-established harmony*, which, I have no doubt, originated in the same false view of the necessity of some connecting link in causation; and was intended, therefore, like the others, to obviate the supposed difficulty of the action of matter on mind, and of mind on matter.

According to this doctrine, the body never acts on the mind, nor the mind on the body, but the motions of the one, and the feelings of the other, are absolutely independent, having as little influence on each other, as they have on any other mind and body. The mind feels pain, when the body is bruised, but, from the pre-established order of its own affections, it would have felt exactly the same pain, though the body, at that moment, had been resting upon roses. The arm, indeed, moves at the very moment, when the mind has *willed* its motion; but, it moves of *itself*, in consequence of its own pre-established order of movement, and would move, therefore, equally, at that very moment, though the mind had wished it to remain at rest. The exact correspondence of the motions and feelings, which we observe, arises merely from the exactness of the choice of the Deity, in uniting with a body, that was formed by Him, to have of itself, a certain order of independent motions, a mind, that was formed of itself to have a certain order of independent but corresponding feelings. In the unerring exactness of this choice, and mutual adaptation, consists the exquisiteness of the harmony. But, however exquisite, it is still a *harmony* only, without the slightest reciprocal action.

The mind, and its organic frame, are, in this system,—to borrow the illustration of it which is commonly used,—like two *time-pieces*, which have no connexion with each other, however accurately they may agree,—and each of which would indicate the hour, in the very same manner, though the other had been destroyed. In like manner, the soul of Leibnitz,—for the great theorist himself may surely be used to illustrate his own hypothesis,—would, though his body had been annihilated at birth, have felt and acted, as if with its bodily appendage,—studying the same works, inventing the same systems, and carrying on, with the same warfare of books and epistles, the same long course of indefatigable controversy;—and the *body* of this great philosopher, though his soul had been annihilated at birth, would not merely have gone through the same process of growth, eating, and digesting, and performing all its other ordinary animal functions,—but would have achieved for itself the same intellectual glory, without any consciousness of the works which it was writing and correcting,—would have argued, with equal strenuousness, for the principle of the sufficient reason,—claimed the honours of the dif-

ferential calculus,—and laboured to prove this very system of the *pre-established harmony*, of which it would, certainly, in that case, have been one of the most illustrious examples.

To say of this hypothesis, which was the dream of a great mind, —but of a mind, I must confess, which was very fond of dreaming, and very apt to dream,—that it is a *mere hypothesis*, is to speak of it too favourably. Like the doctrine of occasional causes, it supposes a system of external things, of which, by the very principle of the hypothesis, there can be no evidence, and which is absolutely of no utility whatever, but as it enables a philosopher to talk, more justly, of pre-established harmonies, without the possibility, however, of knowing that he is talking more justly. If the mind would have exactly the same feelings as now,—the same pleasures, and pains, and perceptions of men and houses, and every thing external, though every thing external, comprehending of course the very organs of sense, had been annihilated ages of ages before itself existed, what reason can there be to suppose, that this useless system of bodily organs, and other external things, exist at present? The universal irresistible belief of mankind, to which philosophers of a different school might appeal, cannot be urged in this case, since the admission of it, as legitimate evidence, would at once, disprove the hypothesis. We do not more truly believe, that light exists, than we believe, that it affects us with vision, and that, if there had been no light, there would have been no sensation of colour. To assert the pre-established harmony, is, indeed, almost the same thing, as to affirm and deny the same proposition. It is to affirm, in the first place, positively, that *matter exists*, since the harmony, which it asserts, is of matter and mind; and then to affirm, as positively, that its *existence is useless*, that it cannot be perceived by us, and that we are, therefore, absolutely incapable of knowing whether it exists or not.

After stating to you so many hypotheses, which have been formed on this subject, I need scarcely remark, what a fund of perpetual conjecture, and, therefore, of perpetual controversy, there is in the varied wonders of the external and internal universe, when it is so very difficult for a few philosphers to agree, as to what it is which gives rise to the simplest sensation of warmth, or fragrance, or colour. It might be thought, that, in the *intellectual opera*, if I may revert to that ingenious and

lively allegory, of which I availed myself in one of my early Lectures, in treating of general physical inquiry,—as the whole spectacle which we behold, is passing within our minds, we are, in *this* instance at least, fairly behind the scenes, and see the mechanism of Nature truly as it is. But though we are really behind the scenes, and even, in one sense of the word, may be said to be ourselves the movers of the machinery, by which the whole representation is carried on, still the minute parts and arrangements of the complicated mechanism are concealed from *our* view, almost as completely as from the observation of the distant spectators. The primary springs and weights, indeed, by the agency of which Phaeton seemed to be carried off by the winds, are left visible to us; and we know, that when we touch a certain spring, it will put in motion a concealed set of wheels, or that when we pull a cord, it will act upon a system of pullies, which will ultimately produce a particular effect desired by us; but what is the number of wheels or pullies, and how they are arranged and adapted to each other so as to produce the effect,—are left to our penetration to divine. On this subject we have seen, that as many grave absurdities have been formed into systems, and honoured with commentaries and confutations, as in the opera of external nature, at which, in the quotation formerly made to you, the Pythagorases and Platos were supposed to be present. "It is not a system of cords and pullies which we put in motion," says Aristotle, "—for to move such a heavy and distant mass would be beyond our power,—but only a number of little phantasms connected with them, which have the *form*, indeed, of cords and pullies, but not the *substance*, and which are light enough, therefore, to fly at our very touch."—"We do not truly move any wheels," says the great inventor of the System of Occasional Causes; "for, as we did not make the wheels, how can we know the principle on which their motion is to depend, or have such a command over them as to be capable of moving them? But when we touch a spring, it is the occasion on which the Mechanist himself, who is always present, though invisible, and who must know well how to move them, sets them instantly in motion."—"We see the motion," says Malebranche, "not by looking at the wheels or pullies,—for there is an impenetrable veil which hides them from us, but by looking at the Mechanist himself, who *must* see them, because He is the mover of them;

and whose eye, in which they are imaged as he gazes on them, must be a living mirror of all which he moves."—"It is not a spring that acts upon the wheels," says Leibnitz; "though, when the spring is touched, the wheels begin to move immediately, and never begin to move at any other time. This coincidence, however, is not owing to any connexion of one with the other; for, though the spring were destroyed, the wheels would move exactly as at present, beginning and ceasing at the same precise moments. It is owing to a *preestablished harmony of motion* in the wheels and spring; by which arrangement the motion of the wheels, though completely independent of the other, always begins at the very moment when the spring is touched."—"No," exclaims Berkeley, "it is all illusion. The wheels, and cords, and weights, are not seen because they exist, but exist because they are seen; and, if the whole machinery is not absolutely annihilated when we shut our eyes, it is only because it finds shelter in the mind of some other Being whose eyes are never shut,—and are always *open*, therefore, at the time when ours are closing."

From all this variety of conjectural speculations, the conclusion which you will perhaps have drawn most readily, is that which is too often the result of our researches in the History of Science,—that there may, as D'Alembert truly says, be a great deal of *philosophizing*, in which there is very little of *philosophy*.

I have now finished the remarks which I had to make on the very important class of our *external affections of mind*, as they may be considered *simply;* but it is not always simply that they exist; and, when they occur in combination with other feelings, the appearance which they assume is sometimes so different, as to lead to the erroneous belief, that the complex feeling is the result of a distinct power of the mind.

When, in my attempt to arrange the various feelings of which the mind is susceptible, I divided these into our *external* and *internal* affections, according as their causes are, in the one case, objects without the mind, and, in the other case, previous feelings, or affections of the mind itself: and subdivided this latter class of internal affections into the two orders of our *intellectual states* of mind, and our *emotions;* I warned you, that you were not to consider these as always arising separately, and as merely successive to each other;—that, in the same manner, as we may both see

and smell a rose, so may we see, or compare, or remember, while under the influence of some or other of our emotions; though, at the same time, by analysis, or at least by a reflective process that is similar to analysis, we may be able to distinguish the emotion from the coexisting perception, or remembrance, or comparison, —as we are able, by a very easy analysis, in like manner, when we both see and smell a rose, to distinguish in our complex perception, the fragrance from the colour and form.

There is *one* emotion, in particular, that is capable of so many modifications, and has so extensive a sway over human life, which it may be said almost to occupy from the first wishes of our infancy to the last of our old age, that it cannot fail to be combined with many of our other feelings, both sensitive and intellectual. The emotion to which I allude is *desire;* a feeling which may exist of various species and degrees, from the strongest passion of which the mind is susceptible, to the slightest wish of knowing a little more accurately the most trifling object before us;—and though, in speaking of it at present, I am anticipating what, according to the strict division which we have made, should not be brought forward till we consider the emotions in general, this anticipation is absolutely unavoidable for understanding some of the most important phenomena, both of perception, which we have been considering, and of those intellectual faculties which we are soon to consider. I need not repeat to you, that Nature is not to be governed by the systems which we form; that though our systematic arrangements ought not to be complicated, her phenomena are almost always so; and that, while every thing is thus intermixed and connected with every thing in the actual phenomena of mind as well as of matter, it would be vain for us to think of accommodating our physical discussions with absolute exactness, even to the most perfect divisions and subdivisions which we may be capable of forming. All that is necessary is, that we should not depart from our order of arrangement without some advantage in view, and an advantage greater than the slight evil which may arise from the appearance of temporary confusion.

The reason of my anticipation, in the present instance, is to explain to you what I conceive to constitute the phenomena of attention,—a state of mind which has been understood to imply the exercise of a peculiar intellectual power, but which, in the case

of attention to objects of sense, appears to be nothing more than the coexistence of desire, with the perception of the object to which we are said to attend; as, in attention to other phenomena of the mind, it is, in like manner, the coexistence of a particular desire with these particular phenomena. The desire, indeed, modifies the perception, rendering our feeling more intense, as any other emotion would do, that has equal relation to the object. But there is no operation of any power distinct from the desire and perception themselves.

To understand this fully, however, it may be necessary to make some previous remarks on the coexistence of sensations.

In the circumstances in which we are placed by our beneficent Creator, in a world of objects capable of exciting in us various feelings, and with senses awake to the profusion of delight,—breathing and moving in the midst of odours, and colours, and sounds, and pressed alike in gentle reaction, whether our limbs be in exercise or repose, by that firm soil which supports us, or the softness on which we rest,—in all this mingling action of external things, there is scarcely a moment in which any one of our feelings can be said to be truly simple.

Even when we consider but *one* of our organs, to the exclusion of all the others, how innumerable are the objects that concur in producing the complex affections of a single sense? In the eye, for example, how wide a scene is open to us, wherever our glance may be turned?—woods, fields, mountains, rivers, the whole atmosphere of light, and that magnificent luminary, which converts into light the whole space through which it moves, as if incapable of existing but in splendour. The mere opening of our eyelid is like the withdrawing of a veil, which before covered the universe:—It is more; it is almost like saying to the universe, which had perished, Exist again!

Innumerable objects, then, are constantly acting together on our organs of sense; and it is evident, that many of these can, at once, produce an effect of some sort in the mind, because we truly perceive them as a coexisting whole. It is not a single point of light only which we see, but a wide landscape; and we are capable of comparing various parts of the landscape with each other,—of distinguishing various odours in the compound fragrance of the meadow or the garden,—of feeling the harmony of various coexisting melodies.

The various sensations, then, may *coexist*, so as to produce one complex affection. When they do coexist, it must be remarked, that they are individually less intense. The same sound, for example, which is scarcely heard in the tumult of the day, is capable of affecting us powerfully if it recur in the calm of the night; not that it is then absolutely louder, but because it is no longer mingled with other sounds, and other sensations of various kinds, which rendered it weaker, by coexisting with it. It may be regarded, then, as a general law of our perceptions, that when many sensations coexist, each individually is less vivid than if it existed alone.

It may be considered almost as another form of the same proposition to say, that when many sensations coexist, each is not merely weaker, but less distinct from the others with which it is combined. When a few voices sing together, we easily recognize each separate voice. In a very full chorus, we distinguish each with more difficulty; and, if a great multitude were singing together, we should scarcely be able to distinguish any one voice from the rest, more than to distinguish the noise of a single billow, or a single dashing of a few particles of agitated air, in the whole thunders of the ocean and the storm.

When many sensations coexist, and are, therefore, of course weaker and less distinct, if any one were suddenly to become much more intense, the rest would fade in proportion, so as scarcely to be felt. A thousand faint sounds murmur around us, which are instantly hushed by any loud noise. If, when we are looking at the glittering firmament of suns in a winter night, any one of those distant orbs were to become as radiant as our own sun, which is itself but the star of our planetary system, there can be no question, that, like our sun on its rising, it would quench with its brilliancy, all those little glimmering lights, which would still shine on us, indeed, as before, but would shine on us without being perceived. It may be regarded, then, as another general law of the mind, that when many sensations coexist of equal intensity, the effect of the *increased* intensity of *one* is a *diminished* intensity of those which coexist with it.

Let us now, for the application of these remarks, consider, what it is which takes place in attention, when many objects are together acting on our senses, and we attend, perhaps, only to a

single sensation. As a mere description of the process, I cannot use a happier exemplification, than that which Condillac has given us in his *Logique*.

Let us imagine a castle, which commands, from its elevation, an extensive view of a domain, rich with all the beauties of nature and art. It is night when we arrive at it. The next morning our window-shutters open at the moment when the sun has just risen above the horizon,—and close again the very moment after.

Though the whole sweep of country was shewn to us *but for an instant*, we must have seen every object which it comprehends within the sphere of our vision. In a second or a third instant we could have received only the same impressions which we received at first; consequently, though the window had not been closed again, we should have continued to see but what we saw before.

This first instant, however, though it unquestionably shewed us all the scene, gave us no real knowledge of it; and, when the windows were closed again, there is not one of us who could have ventured to give even the slightest description of it,—a sufficient proof, that we may have seen many objects, and yet have learned nothing.

At length the shutters are opened again, to remain open while the sun is above the horizon; and we see once more what we saw at first. Even now, however, if, in a sort of ecstacy, we were to continue to see at *once*, as in the first instant, all this multitude of different objects, we should know as little of them when the night arrived, as we knew when the window shutters were closed again after the very moment of their opening.

To have a knowledge of the scene, then, it is not sufficient to behold it *all at once*, so as to comprehend it in a single gaze; we must consider it in *detail*, and pass successively from object to object. This is what Nature has taught us all. If she has given us the power of seeing many objects at once, she has given us also the faculty of looking but at one,—that is to say, of directing our eyes on one only of the multitude; and it is to this faculty,—which is a result of our organization, says Condillac,—that we owe all the knowledge which we acquire from sight.

The faculty is common to us all: and yet, if afterwards we were to talk of the landscape which we had *all* seen, it would be

very evident, that our knowledge of it would not be exactly the same. By some of us, a picture might be given of it with tolerable exactness, in which there would be many objects such as they were, and many, certainly, which had very little resemblance to the parts of the landscape which we wished to describe. The picture which *others* might give, would probably be so confused, that it would be quite impossible to recognize the scene in the description, and yet all had seen the same objects, and nothing but the same objects. The only difference is, that some of us had wandered from object to object irregularly, aud that others had looked at them in a certain order.

Now, what is this order? Nature points it out to us herself. It is the very order in which she presents to us objects. There are some which are more striking than others, and which, of themselves, almost call to us to look at them; they are the *predominant objects*, around which the others seem to arrange themselves. It is to them, accordingly, that we give our *first* attention; and when we have remarked their relative situations, the others gradually fill up the intervals.

We begin, then, with the principal objects; we observe them in succession; we compare them, to judge of their relative positions. When these are ascertained, we observe the objects that fill up the intervals, comparing each with the principal object, till we have fixed the positions of all.

When this process of successive, but regular observation, is accomplished, we know all the objects and their situations, and can embrace them with a single glance. Their order, in our mind, is no longer an order of mere succession; it is *simultaneous*. It is that in which they exist, and we see it at once distinctly.

The comprehensive knowledge thus acquired, we owe to the mere skill with which we have directed our eyes from object to object. The knowledge has been acquired in parts successively; but, when acquired, it is present at once to our mind, in the same manner, as the objects which it retraces to us, are all present to the single glance of the eye that beholds them.

The description which I have now given you, very nearly after the words of Condillac, is, I think, a very faithful representation of a process of which we must all repeatedly have been conscious. It

seems to me however, faithful as it is, as a mere description, to leave the great difficulty unexplained, and even unremarked. We see a multitude of objects, and we have one complex indistinct feeling. We wish to know the scene more accurately, and in consequence of this wish, though the objects themselves continue as before, we no longer seem to view them all, but only one, or a few; and the few, which we now see, we see more distinctly. Such I conceive to be the process; but the difference is, that though we seem to view only a few objects, and these much more distinctly, the field of the eye still comprehends a wide expanse, the light from which scarcely affects us, while the light from other parts of it, though not more brilliant, produces in us distinct perception. It is vain for Condillac to say, that it is in consequence of a faculty which we have of directing our eyes on one subject, a faculty which is the result of our organization, and which is common to all mankind; for, in the first place, if this direction of our eyes, of which he speaks, on a single object, be meant, in its strict sense, of the eye itself, which we direct, it is not true that we have any such faculty. We cannot direct our eyes so as not to comprehend equally in our field of vision, many objects beside that single object which is supposed to have fixed our attention; and if, by the direction of our eyes, be meant the exclusive or limited perception by our mind itself, there remains the difficulty,—how it happens, that while light from innumerable objects falls on our retina as before, it no longer produces any distinct vision relatively to the objects from which it comes,—while light certainly not more brilliant, from other objects, produces vision much more distinct than before. Let us consider this difficulty which, in truth, constitutes the principal phenomenon of attention, a little more fully.

When Condillac speaks of the faculty of the mind, by which he supposes it capable of directing the eye, exclusively, on certain objects, he must speak of that only, of which we are conscious, previously to the more distinct perception of those objects, as certain parts of the scene.

What is it, then, of which we are conscious, between the indistinct perception of the wide scene, and the distinct perception of parts of the scene?

In the first place, there is a general desire of knowing the

scene more accurately. This is the primary feeling of the process of attention. But this primary feeling is soon succeeded by others. Indistinct as the whole complex scene may be, some parts of it more brilliant, or more striking in general character, are less indistinct than others. There are a few *more prominent parts*, as Condillac says, around which the rest are indistinctly arranged.

With some *one* of these, then, as in itself more impressive and attractive, we begin; our general desire of knowing the whole scene having been followed by a wish to know this principal part more accurately.

The next step is to prevent the eye itself from wandering, that no new objects may distract it, and that there may be as little confusion as possible of the rays from different objects, on that part of the retina, on which the rays fell from the particular object which we wish to consider. We fix our eyes, therefore, and our whole body, as steadily as we can, by the muscles subservient to these purposes.

So far, unquestionably, no new faculty is exercised. We have merely *the desire* of knowing the scene before us,—the selection of some prominent object, or rather the mere perception of it, as peculiarly prominent,—the desire of knowing it particularly,—and the contraction of a few muscles, in obedience to our volition.

No sooner, however, has all this taken place, than instantly, or almost instantly, and without our consciousness of any new and peculiar state of mind intervening in the process, the landscape becomes to our vision altogether different. Certain parts only, those parts which we wished to know particularly, are seen by us; the remaining parts seem almost to have vanished. It is as if every thing before had been but the doubtful colouring of enchantment, which had disappeared, and left to us the few prominent realities on which we gaze; or rather, it is as if some instant enchantment, obedient to our wishes, had dissolved every reality besides, and brought closer to our sight the few objects which we desired to see.

Still, however, all of which we are truly conscious, as preceding immediately the change of appearance in the scene, is the mere desire, of which I have spoken, combined certainly with expectation of that more distinct vision which follows. There may

be a combination of feelings, but no new and peculiar feeling, either as simple, or coexisting with other feelings,—no indication, in short, of the exercise of *new power*.

Even though we should be incapable, therefore, of understanding how the desire should have this effect, it would not be the less true, that the desire of knowing accurately a particular object in a group, is instantly,—or, at least, instantly after some organic change which may probably be necessary,—followed by a more vivid and distinct perception of the particular object, and a comparative faintness and indistinctness of the other objects that coexist with it; and that what we call attention is nothing more.

Are the comparative distinctness and indistinctness, however, a result which we had no reason to expect? or are they not rather what might, in some degree at least, have been expected, from our knowledge of the few physical facts with respect to our co-existing sensations, which I have already pointed out to you, and from the circumstance which we are next to consider? We have seen, in the observations already made by us, that many co-existing perceptions are indistinct, and that when *one* becomes more vivid, the others become still fainter. All that is necessary, therefore, is to discover some cause of increased vividness of that one to which we are said to attend.

If we can discover any reason why *this* should become more vivid, the comparative indistinctness of the other parts of the scene may be considered as following of course.

Such a cause exists, unquestionably, in that feeling of desire, without which there can be no attention. To attend, is to have a desire of knowing that to which we attend, and attention without desire is a verbal contradiction,—an inconsistency, at least, as great as if we were said to desire to know without any desire of knowing, or to be attentive without attention.

When we attend, then, to any part of a complex group of sensations, there is always an emotion of desire, however slight the emotion may be, connected exclusively with that particular part of the group to which we attend; and whatever effect our emotions produce on the complex feelings that accompany them, we may expect to be produced, in some greater or less degree, by the desire in the complex process which we term attention.

The effect which our expectation might anticipate, is the very effect that is truly found to take place,—an increased liveliness of that part of the complex group, to which alone the desire relates.

That it is the nature of our *emotions* of every sort, to render *more vivid* all the mental affections with which they are peculiarly combined, as if their own vivacity were in some measure divided with these, every one who has felt any strong emotion, must have experienced. The eye has, as it were, a double quickness, to perceive what we love or hate, what we hope or fear. Other objects may be seen slightly; but these, if seen at all, become instantly permanent, and cannot appear to us without impressing their presence, as it were, in stronger feeling on our senses and our soul.

Such is the effect of emotion, when combined even with sensations that are of themselves, by their own nature, vivid; and mark, therefore, less strikingly, the increase of vividness received. The vivifying effect, however, is still more remarkable, by its relative proportion, when the feelings with which the emotion is combined, are in themselves peculiarly faint, as in the case of mere memory or imagination. The object of any of our emotions, thus merely conceived by us, becomes, in many cases, so vivid, as to render even our accompanying perceptions comparatively faint. The mental absence of *lovers*, for example, is proverbial; and what is thus termed in popular language *absence*, is nothing more than the greater vividness of some mere conception, or other internal feeling, than of any, or all of the external objects present at the time, which have no peculiar relation to the prevailing emotion.

"The darkened sun
Loses his light; The rosy-bosom'd Spring
To weeping Fancy pines; and yon bright arch
Contracted, bends into a dusky vault.
All nature fades, extinct; and she alone,
Heard, felt, and seen, possesses every thought,
Fills evere sense, and pants in every vein.
Books are but formal dulness,—tedious friends,
And sad amid the social band he sits
Lonely and unattentive. From his tongue
The unfinish'd period falls; while, borne away

On swelling thought, his wafted spirit flies
To the vain bosom of his distant Fair;
And leaves the semblance of a lover, fix'd
In melancholy site, with head declined
And love-dejected eyes."*

What brighter colours the fears of *superstition* give to the dim objects perceived in twilight, the inhabitants of the village who have to pass the churchyard at any late hour, and the little students of ballad lore, who have carried with them, from the nursery, many tales which they almost tremble to remember, know well. And in the second sight of this northern part of the island, there can be no doubt, that the objects which the seers conceive themselves to behold, truly are more vivid, as conceptions, than, but for the superstition and the melancholy character of the natives, which harmonize with the objects of this gloomy foresight, they would have been; and that it is in consequence of this brightening effect of the emotion, as concurring with the dim and shadowy objects which the vapoury atmosphere of our lakes and vallies presents, that fancy, relatively to the individual, becomes a temporary reality. The *gifted eye*, which has once believed itself favoured with such a view of the future, will, of course, ever after have a *quicker foresight*, and more frequent revelations; its own wilder emotion communicating still more vivid forms and colours to the objects which it dimly perceives.

On this subject, however, I need not seek any additional illustration. I may fairly suppose you to admit, as a general physical law of the Phenomena of Mind, that the influence of every emotion is to render *more vivid* the perception or conception of its object.

I must remark, however, that when the emotion is *very violent*, as in the violence of any of our fiercer passions, though it still renders every object, with which it harmonizes, more vivid and prominent, it mingles with them some degree of its own confusion of feeling. It magnifies and distorts; and what it renders brighter, it does not therefore render more distinct.

"The flame of passion, through the struggling soul
Deep-kindled, shews across that sudden blaze

* Thomson's Seasons—Spring, v. 1006—1021.

The object of his rapture, vast of size,
With fiercer colours and a night of shade."*

The species of desire which we are considering, however, is not of this fierce and tempestuous kind.

Emotions of a calmer species have the *vivifying* effect, without the *indistinctness;* and precisely of this degree is that desire which constitutes attention as coexisting with the sensations, or other feelings to which we are said to attend.

We have found, then, in the desire which accompanies attention, or rather which chiefly constitutes it, the cause of that increased intensity which we sought.

When all the various objects of a scene are of themselves equally, or nearly equally, interesting or indifferent to us, the union of *desire*, with any particular perception of the group, might be supposed, *a priori*, to render this perception in some degree more vivid than it was before. It is not necessary that this difference of vividness should take place *wholly*, or even be very striking, in the first instant; for, by becoming in the first instant even slightly more vivid, it acquires additional colouring and prominence, so as to increase that interest, which led us originally to select it for our first minute observation, and thus to brighten it more and more progressively. Indeed, when we reflect on our consciousness during what is called *an effort of attention*, we feel that some such progress as this really takes place, the object becoming gradually more distinct while we gaze, till at length it requires a sort of effort to turn away to the other coexisting objects, and to renew with them the same process.

Attention, then, is not a simple mental state, but a process, or a combination of feelings. It is not the result of any peculiar power of the mind, but of those mere laws of perception, by which the increased vividness of one sensation produces a corresponding faintness of others coexisting with it, and of that law of our emotions, by which they communicate greater intensity to every perception, or other feeling, with which they coexist and harmonize.

* Pleasures of Imagination, Book II. v. 137—140.

LECTURE XXXII.

ON THE EXTERNAL AFFECTIONS OF MIND COMBINED WITH DESIRE, CONTINUED.—ON THE INTERNAL AFFECTIONS OF MIND.—CLASSIFICATION OF THEM.

In my last Lecture, Gentlemen, I concluded my sketch of the different hypotheses of philosophers with respect to perception, with an account of that Pre-established Harmony, by which Leibnitz, excluding all reciprocal agency of mind and matter, endeavoured to account for the uniform coincidence of our mental feelings with our bodily movements,—an hypothesis which, though it does not seem to have gained many followers out of Germany, produced the most enthusiastic admiration in the country of its author. I may remark by the way,—as a very striking example of the strange mixture of seemingly opposite qualities, which we frequently find in the character of nations,—that, while the country, of which I speak, has met with ridicule,—most unjust in degree, as national ridicule always is,—for the heaviness of its laborious erudition, it must be allowed to surpass all other countries in the passionate enthusiasm of its philosophy, which, particularly in metaphysics, from the reign of Leibnitz to the more recent worship paid to the transcendentalism of Kant, seems scarcely to have admitted of any calm approbation, or to have known any other inquirers than violent partisans and violent foes.

After my remarks on this hypothesis, which closed my view of our external affections of mind, as they exist simply, I next proceeded to consider them, as they exist, combined with desire, in that state of the mind, which is termed *attention*,—a state which has been supposed to indicate a peculiar intellectual power, but which,

I endeavoured to shew you, admits of being analyzed into other more general principles.

It is to our consciousness, of course, that we must refer for the truth of any such analysis; and the process which it reveals to us, in attention, seems, I think, to justify the analysis which I made, indicating a combination of simpler feelings, but not any new and distinct species of feeling, to be referred to a peculiar faculty.

We see many objects together, and we see them indistinctly. We wish to know them more accurately,—and we are aware, that this knowledge can he acquired only in detail. We select some one more prominent object, from the rest,—or rather, without any selection on our part, this object excites, in a higher degree, our desire of observing it particularly, merely by being more prominent, or, in some other respect, more interesting than the rest. To observe it particularly, we fix our body, and our eyes, —for it is a case of vision which I have taken for an example,— as steadily as possihle, that the light from the same points of the ohject may continue to fall on the same points of the retina. Together with our wish, we have an expectation, the natural effect of uniform past experience, that the object will now be more distinctly perceived hy us; and, in accordance with this expectation, when the process, which I have described, is completed, the object, as if it knew our very wish, and hastened to gratify it, does become more distinct; and, in proportion as it hecomes thus more vivid, the other objects of the group become gradually fainter, till at length they are scarcely felt to he present. Such, without the intervention of any new and peculiar state of mind, is the mental process, as far as we are conscious of it; and, if this be the process, there is no reason to infer in it the operation of any power of the mind different from those which are exercised in other cases. The general capacities of perception, and desire, and expectation, and voluntary command of certain muscles, which, on every view of the phenomena of attention, we must allow the mind to possess, are, of themselves, sufficient to explain the phenomena, and preclude, therefore, any further reference.

The hrightening of the objects to which we attend, that is to say, of the objects which have interested us, and which we feel a *desire* of knowing, and the consequent fading of the other coexisting objects, I explained, by the well known influence, not of de-

sire merely, but of all our emotions, in rendering more vivid those objects of perception or fancy, with which they harmonize; and I illustrated this influence by various examples.

The phantasms of imagination, in the reveries of our waking hours, when our external senses are still open, and quick to feel, are, as mere conceptions, far less vivid than the primary perceptions, from which they originally flowed; and yet, under the influence of any strong emotion, they become so much more bright and prominent than external things, that, to the impassioned muser, on distant scenes and persons, the scenes and persons truly around him, are almost, as if they were not in existence. If a mere conception, then, faint as it must always be by its own nature, can thus be rendered more vivid than reality, by the union of any strong *desire*, it is surely less wonderful, that the same cause should communicate the same superior vividness to the brighter realities of perception. If what we remember with interest, and wish to see again, become so much more vivid in our fancy, merely by this very wish, that we scarcely perceive any one of the innumerable objects before our eyes, what we truly see, in its own lively colouring, and feel a strong desire of knowing more intimately, may well be supposed to render us less sensible to the other coexisting objects, which the very shadows of our imagination, when brightened by a similar desire, were able mutually to annihilate or eclipse.

In addition to this direct vivifying influence of the desire itself, some part,—and, perhaps a very considerable part—of the brightening of the object, during attention, may arise indirectly from the mere muscular adaptation of the organ. I do not speak merely of that *internal* adaptation, whatever it may be, which accommodates the organ to the object, and, therefore, varies with the distance of the object, but of that simpler contraction, which keeps the organ, as a whole, steadily fixed. It is proved by many facts, that a certain time is necessary, for vision, and, probably, in like manner, for all our perceptions. A cannon ball, for example, though it must have reflected light to us, during its passage, may yet pass before our eyes, so rapidly, as not to be perceived; and, if a part of the eye be affected, in a certain manner, by one colour, and a different colour fall upon it so rapidly after the first, that the former affection has not previously ceased, the result is

not the visual affection, which the second colour alone would have produced, but that which would have arisen at once from a mixture of the two colours. In this way, in an experiment which has been often performed, for the demonstration of this simple and beautiful fact; if a cylinder be painted in longitudinal bars, with the prismatic colours, in certain proportions, and be revolved rapidly on its axis, its surface to the eye will not seem to present any one of the colours, which are really painted on it, but an uniform *whiteness*, which it has not, on a single point of its whole surface.

If rays of different colours, falling in rapid succession, on the same points of the retina, thus seem to mingle with each other, and produce one confused effect, it must evidently be of great importance, for distinct vision, that the eyes should be so fixed, that the rays from the objects which we wish to observe, may not fall, on some parts of the retina, previously affected by the light of other objects, but, as much as possible, on the same parts, during the whole time of our observation. This can be done, as I have said, only by the continued agency of certain muscles; and hence arises that feeling of *muscular effort*, of which we are conscious in the process. How difficult is it for us, to keep a muscle, for any length of time, in the same exact point of contraction, without the slightest deviation from this point, is well known to physiologists; and, it is not wonderful, therefore, that in attention, we should be conscious of a considerable effort, in endeavouring to fix steadily any of our organs. The power of thus fixing our muscles, is a power which improves by habitual exercise; and it is probably very much in this way, that the *practised* eye is able so rapidly to distinguish the minute parts of objects, which require from others a much longer effort of attention.

But, whatever the effect of the *muscular adaptation* may be, it is not the less certain, if we reflect on our feelings, that the mental part of the process of attention involves nothing more, in addition to the primary perception, which is its object, than *desire with expectation*. This is all of which we are truly conscious, previously to the brightening of the perception itself, to which we are said to attend;—a brightening, which, from the general laws of emotion, might very naturally be expected as the result of the union of desire, with any of our sensations. In such circumstan-

ces, then, it is not wonderful, that we should remember best the objects to which we pay most attention, since this is only to say, that we remember best the objects on which we have dwelt longest, and with greatest interest, and which we have, therefore, known most accurately.

Such are our sensations or perceptions, when united with desire, exhibiting appearances, which seem, at first, to indicate, though they do not truly indicate, a peculiar power or susceptibility of the mind. We shall find, in considering our intellectual states of mind, the order of mental phenomena, to which we next proceed, that the union of *desire* with these, has led, in like manner, to the belief of many distinct intellectual powers, which yet, like *attention*, admit of being analyzed into simpler elements. These intellectual phenomena themselves, in their simple state, must, however, be first examined by us.

Having now, then, offered all the observations for which our limited course allows me room, on the very important *primary* class of external affections of the mind, I proceed according to our general division, to consider the *secondary* class of its internal affections; those states of it, which are not the result of causes foreign to the mind itself, but immediate consequents of its own preceding feelings.

The Divine Contriver of our mental frame, who formed the soul to exist in certain states, on the presence of external things, formed it also to exist, in certain successive states, without the presence or direct influence of any thing external; the one state of the mind, being, as immediately the cause of the state of mind which follows it, as, in our external feelings, the change produced, in our corporeal organ of sense, is the cause of any one of the particular affections of that class. In the one class, that of our internal affections, the phenomena depend on the laws which regulate the successive changes of state of the mind itself. In the other class, that of our external affections, they depend on the laws of the *mind*, indeed, which is susceptible of these peculiar changes of state; but they depend, in an equal degree, on the laws which give to *matter* its peculiar qualities, and, consequently, its peculiar influence on this mental susceptibility. If light were to be annihilated, it is very evident, that, though our mind itself were to continue endowed with all its present susceptibilities, it

never again could behold the sun, around whose cold and gloomy mass our earth might still revolve as now; nor, in such circumstances, is there any reason to suppose that it would exist in any one of those various states, which constitute the delightful sensations of vision. These sensations, then, depend on *external* things, as much as on the *mind itself*. But, though after we have once been enriched with the splendid acquisitions, which our perceptive organs afford us, every thing external were to vanish, not from our sight merely, but from all our senses, and our mind alone were to exist in the infinity of space, together with that Eternal Majesty which formed it, —still thought after thought, and feeling after feeling, would arise, as it were, spontaneously, in the disembodied spirit,—if no change in its nature were to take place; and the whole world of light, and fragrance, and harmony, would, in its remembrance, almost rise again, as if outliving annihilation itself. It is by this capacity of internal change of state, indeed, that the soul is truly immortal, which, if it were capable of no affections, but those which I have termed external, would itself be virtually as mortal as all the mortal things that are around it; since, but for them, as causes of its feelings, it could not, in these circumstances, of complete dependence, have any feelings whatever, and could, therefore, exist only in that state of original insensibility, which preceded the first sensation that gave it consciousness of existence. It is, in the true sense of immortality of life, immortal, only because it depends for its feelings, as well as for its mere existence, not on the state of perishable things, which are but the atmosphere that floats around it, but on its own independent laws; or, at least,—for the laws of mind, as well as the laws of matter, can mean nothing more,—depends, for the successions of its feelings, only on the provident arrangements, of that *All-foreseeing Power* whose will, as it existed at the very moment at which it called every thing from nothing, and gave to mind and matter their powers and susceptibilities, is thus, consequently, in the whole series of effects, from age to age, the eternal legislation of the universe.

Even while our soul is united to this bodily frame, and continually capable of being affected by the objects that are continually present with it, by far the greater number of our feelings are those which arise from our *internal* successions of thought. Innumerable as our perceptions are, they are but a small part of the

varied consciousness of a day. We do not see, or feel, objects merely, for this alone would be of little value,—but we compare them with each other,—we form plans of action, and prosecute them with assiduous attention,—or we meditate on the means by which they may most effectually be prosecuted; and with all our perceptions of external things, and plans of serious thought, a continued fairy work of involuntary fancy, is incessantly mingling, in consequence of the laws of suggestion in the mind itself, like the transient shadows, on a stream, of the clouds that fled over it, which picture on it their momentary forms, as they pass in rapid variety, without affecting the course of the busy current, which glides along in its majestic track, as if they had never been. If we had the power of *external* sense only, life would be as passive as the most unconnected dream, or rather far more passive and irregular than the wildest of our dreams. Our remembrances, comparisons, our hopes, our fears, and all the variety of our thoughts and emotions, give a harmony and unity to our general consciousness, which make the consciousness of each day a little drama, or a connected part of that still greater drama, which is to end only with the death of its hero, or rather with the commencement of his glorious apotheosis.

How wide a field the internal affections of the mind present, without dependence on the system of material things,—with which we are connected, indeed, by many delightful ties, but by ties that have relation only to this mortal scene,—is proved in a very striking manner, by the increased energy of thought which we often seem to acquire in those hours of the quiet of the night, when every *external* influence is nearly *excluded*,—the hours of inward meditation, in which the mind has been poetically said, to retire into the sanctuary of its own immense abode, and to feel there and enjoy its spiritual infinity, as if admitted to the etherial dwellings and the feasts of the Gods.

> " Nonne vides, quoties nox circumfunditur atra
> Immensi terga Oceani terramque polumque,
> Cum rerum obduxit species obnubilus Aer
> Nec fragor impulsas aut vox allabitur aures,
> Ut nullo intuitu mens jam defixa, recedit
> In sese, et vires intra se colligit omnes?
> Ut magno hospitio potitur, seque excipit ipsa
> Totam intus; seu jussa Deum discumbere mensis.

Nam neque sic illam solido de marmore tecta
Nec cum porticibus capiunt laquiaria centum
Aurea, tot distiucta locis, tot regibus apta,
Quæsitæque epulæ, Tyrioque instructus ab ostro;
Ut gaudet sibi juncta, sibique intenditur ipsa,
Ipsa sibi tota incumbens, totamque pererrans
Immensa immensam spatio longeque patentem.
Seu dulces inter latebras Heliconis amæni,
Et sacram Phœbi nemorum divertitur umbram,
Fœcundum pleno exercens sub pectore numen;
Seu causas rerum occultas, et semina volvit,
Et queis fœderibus conspirent maximus Æther
Neptunusque Pater, Tellusque, atque omnia gignant;
Sive altum virtutis iter subducit, et almus
Molitur leges, queis fortunata juventus
Pareat, ac pace imperium tutetur et armis."*

The *internal* states of mind, then, which form the class next to be considered by us, present to our inquiry no narrow or uninteresting field. We are to find in these again every thing, though in fainter colours, which delighted and interested us in the former class; while we are, at the same time, to discover, an abundant source of feelings still more delightful and suhlime in themselves, and still more interesting to our analysis. We are no longer mere *sensitive* beings, that *gaze* upon the universe, and feel pain or pleasure as a few of its elementary particles touch our nerves. We are the discoverers of laws, which every element of the universe obeys,—the tracers of events of ages that are past, —the calculators and prophets of events, that are not to occur till generation after generation of the prophetic calculators that succeed us shall themselves have passed away;—and, while we are thus able to discover the innumerable relations of created things, we are, at the same time, by the medium of these internal states of our own mind, the *discoverers* also of that *Infinite Being*, who framed every thing which it is our glory to be capable merely of observing, and who, without acting directly on any of our organs of sense, is yet present to our intellect with as bright a reality of perception, as the suns and planets which he has formed are present to our corporeal vision.

* D. Heinsius. De Contemptu Mortis, Lib. i.

The species of philosophical inquiry, which our *internal* affections of mind admit, is exactly the same as that which our *external* affections admit; that is to say, we are in our inquiry, to consider the circumstances in which they arise, and the circumstances which follow them, with the relations which they appear to us mutually to bear to our *external* feelings, and to each other, and nothing more. It is as little possible for us, independently of experience, to discover *a priori*, any reason that one state of mind should be followed directly by another state of mind, as, in the case of our external feelings, to discover any reason, that the presence of light should be followed by that particular mental state which constitutes the sensation of colour, not by that which constitutes the perception of the song of a nightingale, or the fragrance of a violet,—or that those external causes should be followed by their peculiar sensations, rather than by the perception of colour. It is equally vain for us to think of discovering any reason, in the nature of the mind itself, which could have enabled us to *predict*, without actual experience, or, at least, without analogy of other similar instances, any of the mere intellectual changes of state,—that the sight of an object, which we have seen before in other circumstances, should recal, by instant spontaneous suggestion, those other circumstances which exist no longer;—that in meeting, in the most distant country, a native of our own land, it should be in our own power, by *a single word* to *annihilate*, as it were, for the moment, all the seas and mountains between him and his home;—or, in the depth of the most gloomy dungeon, where its wretched tenant, who has been its tenant for half a life, sees, and scarcely sees, the few faint rays that serve but to speak of a sunshine, which he is not to enjoy, and which they deprive him of the comfort of forgetting, and to render visible to his very eyes that wretchedness which he feels at his heart,—that even this creature of misery,—whom no one in the world perhaps remembers but the single being, whose regular presence, at the hour at which he gives him, day by day, the means of adding to his life another year of wretchedness like the past, is scarcely felt as the presence of another living thing,—should yet, by the influence of a single thought, enter into the instant possession of a freedom beyond that which the mere destruction of his dungeon could give,—a freedom which restores him not merely to the *liberty*, but to

the very *years* which he had lost,—to the woods, and the brook, and the fields of his boyish frolics, and to all the happy faces which were only as happy as his own. The innumerable examples of such successions of thought we know from experience, but from experience only. It is enough for us, however, to ascertain the simple fact, that the internal suggestions of thought after thought, without the recurrence of any external object *does* take place, as truly as sensation itself, when external objects recur,—to observe the general circumstances relating to the suggestion,—and to arrange the principle on which it seems to depend, as a principle of our intellectual constitution. While we attempt no more than this, we are certain at least that we are not attempting any thing which is beyond the sphere of human exertion. To attempt *more*, and to strive to discover, in any one of the series of our internal feelings, some reason which might have led us originally to *predict* its existence, or the existence of the other mental affections which succeed it, would be to hope to discover, what is not merely beyond our power even to divine, but what we should be incapable of knowing that we *had* divined, even though we should *casually* have succeeded in making the discovery.

In the classification of our internal feelings, as in every classification, and, indeed, in every thing, intellectual or moral, which can exercise us, it is evident, that we may err in *two* ways, by excess or deficiency. We may multiply divisions without necessity, or we may labour in vain to force into one division individual diversities, which cannot, by any labour, be made to correspond. The *golden mean*, of which moralists speak, is as important in *science*, as in our practical views of happiness; and the habit of this cautious speculative moderation, is, probably, of as difficult attainment in the one, as the habitual contentment which is necessary to the enjoyment of the other.

When we think of the infinite variety of the physical objects around us, and of the small number of classes in which they are at present arranged, it would seem to us, if we were ignorant of the history of philosophy, that the regular progress of classification must have been to simplify, more and more, the general circumstances of agreement, on which arrangement depends; that, in this progressive simplification, millions of diversities must have been originally reduced to thousands,—these, afterwards, to hun-

dreds,—and these again, successively, to divisions still more minute. But, the truth is, that this simplicity of division is far from being so progressive in the arrangement even of external things. The first steps of classification must, indeed, uniformly be, to reduce the great multitude of obvious diversities to some less extensive tribes. But the mere guess-work of hypothesis soon comes in to supply the place of laborious observation or experiment, and of that slow and accurate reasoning on observations and experiments, which, to minds of very rapid imagination, is perhaps, a labour as wearisome, as, in the long observation itself, to watch for hours, with an eye fixed like the telescope through which it gazes, one constant point of the heavens, or to minister to the furnace, and hang over it in painful expectance of the transmutations which it tardily presents. By the unlimited power of an hypothesis, we in a moment range together, under one general name, myriads of diversities the most obstinately discordant; as if the mere giving of a name could of itself alter the qualities of things, making similar what was dissimilar before, like words of magic, that convert any thing into any thing. When the hypothesis is proved to be false, the temporary magic of the spell is of course dissolved; and all the original diversities appear again, to be ranged once more in a wider variety of classes. Even where, without any such guess-work of hypothetical resemblance, divisions and arrangements have been formed on the justest principles, according to the qualities of objects known at the time, some new observation, or new experiment, is continually shewing differences of composition or of general qualities, where none were conceived before; and the same philosophy is thus, at the same moment, employed in uniting and disuniting,—in reducing many objects to a few, and separating a few into many,—as the same electric power, at the moment in which it is *attracting* objects nearer to it, *repels* others which were almost in contiguity, and often brings the same object close to it, only to throw it off the next moment to a greater distance. While a nicer artificial analysis, or more accurate observation, is detecting unsuspected resemblances, and, still more frequently, unsuspected diversities, there is hence no fixed point nor regular advance, but a sort of ebb and flow of wider and narrower divisions and subdivisions; and the classes of an intervening age may be fewer than the classes both of the age which

preceded it, and of that which comes after it. For a very striking example of this alternation, I may refer to the history of that science, which is to matter what our intellectual analysis is to mind. The elements of bodies have been more and fewer successively, varying with the analyses of almost every distinguished chemist; far from having fewer principles of bodies, as chemistry advances, how many more *elements* have we now than in the days of Aristotle! There can be no question, that when man first looked around him with a philosophic eye, and saw, in the sublime rudeness of nature, something more than objects of savage rapacity, or still more savage indifference, he must have conceived the varieties of bodies to be innumerable; and could as little have thought of comprehending them all under a few simple names, as of comprehending the whole earth itself within his narrow grasp. In a short time, however, this narrow grasp, if I may venture so to express myself, did strive to comprehend the whole earth; and soon after man had made the first great advance in science, of wondering at the infinity of things in which he was lost, we had sages, such as Thales, Anaximenes, and Heraclitus, who were forming every thing of a *single principle*,—water, or air, or fire. The four elements, which afterwards reigned so long in the schools of physics, gave place to a *single principle* with the alchemists; or to three principles,—*salt*, *sulphur*, and *mercury*,—with chemists less bold in conjecture. These, again, were soon multiplied by observers of still nicer discrimination; and modern chemistry, while it has shewn some bodies, which we regarded as different, to be composed of the same elements, has, at the same time, shewn, that what we regarded as *elements*, are themselves compounds of elements which we knew not before.

To him who looks back on the history of our own science, the analytic science of mind, which, as I have already said, may almost be regarded, in its most important aspects, as a sort of intellectual chemistry,—there will appear the same alternate widening and narrowing of classification. The mental phenomena are, in one age or country, of many classes; in a succeeding age, or in a different country, they are of fewer; and again, after the lapse of another age, or the passage of a river or a mountain, they are of many more. In our own island, after the decay of scholastic metaphysics, from *Hobbes* to *Hume*,—if I may use these names, as dates

of eras, in a science, on which, with all their unfortunate errors on many of the most important points of human belief, they both unquestionably threw a degree of light, which rendered their errors on these subjects the more to be lamented,—in this long and brilliant period,—which, of course, includes, with many other eminent names, the very eminent author of the *Essay on the Human Understanding*,—there was a tendency to simplify, as much as possible, the classification of the phenomena of mind; and more regard, perhaps, was paid to the similarities of phenomena, than to their differences. Subsequently to this period, however, the philosophy of Dr Reid, and, in general, of the metaphysicians of this part of the island, has had the opposite tendency,—to enlarge, as I conceive, far beyond what was necessary, the number of classes which they considered as too limited before;—and, in proportion, more regard has perhaps been paid to the differences, or supposed differences of phenomena, than to their resemblances. There can be no doubt, at least, that we are now accustomed to speak of more powers or operations of the mind, than even the schoolmen themselves, fond as they were of all the nicest subtleties of infinitesimal subdivision.

The difference in this respect, however, is not so striking, when we consider successions of ages, in which, of course, from our general notion of the effects of time, we are accustomed to expect variety, as when we look to neighbouring countries at the same period, especially if we consider the advantage of that noble art, which might have been supposed, by the wide diffusion which it gives to opinion, to have removed, as to human sentiment, all the boundaries of mere geographic distance. Slight, however, as the distance is which separates the two countries, the philosophy of France, in its views of the phenomena of mind, and the philosophy of Britain, particularly of this part of Britain, have for more than half a century differed as much, as in the philosophy of different ages; certainly in a degree far greater, than, but for experience, it would have been easy for us to suppose. In France, all the phenomena of mind have been, during that period, regarded as sensations, or transformed sensations, that is to say, as sensations variously simplified or combined. The works of Condillac, who professed to have founded his system on that of Locke, but who evidently did not understand fully what Locke intended, gave

the principal tone to this philosophic belief; and it has been fostered since by that passion for the simple and the wonderful, which, when these two objects can be united, is perhaps the strongest of all our intellectual passions. In the system of the French metaphysicians, they are united in a very high degree. That this universal presence of sensation, whether true or false, is at least very *simple*, cannot be denied; and there is certainly abundant matter of wonder in the supposed discovery, that all the variety of our internal feelings are those very feelings of a different class, to which they have so little appearance of belonging. It is a sort of perpetual masquerade, in which we enjoy the pleasure of recognizing a familiar friend in a variety of grotesque dresses, and the pleasure also of enjoying the mistakes of those around us, who take him for a different person, merely because he has changed his robe and his mask. The fallacy of the doctrine is precisely of that kind, which, if once admitted, is most difficult to be shaken off. It relates to a system which is very simple, very wonderful, and obviously true in part. Indeed, when there are so many actual transformations of our feelings, so many emotions, of which the principal elements are so little recognizable, in the complex affection that results from them,—the supposition that all the varieties of our consciousness may be only modes of one simple class of primary feelings, false as it is, is far from being the most striking example which the history of our science presents of the extravagance of philosophic conjecture.

The speculations of the French school of philosophers, to which I have now alluded, as to the supposed universal transmutations of feeling, bear, as you can scarcely fail to have remarked, a very obvious resemblance, in extreme simplicity, to the speculations of alchemists on transmutations of another kind. The resemblance is stated with great force by a living French author, himself a metaphysician of no humble rank. I allude to a passage which you will find quoted by Mr Stewart, in one of the valuable preliminary dissertations of his volume of Essays, from a work of De Gerando.

"It required nothing less,"—says this ingenious writer,—"than the united splendour of the discoveries brought to light by the new chemical school, to tear the minds of men from the pursuit of a simple and primary element; a pursuit renewed in every

age, with an idefatigable perseverance, and always renewed in vain. With what feelings of contempt would the physiologists of former times have looked down on the chemists of the present age, whose timid and circumscribed system admits nearly *forty* different principles in the composition of bodies! What a subject of ridicule would the new nomenclature have afforded to an alchemist!

"The Philosophy of Mind has its alchemists also; men whose studies are directed to the pursuit of *one single principle*, into which the whole science may be resolved; and who flatter themselves with the hope of discovering the *grand secret*, by which the pure gold of truth may be produced at pleasure."*

This secret of the intellectual *opus magnum*, Condillac conceived himself to have found; or, rather, as I have already said, he ascribed the grand discovery to our own illustrious countryman. In this reference the whole school of French metaphysicians have very strangely agreed; conferring on Mr Locke a praise which they truly meant to do him honour, but praise which the object of it would have hastened to disclaim. He certainly was *not* that *alchemist* in the science of mind which they conceived him to be; though he was a *chemist* in it, unquestionably, and a chemist of the highest rank.

* Chap. I. Sect. ii. p. 15, 16. 4to. Edit.

LECTURE XXXIII.

ON THE CLASSIFICATION OF THE MENTAL PHENOMENA, BY LOCKE—BY CONDILLAC—BY REID—A NEW CLASSIFICATION.

Gentlemen, in the conclusion of my last Lecture, I alluded to the system of the French metaphysicians, as an instance of error from *extreme simplification* in the analysis of that class of our feelings which we are now considering.

Of this system,—which deserves some fuller notice, on account both of the great talents which have stated and defended it, and of its very wide diffusion,—I may remark, in the first place, that it is far from being, what its author and his followers consider it to be, a mere developement of the system of our illustrious countryman. On the contrary, they agree with Locke only in one point, and that a negative one,—as to which all philosophers may now be considered as unanimous,—the *denial* of what were termed *innate ideas*. In every thing which can be strictly said to be *positive* in his system, this great philosopher is nearly as completely opposed to Condillac and his followers, as to the unintelligible wranglers of the ancient schools. To convince you of this, a very slight statement of the two systems will be sufficient.

According to Locke, the mind, to whose existence thought or feeling is not essential, might, but for sensation, have remained forever without feeling of any kind. From *sensation* we acquire our first *ideas*,—to use a word, which, from its ambiguity I am not very fond of using, but which, from its constant occurrence, is a very important one in his system. These ideas we cannot merely remember as past, and compound or decompound them in various ways, but we can compare them in all their variety of rela-

tions; and according as their objects are agreeable or disagreeable, can love or hate those objects, and fear or hope their return. We remember not external things only, so as to have ideas of them,—ideas of sensation,—but we remember also our very *remembrance itself*,—our abstractions, comparisons, love, hate, hope, fear, and all the varieties of reflex thought, or feeling; and our remembrance of these internal feelings, or operations of our mind, furnishes another abundant source of ideas, which he terms ideas of reflection. The *comparison*, however,—and it is this point alone which can be of any consequence in reference to the French system,—the comparison, as a state of the mind, even when it is exercised on our sensations or perceptions, is not itself a sensation or perception,—nor is our hope, or fear, or any other of our reflex feelings; for then, instead of the two sources of our ideas, the distinction of which forms the very groundwork of the Essay on the Human Understanding, we should truly have but one source, and our ideas of reflection would themselves be the very ideas of sensation to which they are opposed. Our sensations, indeed, directly or indirectly give rise to our reflex feelings, but they do not *involve* them; they are only prior in order,—the occasions, on which certain powers or susceptibilities of feeling in the mind evolve themselves.

Such is the system of Locke, on those very points, on which the French philosophers most strangely profess to regard him as their great authority. But it is surely very different from the system, which they affect to found on it. According to them, sensation is not merely that primary affection of mind, which gives occasion to our other feelings, but is itself, as variously composed or decomposed, all the variety of our feelings. "If we consider," says Condillac, in a paragraph, which may be said to contain a summary of his whole doctrine, with respect to the mind—"if we consider that to remember, to compare, to judge, to distinguish, to imagine, to be astonished, to have abstract ideas, to have ideas of number and duration, to know truths, whether general or particular, are but so many modes of being attentive; that to have passions, to love, to hate, to hope, to fear, to will, are but so many different modes of desire; and that *attention*, in the one case, and *desire*, in the other case, of which all these feelings are modes, are themselves, in their origin, nothing more than modes of sensa-

tion, we cannot but conclude, that sensation *involves* in itself—*enveloppe*—all the faculties of the soul."*

Whatever we may think of this doctrine, as true or false, ingenious or absurd, it seems, at least, scarcely possible, that we should regard it as the doctrine of Locke—of him, who sets out, with a primary division of our ideas, into two distinct classes, one class of which alone belongs to sensation; and who considers even this class of our mere ideas, not as involving all the operations of the mind with respect to them, but only as the objects of the mind, in these various operations;—as being what we compare, not the very feeling of our comparison itself—the *inducements* to passion, not what constitutes any of our passions, as a state, or series of states, of the mind. To render the paragraph, which I have quoted from Condillac, at all accordant with the real doctrine of Locke, it would be necessary to reverse it, in almost every proposition which it involves.

The doctrine, then, as exhibited by Condillac and his followers, whatever merit it may have in itself, or however void it may be of merit of any kind, is *not* the doctrine of him from whom it is said to be derived. But its agreement or disagreement with the system of any other philosopher, is comparatively, of very little consequence. The great question is, whether it be *just*,—whether it truly have the merit of presenting a faithful picture of the mental phenomena, which it professes to develope to us more clearly.

Have we reason to believe, then, that all the various feelings of our mind, which form the classification of its internal affections, are merely, to use Condillac's phrase, *transformed sensations?*

Transformed sensations, it is evident, on his own principles, though the phrase might seem vague and ambiguous, in any other system, can mean nothing more than sensations more or less lively, or more or less complex. It cannot signify any thing that is absolutely different or superadded; for, if there be any thing, in any complex feeling of the mind, which did not originally form a sensation, or a part of a complex sensation, this addition, however slight, is itself a proof, that all the phenomena of the mind are not mere sensations, variously repeated—that sensation, in short, does not "*involve*" all the affections and faculties of the soul.

* Traite des Sensations, Part I. Chap. vii. Sect. 2.

Is every feeling, then, in the whole series of our varied consciousness, referable, in all its parts, to *sensation*, as its original source?—not its source merely, in one very evident respect, as that which is, in order, truly primary to all our other feelings, but as that which essentially constitutes them all, in the same manner as the waters of the fountain are afterwards the very waters which flow along the mead?

To prove the affirmative of this, it is astonishing, with what readiness Condillac,—who is generally regarded as a nice and subtile reasoner, and who certainly, as his work on that subject shows, had studied with attention the great principles of logic,—passes from faculty to faculty, and from emotion to emotion, professing to find sensation everywhere, without exhibiting to us even the semblance of what he seeks, and yet repeating the constant affirmative, that he *has* found it,—as if the frequent repetition, were itself a proof of what is frequently repeated,—but proving only that the various feelings of the mind agree, as might be supposed, in being feelings of the mind—not that they agree in being *sensations*, as that word is used by himself, and as it is, in common philosophic use, distinguished from the other more general term. Except the mere frequency of the affirmation, and the unquestionable priority in order of time, of our sensations to our other feelings,—there is not the slightest evidence, in his system, of that universal transmutation which it affirms.

It may be necessary to mention, that, in these remarks on the system of the illustrious preceptor of the Prince of Parma, I allude, in particular, to his Treatise "*of Sensations*," which contains his more mature opinions on the subject—not to his earlier work, on *the origin of human knowledge*, in which he has not ventured on so bold a simplification; or at least, has not expressed it in language so precise.

The great error of Condillac, as it appears to me, consists in supposing that, when he has shown the circumstance from which any effect *results*, he has shown this result to be essentially the *same* with the circumstance which produced it.

Certain sensations have ceased to exist, certain other feelings have immediately arisen;—these new feelings are therefore *the others* under another shape. Such is the secret, but very false, logic, which seems to pervade his whole doctrine on the subject.

If all that is meant were merely, that whatever may be the varying feelings of the mind, the mind itself, in all this variety, when it remembers or compares, hates or loves, is still the same substance, as that which saw, heard, smelled, tasted, touched, there could be nothing objectionable in the doctrine, but there would then certainly be nothing new in it;—and, instead of thinking either of Locke or of Condillac, we might think, at pleasure, in stating such a doctrine of any of the innumerable assertors of the spirituality of the thinking principle. Such, however, is not the meaning of the French metaphysician. He asserts this identity of substance, indeed, like the philosophers who preceded him, but he asserts still more. It is not the permanent substance of *mind* only which is the same. Its *affections*, or states, which seem, in many respects, absolutely different, are the same as those very affections, or states, from which they seem to differ—and are the *same*, merely because they have succeeded them; for, as I have already said, except the frequency of his affirmation, that they are the same, there is no other evidence but that of the mere succession in order of time, by which he attempts to substantiate their sameness.

The origin of this false reasoning I conceive to be the analogy of MATTER, to which his system, by reducing *all* the affections of mind to that class which is immediately connected with external things, must have led him to pay peculiar attention. Yet, in justice to him, I must remark, that, although a system which reduces every feeling to mere sensation, and consequently connects every feeling, in its origin, with the qualities of matter, must be favourable to materialism, and has unquestionably fostered this, in a very high degree, in the French school of metaphysics, there is no reason to consider Condillac himself as a materialist; on the contrary, his works contain many very just remarks on the errors of materialism. But still his system, as I have said, by leading him continually to our organs of sense, and to the objects which act upon them, must have rendered the phenomena of matter peculiarly apt to recur to his mind in all its speculations. Now, in *matter*, there can be no question as to the reality of that transmutation, which, as applied to mind, forms the chief principle of his intellectual analysis. In the chemistry of the material elements, the compounds are the very elements themselves. When any two

substances, present together, vanish as it were from our view, and a third substance, whether like or unlike to either of the former, presents itself in their place, we believe this third substance, however dissimilar it may appear, to be only the coexistence of the two others; and indeed, since we have no reason to believe that any change takes place, in the number of the corpuscles of which our planet is composed, the whole series of its corpuscular changes can be only new combinations of particles that existed before.

The doctrine of Pythagoras, in its application to the material world, is in this respect philosophically accurate:

> Tempus edax rerum, tuque invidiosa vetustas
> Omnia destruitis, vitiataque dentibus ævi
> Paulatim lenta consumitis omnia morte.
> Nec species sua cuique manet; rerumque novatrix
> Ex aliis alias reparat natura figuras.
> Nec perit in toto quicquam, mihi credite, mundo,
> Sed variat faciemque novat; *nasciique* vocatur
> Incipere esse aliud quam quod fuit ante,—*moriique*
> Desinere illud idem. Cum sint huc forsitan illa,
> Hæc translata illuc, summa tamen omnia constant.*

With respect to the mere elements of matter, therefore, the *present* may be said, and truly said, to be exactly the *past*; and, in the whole series of phenomena of the material universe, from the moment of its creation to this present moment, there has been nothing new, but mere changes of relative position. This absolute sameness of result, in all the apparent changes of matter, Condillac applies, by a most unwarrantable extension, to the mere affections of the mind; and, because two affections of mind are followed by a third, he considers this *third* to be the two former *coexisting*, or, as he terms it, *transformed*. The feeling which follows another feeling, however seemingly different, is thus, in his system, the same, because it results from it; and it is very easy for him, in this way, to prove *all* our feelings to be *sensations*, by this simplest of arguments, that sensation was the first state induced in mind, and that, hence, since all our other feelings, of every species, must have followed it, they must have originated in it,

* Ovid. Metamorph. Lib. XV v. 234—6, and 252—8.

and therefore, been this very sensation under a mere change of form. It is number one of the long series; and, if number two be a transformed sensation, because it results from number one, which was a sensation, number three must be equally so, because it follows number two; and thus, successively, the whole series. I perceive a hare; I perceive a sheep:—each of these separate states of my mind is a sensation. I cannot attend to them long, he says, without comparing them, and perceiving those circumstances of agreement, which lead me to apply to both the word quadruped. All this is most indubitably true. It is impossible, or, at least, it is not very common for us to observe any two animals long, together, without thinking of some of the circumstances in which they agree or differ. The one state of mind is a consequence of the other state of mind. But this is far from proving the comparison itself, as a subsequent state or phenomenon of the mind, to be the same mental state as the mere perception of the two animals which simply preceded it. If the evidence of our consciousness is to be trusted, it is very different; and in what other evidence can the assertion of their sameness be founded? We do not feel the state of mind, which constitutes the comparison, to be virtually equal to the two states of mind which constituted the separate perception, as we feel the relation of virtual equality between our notion of the number eight, and our notions of six and two combined; the one feeling does not *virtually* comprehend the two others, and it surely does not comprehend them in any grosser physical sense; for there certainly is nothing in the absolute spiritual unity of our thinking principle which can lead us to believe that the state or affection of mind which constitutes the perception of a horse, and the state or affection of mind which constitutes the perception of a sheep, unite, in that different state or affection of mind, which constitutes the comparison of the two, in the same manner as the solid chrystals of any salt unite, in solution, with the liquid which dissolves them. They do not involve or constitute, they merely give occasion to this third state, and give occasion to it, merely in consequence of the peculiar susceptibilities of the mind itself, as formed, by its divine Author, to be affected in this particular manner, after being affected in those different manners, which constitute the separate perceptions, as sensation itself, the primary feeling, was made to depend on some previous organic affection produced

by an external object. It is not, therefore, as being susceptible of *mere sensation*, but as being susceptible of *more* than mere sensation, that the mind is able to compare its sensations with each other. We may see, and certainly do see, objects together, without forming uniformly the same comparison; which could not be the case if the mere coexistence of the two perceptions constituted or involved the comparison itself. In the case of a *horse* and *sheep*, for example, though these, in the sensations which they excite, cannot, at different times, be very different, we compare, at different times, their colour, their forms, their magnitudes, their functions, and the uses to which we put them, and we consider them as related in various other ways. The perceptions being the same, the comparisons, or subsequent feelings of relation, are different; and though the relation cannot be felt but when both objects are considered together, it is truly no part of the perception of each. According to the French system, the science, which we now strangely regard as of difficult acquirement, would be nothing more than the mere opening of our eyes. Were we to shew to a peasant, absolutely unacquainted with the very elements of geometry, *diagrams* representing two right angles, and a plane triangle, he might certainly, though he could not give them names, perceive these figures as clearly as the most expert mathematician. Every thing which mere sensation could produce, in this case, would be the same in both; and nothing can be added to this primary sensation, since every thing is said to be actually involved in the sensation itself. Yet, with all his accurate perception of the figures, however clear. and vivid, and lasting, the peasant would not find, in this immediate perception, the *equality* of the two right angles taken together to the three angles of the triangle, or any other geometrical relation. The comparison, then, and the belief of an universal truth of proportion, which results from that comparison, are certainly something more than the mere sensation itself. They are, in short, new states of mind, as distinct from the mere perception of the figures in the diagram, as the perception of a circle itself differs from the perception of a square. To compare one animal with another, is, indeed, to have different visual images; but the mere coexistence of visual images is only a group, larger, or smaller, as the images are more or fewer, and all which transformation can do is to add to this group or take away from it.

Innumerable objects may be, and are, continually present to us *at once*, so as to produce one complex affection of mind,—fields, groves, mountains, streams,—but the mere *coexistence* of these, so as to form in our thought one scene, involves no feeling of comparison; and if the mind had not been susceptible o other affections than those of sense, or of mere remembrance of the past objects of sense, either in whole or in part, it might, when such a scene was present, have existed forever in the state which forms the complex perception of the scene, without the slightest notion of the RELATION of its parts to the whole, or to each other.

When I thus attempt to prove, by so many wearying arguments, that the feeling which constitutes our comparison of our sensations, or, in other words, our belief of their agreement or disagreement, is itself a state of mind, different from either of the separate sensations which we compare, and different from both, as merely coexisting, I cannot but feel, what many of you have probably felt already, as if I were labouring to demonstrate a mere truism. Indeed, when I consider the argument as any thing more, it is necessary for me to call to mind the great name, and great talents, of the author whose system I oppose,—the praise which the system has received, of extreme subtlety of analysis, combined with extreme simplicity, and its wide diffusion, as the universal, or nearly universal, metaphysical creed, of one of the most enlightened nations of Europe.

But for these remembrances, I must confess, that the system which supposes our comparison to be the ideas compared, and nothing more, as if these had flowed together into one, would appear to me to correspond almost exactly with an ironical theory of the same process, and, indeed, of all the intellectual processes, proposed in our own country,—not in the Essay on Human Understanding, but in a very different work,—a theory which supposes comparison, or judgment, to be only the *conflux* of two ideas, in one *propositional canal.*

"Simple ideas are produced by the motion of the spirits in one simple canal: when two of these canals disembogue themselves into one, they make what we call a proposition: and when two of these propositional channels empty themselves into a third, they form a syllogism, or a ratiocination. Memory is performed in a distinct apartment of the brain, made up of vessels similar,

and like situated to the ideal, propositional, and syllogistical vessels, in the primary parts of the brain. After the same manner, it is easy to explain the other modes of thinking; as also why some people think so wrong and perversely, which proceeds from the bad configuration of those glands. Some, for example, are born without the propositional or syllogistical canals; in others, that reason ill, they are of unequal capacities; in dull fellows, of too great a length, whereby the motion of the spirits is retarded; in trifling geniuses, weak and small; in the over-refining spirits, too much intorted and winding; and so of the rest."*

In examining the system of Condillac, which must certainly be allowed to bear a considerable resemblance to this system, I have instanced the feeling of relation, in comparison, merely as being one of the simplest examples which I could select. I might, with equal reason, have instanced other states of mind; in particular, all the variety of our emotions,—*astonishment* or *desire*, for example, which are as little sensations, in the philosophical meaning of the term, as they are fear or sorrow. The feeling of pleasure, in all its degrees of vividness or faintness, is a state of mind very different from that which constitutes desire of the recurrence of its object; for, otherwise, the desire would be itself the very gratification, which it supposes to be absent. It is induced, indeed, by the remembrance of the pleasure; but it is a consequence of the remembrance, not a part of it. It is like that general activity of life, to which amid the mild breathings of spring, the torpid animal awakes, that, in continual winter would have slumbered forever in insensibility,—or, like the bud, which, without warmth and moisture, never could have burst from the leafless stem; but which is still, in itself, something very different from the sunshine and the shower.

It seems to me not improbable, that the error of Condillac, and of the other French metaphysicians, who have adopted his leading doctrine, may have arisen in part, or, at least, may have escaped detection more readily, from the ambiguous signification of the word *sentir*, which is a verb originally, indeed, and strictly expressive of mere sensation; but applied also, by a sort of metaphorical extension, to our emotions and other affections of mind,

* Mart. Scrib. c. xii.

that do not originate directly like sensation, in an external cause. Though this mere arbitrary word, however, may be applicable to a variety of feelings, it does not, therefore, follow, that these are all modifications of that small class of feelings, to which the word was, in its primary sense, confined,—any more than from the still wider use, in our language, of the term *feeling*, as applicable to all the states of the mind, it would follow, that these are all modes of affection of our sense of touch. Still, however, I cannot but think, that, if the term *sentir* had been of less vague application, a mind, so acute as that of Condillac, could not have failed to discover, in the imaginary proof which he offers of the intellectual transmutations of his simple and universal principles, those unwarrantable assumptions, which, even to humbler minds, seem so obvious, as scarcely to require for the detection of them, many moments' thought.

These observations, I flatter myself, have shown sufficiently the error of the system, which would convert all our feelings into *sensations*, in some indescribable state of metamorphosis. The system, I confess, appears to me a very striking example of an extreme, into which we are more apt to fall, from the very false notion, that it is characteristic of philosophic genius,—the extreme of excessive simplification,—which is evil, not merely as being false in itself, but, I may remark also, as being productive of the very confusion, to which simplicity is supposed to be adverse. When we think of love, or hate, or fear, or hope, as fundamentally and truly nothing more than affections of external sense, we try to recognize the original sensations of smell, taste, hearing, touch, and sight, which have been transformed into them; but we try in vain to recognize what is essentially *different*, and lose ourselves, therefore, in the attempt. We perceive every thing, as it were, through a mist, which it is impossible for our vision to penetrate, and we are at least as much perplexed by having only one object to seek amid the multitude, as if we considered all the phenomena of mind, without any classification whatever.

Before closing this slight review of the theory of transformed sensations, I must remark, that, even though it were strictly true, that all the feelings of the mind, if considered simply as feelings of the mind, are mere sensations varied or transformed by some strange internal process, undescribed and indescribable,—still, in

conformity with every just principle of philosophizing, it would be necessary to form two classes of these mental phenomena, corresponding with the primary classification which we have made of them. That the mind should begin immediately to exist in a certain state, in consequence of the presence of external objects, so that it would not, at that moment, have existed in that state, but for the presence of the external object, is a proof of one set of laws, which connect mind directly and immediately with matter. That it should afterwards begin to exist in a similar state, without the recurrence of any external cause whatever, in consequence of its own susceptibilities only, is a proof of another set of laws peculiar to the mind itself. The complete difference of the cause, in the two instances, would justify, or rather require a different arrangement of the effect; as, when the same motion of a piece of iron is produced, at one time by impulse, at another by the presence of a magnet, at another by its mere gravity, we consider the motion, though itself the same in velocity and direction, as referable to different physical powers. With the same states of mind variously produced, we should still have to speak of external and internal mental susceptibilities of affection, as, with the same motions of a piece of iron variously produced, we speak of magnetism, impulse, gravitation.

The very celebrated system which I have now been combating,—a system, which, by the universality of transmutation supposed in it, truly deserves the name of *intellectual alchymy*,—may then be regarded as exemplifying one species of error in arrangement, —the error of a simplification beyond what the phenomena allow. This species of error, in the philosophy of mind, has not prevailed very generally in our country,—by far the more general tendency, especially on this part of the island, being to *excessive amplification*. Instead of wasting the labour of our analysis on elements that do not admit of any further decomposition, we have given up this labour too soon, and have classed, in many cases, as ultimate principles, what appear to me to be susceptible of still nicer analysis. The phenomena of mind are, accordingly, in the general technical language of the science, referred by us to many powers, which I cannot but think, are not so different as to furnish ground of ultimate distinction, but are truly only varieties of a few more simple powers or susceptibilities.

While I am far from conceiving, therefore, with Condillac and his followers, that all our states of mind are mere sensations modified or transformed, since this belief appears to me to be a mere assumption without even the slightest evidence in our consciousness, I am equally unwilling to admit the variety of powers, of which Dr Reid speaks. In one sense, indeed, the susceptibilities, or powers, which the mind possesses, may be said, with propriety, to be still more numerous,—as numerous as its feelings themselves,—for it must never be forgotten, that what we term classes, are only words of our own invention,—that the feelings which we arrange as belonging to one class, are truly different in themselves, precisely in the same manner as the feelings arranged in different classes are reciprocally different,—that each feeling is, and must be, indicative of a peculiar susceptibility of being affected in that particular manner,—and that the mind has, therefore, truly, as many susceptibilities, as, in various circumstances, it can have different feelings. But still, when we arrange these different phenomena in certain classes, it is an error in classification to give a new name to varieties that can be referred to other parts of the division already made; and it is on this account I object to the unnecessary amplification of our intellectual systems, in arranging the phenomena of mind under so many powers as those of which we are accustomed to speak.

Our various states or affections of the mind, I have already divided into two classes, according to the nature of the circumstances which precede them,—the *External* and the *Internal*,—and this latter class into two orders,—our *Intellectual States of Mind*, and our *Emotions*. It is with the intellectual phenomena that we are at present concerned; and this order I would arrange under two generic capacities, that appear to me to comprehend or exhaust the phenomena of the order. The whole order, as composed of feelings, which arise immediately, in consequence of certain former feelings of the mind, may be technically termed, in reference to these feelings which have induced them, Suggestions; but, in the suggested feelings themselves, there is one striking difference. If we analyse our trains of intellectual thought exclusively of the *Emotions* which may coexist or mingle with them, and of sensations that may be accidentally excited by external objects, we shall find them to be composed of two very distinct sets of feel-

ings,—one set of which are mere conceptions or images of the past, that rise, image after image, in regular sequence, but simply in succession, without any feeling of relation necessarily involved, —while the perceptions of relation, in the various objects of our thought, form another set of feelings, of course as various as the relations perceived. Conceptions and relations,—it is with these, and with these alone, that we are intellectually conversant. There is thus an evident ground for the arrangement of the internal suggestions, that form our trains of thought, under two heads, according as the feeling excited directly by some former feeling, may be either a simple conception, in its turn, perhaps, giving place to some other conception as transient; or may be the feeling of a relation which two or more objects of our thought are considered by us as bearing to each other. There is, in short, in the mind, a capacity of *association;* or as, for reasons afterwards to be stated, I would rather term it,—the capacity of *Simple Suggestion*,—by which feelings, formerly existing, are revived, in consequence of the mere existence of other feelings, as there is also a capacity of feeling resemblance, difference, proportion, or relation in general, when two or more external objects, or two or more feelings of the mind itself, are considered by us,—which mental capacity in distinction from the former, I would term the capacity of *Relative Suggestion;* and of these simple and relative suggestions, our whole intellectual trains of thought are composed. As I am no lover of new phrases, when the old can be used without danger of mistake, I would very willingly, substitute for the phrase relative suggestion, the term *comparison*, which is more familiar, and expresses very nearly the same meaning. But comparison, though it involve the feeling of relation, seems to me also to imply a voluntary seeking for some relation, which is far from necessary to the mere internal suggestion or feeling of the relation itself. The *resemblance* of two objects strikes me, indeed, when I am studiously comparing them; but it strikes me also, with not less force, on many other occasions, when I had not previously been forming the slightest intentional comparison. I prefer, therefore, a term which is applicable alike to both cases, when a relation is sought, and when it occurs, without any search or desire of finding it.

The term *judgment*, in its strict philosophic sense, as the mere

perception of relation, is more exactly synonymous with the phrase which I have employed, and might have been substituted with safety, if the vulgar use of the term, in many vague significations, had not given some degree of indistinctness even to the philosophical use of it. I may remark, too, that in our works of logic and intellectual physiology, *judgment* and *reasoning* are usually discussed separately, as if there were some essential difference of their nature; and, therefore, since I include them both, in the relative suggestions of which I shall afterwards have to treat, it seems advisable, not to employ for the whole, a name which is already appropriated, and very generally limited, to a part. As the rise in the mind of the feeling of relation, from the mere perception or conception of objects, is, however, what I mean to denote by the phrase *Relative Suggestion;* and as *judgment*, in its strictest sense, is nothing more than this feeling of relation,—or any two or more objects, considered by us together,—I shall make no scruple, to use the shorter and more familiar term, as *synonymous*, when there can be no danger of its being misunderstood.

The intellectual states of the mind, then, to give a brief illustration of my division, I consider as all referable to two generic susceptibilities,—those of *Simple Suggestion* and *Relative Suggestion.* Our perception or conception of one object excites, of itself, and without any known cause, external to the mind, the conception of some other object, as when the mere sound of our friend's name, suggests to us the conception of our friend himself,—in which case, the conception of our friend, which follows the perception of the sound, involves no feeling of any common property, with the sound which excites it, but is precisely the same state of mind, which might have been induced, by various other previous circumstances, by the sight of the chair on which he sat,—of the book which he read to us,—of the landscape which he painted. This is *Simple Suggestion.*

But, together with this capacity of Simple Suggestion, by which conception after conception arises in the mind,—precisely in the same manner, and in the same state, as each might have formed a part of other trains, and in which the particular state of mind that arises by suggestion does not necessarily involve any consideration of the state of mind which preceded it,—there is a suggestion of a very different sort, which, in every case, involves the consid-

eration, not of one phenomenon of mind, but of two or more phenomena, and which constitutes the feeling of agreement, disagreement, or relation of some sort. I perceive, for example, a horse and a sheep at the same moment. The perception of the two is followed by that different state of mind which constitutes the feeling of their agreement in certain respects, or of their disagreement in certain other respects. I think of the square of the hypotenuse of a rightangled triangle, and of the squares of the two other sides;—I feel the relation of equality. I see a dramatic representation; I listen to the cold conceits which the author of the tragedy, in his omnipotent command over warriors and lovers of his own creation, gives to his hero, in his most impassioned situations;—I am instantly struck with their unsuitableness to the character and the circumstances. All the intellectual successions of feeling, in these cases, which constitute the perception of relation, differ from the results of simple suggestion in necessarily involving the consideration of two or more objects or affections of mind, that immediately preceded them. I may think of my friend, in the case of simple suggestion,—that is to say, my mind may exist in the state which constitutes the conception of my friend, without that previous state which constitutes the perception of the sound of his name; for the conception of him may be suggested by various objects and remembrances. But I cannot, in the cases of relative suggestion, think of the resemblance of a horse and a sheep; of the proportion of the squares of the sides of a right-angled triangle; or of the want of the truth of nature in the expressions of a dramatic hero, without those previous states of mind, which constitute the conceptions of a horse and a sheep—of the sides of the triangle,—or of the language of the warrior or lover, and the circumstances of triumph, or hope, or despair, in which he is exhibited to us by the creative artist.

With these two capacities of suggested feelings, simple and relative, which are all that truly belong to the class of intellectual states of the mind,—various emotions may concur, particularly that most general of all emotions, the emotion of desire, in some one or other of its various forms. According as this desire does or does not concur with them, the intellectual states themselves appear to be different; and, by those who do not make the necessary analysis, are supposed, therefore, to be indicative of differ-

ent powers. By simple suggestion, the images of things, persons, events, pass in strange and rapid succession; and a variety of names, expressive of different powers,—conception, association, memory,—have been given to this one simple law of our intellectual nature. But, when we *wish* to remember some object; that is to say, when we wish our mind to be affected in that particular manner, which constitutes the conception of a particular thing, or person, or event,—or when we wish to combine new images, in some picture of fancy, this coexistence of desire, with the simple course of suggestion, which continues still to follow its own laws, as much as when no desire existed with it,—seems to us to render the suggestion itself different; and recollection, and imagination or fancy, which are truly, as we shall afterwards find, nothing more than the union of the suggested conceptions, with certain specific permanent desires, are to us, as it were, distinct additional powers of our mind, and are so arranged in the systems of philosophers, who have not made the very simple analysis, which alone seems to me to be necessary for a more precise arrangement.

In like manner, those suggestions of another class, which constitute our notions of proportion, resemblance, difference, and all the variety of relations, may, as I have already remarked, arise, when we have had no previous desire of tracing the relations, or may arise *after* that previous desire. But, when the feelings of relation seem to us to arise spontaneously, they are not in themselves, different from the feelings of relation, that arise, in our intentional comparisons or judgments, in the longest series of ratiocination. Of such ratiocination, they are truly the most important elements. The permanent desire of discovering something unknown, or of establishing, or confuting, or illustrating, some point of belief or conjecture, may coexist, indeed, with the continued series of relations that are felt, but does not alter the nature of that law, by which these judgments, or relative suggestions, succeed each other.

There is no power to be found, but only the union of certain intellectual states of the mind, with certain desires,—a species of combination not more wonderful in itself, than any other complex mental state, as when we, at the same moment, see and smell a rose,—or listen to the voice of a friend, who has been long absent from us, and see, at the same moment, that face of affection, which

is again giving confidence to our heart, and gladness to our very eyes.

Our intellectual states of mind, then, are either those resemblances of past affections of the mind, which arise by *simple* suggestion, or those feelings of relation, which arise by what I have termed *relative* suggestions,—the one set resulting, indeed, from some prior states of the mind, but not involving necessarily, any consideration of these previous states of mind, which suggested them,—the other set, necessarily, involving the consideration of two or more objects, or two or more affections of mind, as subjects of the relation which is felt.

How readily all the intellectual states of mind, which are commonly ascribed to a variety of powers, may be reduced to those two, will appear more clearly, after we have considered and illustrated the phenomena of each set.

I shall proceed, therefore, in the first place, to the phenomena of *simple suggestion*, which are usually referred to a principle of association in our ideas.

LECTURE XXXIV.

CLASSIFICATION OF THE INTERNAL AFFECTIONS OF MIND, CONTINUED,—ON SIMPLE SUGGESTION,—ADVANTAGES RESULTING FROM THE PRINCIPLE OF SUGGESTION,—ON MR HUME'S CLASSIFICATION OF THE CAUSES OF ASSOCIATE FEELINGS.

GENTLEMEN, my general arrangement of the various phenomena, or states of the mind, is, I trust, now sufficiently familiar to you. We know the mind only in the succession of these states, as they vary, from moment to moment; and you have learned to class them, as, in the first place, External or Internal Affections, according as the mental changes of state that are induced, have arisen immediately from the presence of external objects, or from some preceding state of the mind itself,—and the latter of these classes, you have learned also to subdivide into its two distinct orders of *Intellectual States of the Mind* and *Emotions*. Thus far we have proceeded, I trust, without much risk of misconception.

In my last Lecture, I proceeded to consider the former of these orders, and arranged all the variety of our Intellectual States of Mind under two generic capacities,—those of *Simple* and of *Relative* suggestion. Intellectually, we conceive or we judge; our *past* feelings, in *Simple Suggestion*, of image after image, arise again, in colours more or less faint, without any known cause exterior to the mind. By our capacity of the other species of Suggestion, we are impressed with feelings of a different order, that arise when two or more objects are contemplated together,—feelings of their agreement, proportion, or some one or other of the variety of their relations. Of these two orders of feelings, and of these alone, consists the whole varied tissue of our trains of thought. All the intellectual powers, of which writers on this

branch of science speak, are, as we shall find, only modes of these two, as they exist simply, or as they exist in combination with some desire more or less permanent,—with the desire of prosecuting a continued inquiry, for example, or of evolving its results to others,—as in the long series of our ratiocination; or of framing some splendid succession of images and incidents, as in the magic pictures of poetry and romance. The simplification may, perhaps, at present appear to you excessive; but I flatter myself, that after the two generic capacities themselves shall have been fully considered by us, it will not appear to you more than is absolutely necessary for accuracy of analysis and arrangement.

SIMPLE SUGGESTION.

The intellectual phenomena which we are, in the first place, to consider, then, are those of Simple Suggestion, which are usually classed under the general term of the *Association of Ideas*,—a term employed to denote that tendency of the mind, by which feelings, that were formerly excited by an external cause, arise afterwards, in regular successions to each other, as it were spontaneously, or at least without the immediate presence of any known external cause. The limitation of the term, however, to those states of mind, which are exclusively denominated ideas, has, I conceive, tended greatly to obscure the subject, or at least to deprive us of the aid which we might have received from it in the analysis of many of the most complex phenomena. The influence of the associating principle itself extends, not to ideas only, but to every species of affection of which the mind is susceptible. Our internal joys, sorrows, and all the variety of our emotions, are capable of being revived in a certain degree by the mere influence of this principle, and of blending with the ideas or other feelings which awakened them, in the same manner as our conceptions of external things. These last, however, it must be admitted, present the most striking and obvious examples of the influence of the principle, and are, therefore, the fittest for illustrating it. The faint and shadowy elements of past emotions, as mingling in any present feeling, it may not be easy to distinguish; but our remembrances of things without are clear and definite, and are easily recognized by us as images of the past. We have seen,

in the history of our senses, by what admirable means Nature has provided for communicating to man those first rude elements of knowledge, which are afterwards to be the materials of his sublimest speculations,—and with what still more admirable goodness she has ministered to his pleasure in these primary elements of thought, and in the very provision which she has formed for the subsistence of his animal frame,—making the organs by which he becomes acquainted with the properties of external things, not the fountain of knowledge only, but an ever-mingling source of enjoyment and instruction.

It is through the medium of perception, as we have seen,—that is to say, through the medium of those *sensitive capacities* already so fully considered by us,—that we acquire our knowledge of the properties of external things. But if our knowledge of these properties were limited to the moment of perception, and were extinguished forever with the fading sensation from which it sprang, the acquisition of this fugitive knowledge would be of little value. We should still, indeed, be sensible of the momentary pleasure or pain; but all experience of the past, and all that confidence in the regular successions of future events, which flows from experience of the past, would of course, be excluded by universal and instant forgetfulness. In such circumstances, if the common wants of our animal nature remained, it is evident, that even life itself, in its worst and most miserable state, could not be supported; since, though oppressed with thirst and hunger, and within reach of the most delicious fruits and the most plentiful spring-water, we should still suffer without any knowledge of the means by which the suffering could be remedied. Even if, by some provision of Nature, our bodily constitution had been so framed, as to require no supply of subsistence, or if, instinctively and without reflection, we had been led on the first impulse of appetite, to repair our daily waste, and to shelter ourselves from the various causes of physical injury to which we are exposed, though our animal life might then have continued to be extended to as long a period as at present, still, if but a succession of momentary sensations, it would have been one of the lowest forms of mere animal life. It is only as capable of looking before and behind,—that is to say, as capable of those spontaneous suggestions of thought which constitute *remembrance* and *foresight*,—that we

rise to the dignity of intellectual being, and that man can be said to be the image of that Purest of Intellects, who looks backward and forward, in a single glance, not on a few years only, but on all the ages of eternity. "Deum te scito esse," says Cicero, in allusion to these powers,—"Deum te scito esse, siquidem Deus est, qui viget, qui sentit,—qui meminit, qui prævidet, qui tam regit et moderatur et movet id corpus, cui præpositus est, quam hunc mundum princeps ille Deus."

> "Were it not so, the Soul, all dead and lost,
> As the fix'd stream beneath the impassive frost,*
> Form'd for no end, and impotent to please,
> Would lie inactive on the couch of ease;
> And, heedless of proud fame's immortal lay,
> Sleep all her dull divinity away."†

Without any remembrance of pleasures formerly enjoyed, or of sorrows long past and long endured,—looking on the persons and scenes which had surrounded us from the first moment of our birth, as if they were objects altogether unknown to us,—incapable even of as much reasoning as still gleams through the dreadful stupor of the maniac,—or of conveying even that faint expression of thought with which the rudest savages, in the rudest language, are still able to hold some communication of their passions or designs;—such, but for that capacity which we are considering, would have been the deplorable picture of the whole human race. What is now revered by us as the most generous and heroic virtue, or the most profound and penetrating genius, would have been nothing more than this wretchedness and imbecility. It is *the suggesting principle*, the reviver of thoughts and feelings which have passed away, that gives value to all our other powers and susceptibilities, intellectual and moral—not indeed, by producing them, for, though unevolved, they would still, as latent capacities, be a part of the original constitution of our spiritual nature,—but by rousing them into action, and furnishing them with those accumulating and inexhaustible materials, which are to be the elements of future thought and the objects of future emotion. Every

* "Like the tall cliff beneath the impassive frost."—ORIG.

† Cawthorn.—Regulation of the Passions, &c. v. 15—20.

talent by which we excel, and every vivid feeling which animates us, derive their energy from the suggestions of this ever-active principle. We love and hate,—we desire and fear,—we use means for obtaining good, and avoiding evil,—because we remember the objects and occurrences which we have formerly observed, and because the future, in the similarity of the successions which it presents, appears to us only a prolongation of the past.

In conferring on us the capacity of these spontaneous suggestions, then, Heaven has much more than doubled our existence; for, without it, and consequently without those faculties and emotions which involve it, existence would scarcely have been desirable. The very importance of the benefits which we derive from it, however, renders us perhaps less sensible of its value; since it is so mingled, with all our knowledge, and all our plans of action, that we find it difficult to conceive a state of sentient being, of which it is not a part, and to estimate, consequently, at a just amount, the advantage which it affords. The *future memory of perception* seems to us almost implied in perception itself; and to speculate on that strange state of existence which would have been the condition of man, if he had been formed without the power of remembrance, and capable only of a series of sensations, has, at first, an appearance almost of absurdity and contradiction, as if we were imagining conditions which were in their nature incompatible. Yet, assuredly, if it were possible for us to consider such a subject *a priori*, the real cause of wonder would appear to be, not in the *absence* of the suggestions of memory, as in the case, imagined, but in that remembrance of which we have the happy experience. When a feeling, of the existence of which consciousness furnishes the only evidence, has passed away so completely, that not even the slightest consciousness of it remains, it would surely, —but for that experience,—be more natural to suppose that it had perished altogether, than that it should, at the distance of many years, without any renewal of it by the external cause which originally produced it, again start, as it were of itself, into being. To foresee that which has not yet begun to exist, is, in itself, scarcely more unaccountable, than to see as it were before us, what has wholly ceased to exist. The present moment is all of which we are conscious, and which can strictly be said to have a real existence, in relation to ourselves. That mode of time,

which we call the *past*, and that other mode of time, which we call the *future*, are both equally unexisting. That the knowledge of either should be added to us, so as to form a part of our present consciousness, is a gift of Heaven, most beneficial to us indeed, but most mysterious, and equally, or nearly equally mysterious, whether the unexisting time, of which the knowledge is indulged to us, be the future or the past

The advantage which we derive from the principle of suggestion, it must, however, be remarked, consists, not in its mere revival of thoughts and feelings, of which we had before been conscious, but in its revival of these in a certain order. If past objects and events had been suggested to us again, not in that series, in which they had formerly occurred, nor according to any of those relations, which human discernment has been able to discover among them, but in endless confusion and irregularity, the knowledge thus acquired, however gratifying as a source of mere variety of feeling, would avail us little, or rather would be wholly profitless, not merely in our speculative inquiries as philosophers, but in the simplest actions of common life. It is quite evident, that, in this case, we should be altogether unable to turn our experience to account, as a mode of avoiding future evil or obtaining future good; because, for this application of our knowledge, it would be requisite that events, before observed, should occur to us, at the time, when similar events might be expected. We refrain from tasting the poisonous berry, which we have known to be the occasion of death to him who tasted it; because the mere *sight* of it brings again before us the fatal event, which we have heard or witnessed. We satisfy our appetite with a salutary fruit, without the slightest apprehension; because its familiar appearance recals to us the refreshment, which we have repeatedly received. But, if these suggestions were reversed,—if the agreeable images of health and refreshment were all that were suggested by the poisonous plant, and pain, and convulsions, and death were the only images suggested by the sight of the grateful and nourishing fruit, there can be no doubt, to which of the two, our unfortunate preference would be given. To take the most familiar of all instances,—that of language,—which, either as written or spoken, is in such constant use, and which is so essential, not merely to our first advance, from absolute barbarism, but to the

common domestic necessities, even of barbarous life, that, without it, we can scarcely conceive two individuals, however rude, to exist together,—this, it is evident, could not have been invented, —nor, if invented, could it serve any other purpose than to mislead,—if the words spoken were to have no greater chance of suggesting the meaning intended by the speaker, than any other meaning, which any other words of the language might be employed to denote. What social affection could continue for an hour, if the sight of a friend were to suggest, in intimate combination, not the kindnesses which he had conferred, and all the enjoyments of which he had been the source, but the malice, and envy, and revenge of some jealous and disappointed enemy?

He who has given us, in one simple principle, the power of reviving the past, has not made his gift so unavailing. The feelings, which this wonderful principle preserves and restores, arise, not loosely and confusedly—for what is there in the whole wide scene of nature, which does so occur?—but, according to general laws or tendencies of succession, contrived with the most admirable adaptation to our wants, so as to bring again before us the knowledge formerly acquired by us, at the very time when it is most profitable that it should return. A value is thus given to experience, which otherwise would not be worthy of the name; and we are enabled to extend it almost at pleasure, so as to profit, not merely by that experience which the events of nature, occurring in conformity with these general laws, must at any rate have afforded to us,—but to regulate this very experience itself,—to dispose objects and events, so that, by tendencies of suggestion, on the firmness of which we may put perfect reliance, they shall give us, perhaps at the distance of many years, such lessons as we may wish them to yield,—and thus to invent and create, in a great measure, the intellectual and moral history of our future life, as an epic or dramatic writer arranges at his will the continued scenes of his various and magnificent narrative. I need not add, that it is on this skilful management of the laws, which regulate our trains of thought, the whole theory and practice of *education* are founded;—that art, which I have already repeatedly represented to you as the noblest of all the arts of man—itself the animating spirit of every other art—which exerts its own immediate operation, not on lifeless things, but on the affections and faculties of the soul it-

self—and which has raised us from the dust, where we slept or trembled, in sluggish, yet ferocious ignorance, the victims of each other, and of every element around us, to be the sharers and diffusers of the blessings of social polity, the measurers of the earth and of the skies, and the rational worshippers of that eternal Being by whom they and we were created.

That there is a tendency of ideas to suggest each other, without any renewed perception of the external objects which originally excited them, and that the suggestion is not, altogether loose and indefinite, but that certain ideas have a peculiar tendency to suggest certain other relative ideas in associate trains of thought, is too familiar to you, as a general fact of our intellectual nature, to require to be illustrated by example.

It has been beautifully compared, by the most philosophic of our poets, to the mutual influence of two sympathetic needles, which Strada, in one of his Prolusions, availing himself of a supposed fact, which was then believed, or scarcely doubted by many philosophers, makes the subject of verses, supposed to be recited by Cardinal Bembo, in the character of Lucretius. The needles were fabled to have been magnetized together, and suspended over different circles, so as to be capable of moving along an alphabet. In these circumstances, by the remaining influence of their original kindred magnetism, they were supposed, at whatever distance, to follow each other's motions, and pause accordingly at the same point; so that, by watching them at concerted hours, the friends, who possessed this happy telegraph, were supposed to be able to communicate to each other their feelings, with the same accuracy and confidence as when they were together.

> "For when the different images of things,
> By chance combin'd have struck the attentive soul
> With deeper impulse, or, connected long,
> Have drawn his frequent eye; howe'er distinct
> The external scenes, yet oft the ideas gain
> From that conjunction an eternal tie
> And sympathy unbroken. Let the Mind
> Recal one partner of the various league,—
> Immediate, lo! the firm confederates rise,
> And each his former station straight resumes;
> One movement governs the consenting throng,
> And all at once with rosy pleasure shine,

Or all are sadden'd with the glooms of care.
'Twas thus, if ancient fame the truth unfold,
Two faithful needles, from the informing touch
Of the same parent-stone, together drew
Its mystic virtue, and at first conspir'd
With fatal impulse quivering to the pole,
Then, though disjoin'd by kingdoms,—though the main
Roll'd its broad surge betwixt,—and different stars
Beheld their wakeful motions,—yet preserv'd
The former friendship, and remember'd still
The alliance of their birth. Whate'er the line
Which one possessed, nor pause nor quiet knew
The sure associate, ere, with trembling speed,
He found its path, and fixed unerring there.
Such is the secret union, when we feel
A song, a flower, a name, at once restore
Those long connected scenes where first they mov'd
The attention. Backward through her many walks,
Guiding the wanton fancy to her scope,
To temples, courts, or fields,—with all the hand
Of (living)* forms, of passions, and designs,
Attendant; whence, if pleasing in itself,
The prospect from that sweet accession gains
Redoubled influence o'er the listening Mind.
By these mysterious ties, the busy power
Of Memory her ideal train preserves
Entire; or, when they would elude her watch,
Reclaims their fleeting footsteps, from the waste
Of dark Oblivion."†

What then are these *mysterious ties?*—or, to state the question more philosophically, what are the general circumstances which regulate the successions of our ideas?

That there is some regularity in these successions, must, as I have already remarked, have been felt by every one; and there are many references to such regularity in the works of philosophers of every age. The most striking ancient reference, however, to any general circumstances, or *laws* of suggestion,—though the innumeration of these is hinted, rather than developed at any length,—is that which you will find in a passage, quoted by Dr Beattie and Mr Stewart, from Aristotle. It is a passage explana-

* Painted—ORIG.

† Pleasures of Imagination, Book III. v. 312—352.

tory of the process by which, in voluntary reminiscence, we endeavour to discover the idea of which we are in search. We are said to hunt for it—(*θηρεύομεν* is the word in the original)—among other ideas, either of objects existing at present, or at some former time; and from their resemblance, contrariety, and contiguity—*ἀπὸ τοῦ νῦν, ἢ ἄλλου τινὸς, καὶ ἀφ' ὁμοίου, ἢ ἐναντίου, ἢ του συνέγγυς. Διὰ τοῦτο γινεται ἡ ἀνάμνησις.** This brief enumeration of the general circumstances which direct us in reminiscence is worthy of our attention on its own account; and is not less remarkable on account of the very close resemblance which it bears to the arrangement afterwards made by Mr Hume, though there is no reason to believe that the modern philosopher was at all acquainted with the classification which had, at so great a distance of time, anticipated his own.

I must remark, however, that though it would be in the highest degree unjust to the well-known liberality and frankness of Mr Hume's character, to suppose him to have been aware of any enumeration of the general circumstances on which suggestion appears to depend, prior to that which he has himself given us, his attempt was far from being so original as he supposed. I do not allude merely to the passage of Aristotle, already quoted, nor to a corresponding passage, which I might have quoted, from one of the most celebrated of his commentators, Dr Thomas Aquinas, but to various passages which I have found in the works of writers of much more recent date, in which the influence of *resemblance* and *contiguity*, the two generic circumstances to which, on his own principles, his own triple division should have been reduced, is particularly pointed out. Thus, to take an example from an elementary work of a very eminent author, Ernesti, published in the year 1734,—his *Initia Doctrinæ Solidioris*,—with what precision has he laid down those very laws of association of which Mr Hume speaks. After stating the general fact of suggestion, or association, under the Latin term *phantasia*, he proceeds to state the principles which guide it. All the variety of these internal successions of our ideas, he says, may be reduced to the following law. When one image is present in the mind, it may suggest the image of some absent object—either of one that is similar in some respect to that already present—or of one of which the present

* Aristot. de Memor. and Reminisc. c. ii.—v. II. p. 86. Edit. Du Val.

is a part—or of one which has been present together with it on some former occasion. "Hujus autem phantasiæ lex hæc est; Præsentibus animo rerum imaginibus quibuscunque, recurrere et redire ad animum possunt rerum absentium olimque perceptarum imagines, præsentibus similes, vel quarum, quæ sunt præsentes, partes sunt,—vel denique, quas cum præsentibus simul hausimus."*

Even the arrangement, as stated by Mr Hume, is not expressed in more formal terms. But as it is to his arrangement the philosophers of our own country are accustomed to refer, in treating of association, the importance thus attached to it gives it a preferable claim to our fuller discussion. It is stated by him briefly in two paragraphs of his Essay on the Association of Ideas.

"Though it be too obvious to escape observation," he says, "that different ideas are connected together, I do not find that any philosopher has attempted to enumerate or class all the principles of association; a subject, however, that seems worthy of curiosity. To me there appear to be only three principles of connexion among ideas, viz. *resemblance*, *contiguity* in time or place, and *cause* or *effect*.

"That these principles serve to connect ideas, will not, I believe, be much doubted. A picture naturally leads our thoughts to the original. The mention of one apartment in a building naturally introduces an inquiry or discourse concerning the others. And if we think of a wound, we can scarcely forbear reflecting on the pain which follows it. But that the enumeration is complete, and that there are no other principles of association except these, may be difficult to prove to the satisfaction of the reader or even to a man's own satisfaction. All we can do, in such cases, is to run over several instances, and examine carefully the principle which binds the different thoughts to each other,—never stopping, till we render the principle as general as possible. The more instances we examine, and the more care we employ, the more assurance shall we acquire, that the enumeration which we form from the whole is complete and entire."†

On these paragraphs of Mr Hume, a few obvious criticisms

* De Mente Humana, C. I. Sect. xvi. p. 138, 139.

† Hume's Inquiry concerning Human Understanding, Sect. III.

present themselves. In the first place, however, I must observe, —to qualify in some degree the severity of the remarks which may be made on his classification,—that it is evident, from the very language now quoted to you, that he is far from bringing forward his classification as complete. He states, indeed, that it appears to him, that there are no other principles of connexion among our ideas than the three which he has mentioned; but he adds, that though the reality of their influence as connecting principles will not, he believes, be much doubted, it may still be difficult to prove, to the satisfaction of his reader, or even of himself, that the enumeration is complete; and he recommends, in consequence, a careful examination of every instance of suggestion, in the successive trains of our ideas, that other principles, if any such there be, may be detected.

But to proceed to the actual classification, as presented to us by Mr Hume. A note, which he has added to the paragraph that contains his system, affords perhaps as striking an instance as is to be found in the history of science of that illusion, which the excessive love of simplicity tends to produce, even in the most acute and subtile philosopher, so as to blind, to the most manifest inconsistencies, in his own arrangement, those powers of critical discernment which would have flashed instant detection on inconsistencies far less glaringly apparent in the speculations of another. After stating, that there appear to him to be only the three principles of connexion already mentioned, Mr Hume adds, in a note,—as an instance of other connexions apparently different from these three, which may, notwithstanding, be reduced to them,—

"*Contrast* or *contrariety*, also, is a species of connexion among ideas. But it may perhaps be considered as a mixture of causation and resemblance. Where two objects are contrary, the one destroys the other, *i. e.* is the cause of its annihilation, and the idea of the annihilation of an object implies the idea of its former existence."

When we hear or read for the first time this little theory of the suggestions of contrast, there is, perhaps no one who does not feel some difficulty in believing it to be a genuine speculation of that powerful mind which produced it. Contrast, says Mr Hume, is a mixture of *causation* and *resemblance*. An object, when con-

trasted with another, destroys it. In destruction there is causation; and we cannot conceive destruction, without having the idea of former existence. Thus, to take an instance,—Mr Hume does not deny, that the idea of a *dwarf* may suggest, by contrast, the idea of a *giant;* but he says that the idea of a dwarf suggests the idea of a giant, because the idea of a dwarf *destroys* the idea of a giant, and thus, by the connecting principle of causation involved in all destruction, may suggest the idea destroyed; And he adds, as an additional reason for the suggestion, that the idea of the annihilation of a giant implies the idea of the former existence of a giant. And all this strange and complicated analysis,—this explanation, not of the *obscurum per obscurius*, which is a much more intelligible paralogism, but of the *lucidum per obscurum*, is seriously brought forward by its very acute author, as illustrating the simple and familiar fact of the suggestion of opposites, in contrast, by opposites.

In the first place, I may remark, that in Mr Hume's view of contrast, it is not easy to discover what the resemblance is of which he speaks, in a case in which the objects in themselves are said by him to be so contrary, that the one absolutely destroys the other by this contrariety alone; and, indeed, if there be truly this mixed resemblance in contrast, what need is there of having recourse to annihilation or causation at all, to account for the suggestion, since the resemblance alone in this, as in every other case, might be sufficient to explain the suggestion, without the necessity of any separate division;—as the likeness of a single feature in the countenance of a stranger, is sufficient to bring before us in conception the friend whom he resembles, though the resemblance be in the single feature only.

In the second place, there is no truth, if, indeed, there be any meaning whatever, in the assertion that in contrast one of the objects destroys the other; for, so far is the idea of the dwarf from destroying the idea of the giant, that, in the actual case supposed, it is the very reason of the existence of the second idea; nay, the very supposition of a perceived contrast implies that there is no such annihilation; for both ideas must be present to the mind together, or they could not appear either similar or dissimilar, that is to say, could not be known by us as contrasted, or contrary, in any respect. It is, indeed, not very easy to conceive,